Minstry of Health

Kenya National Guidelines for Prevention, Management and Control of Sexually Transmitted Infections

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FOREWORD

Sexually Transmitted Infections (STIs) are major public health problems in Kenya and have far-reaching health, social and economic consequences. STIs have public health importance because of their magnitude, potential complications and their interaction with HIV/AIDS. They affect the health and social wellbeing of women and other priority populations disproportionately by producing significant impact on their sexual and reproductive health. The clinical problems and complications that STIs cause in individual patients make STIs require attention. This fact becomes even more worrying when STIs are viewed as a proxy indicator of behaviours placing people at a higher risk of acquiring and transmitting HIV infection.

Since 1990, Kenya adopted a syndromic algorithm to STI management to address the high cost of etiological treatment. The algorithm was first validated in 1995, remained in use without further validation until 2015 when the Rapid Advice was developed. The emergence of resistance to antimicrobial agents in the algorithm, changing profile of etiological agents associated with some syndromes and revision of the WHO guidelines has necessitated a review of the current national STI treatment guidelines.

This revised Ministry of Health (MOH) guideline has updated information required to effectively manage STIs through the syndromic approach and has increased the scope of STIs/syndromes not covered in the previous version. Furthermore, in these guidelines, the STI treatment drug list has been updated, and the monitoring and evaluation (M&E) components have been revised.

The previous guidelines did not emphasize additional components of STI management. The new guidelines address issues such as: STIs among Key Populations, health worker attitude, integration of STIs with routine services, STI medication supply and chain management, STI screening, and implementation of STI prevention and treatment programming.

The use of this guidance is strongly recommended in order to ensure standard quality treatment and prevention at all levels of the Kenya Health System. These guidelines provide clear direction, facilitates training and supervision of healthcare providers, helps to improve surveillance, and assists in effective STI drugs and related supplies management.

It is my sincere hope that this document will serve as a working tool for the national STI Control program and assist health workers in the management of STI activities and problems in Kenya.

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ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
BV	Bacterial Vaginosis
CDC	Centres For Disease Control And Prevention
COC	Clinical Officers Council
COCs	Combined Oral Contraceptives
CSO	Civil Society Organisation
CT	Chlamydia Trachomatis
DHIS	Demographic Health Information Systems
DIF	Direct Immuno Fluoresence
DNA	Deoxyribonucleic Acid
EIA	Enzyme Immuno Assay
ELISA	Enzyme Linked Immunosorbent Assay
FP	Family Planning
FSW	Female Sex Worker
GC	Gonococcus
GUS	Genital Ulcer Syndrome
HBV	Hepatitis B Virus
HCP	Health Care Provider
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HPV	Human Papiloma Virus
HSV2	Herpes Simplex Virus Type 2
HTS	Hiv Testing Services
IDU	Intravenous Drug Users
IEC	Information Education Communication
IM	Intramuscular
IPC	Inter Personal Communication
IUD	Intra Uterine Device
IV	Intravenous
KDHS	Kenya Demographic Health Survey
KEMRI	Kenya Medical Research Institute
KMLTB	Kenya Medical Laboratories And Technology Board
KMPDB	Kenya Medical Practitioners And Dentists Board
KOH	Potassium Hydroxide

KP	Key Population
LAP	Lower Abdominal Pain
LGV	Lymphogranuloma Venerum
MB	Mycobacteria
MOH	Ministry Of Health
M&E	Monitoring And Evalution
MSM	Men Who Have Sex With Men
NASCOP	National Aids and STI Control Program
NCK	Nursing Council Of Kenya
NG	Neisseria Gonorrhoea
PCR	Polymerase Chain Reacton
PID	Pelvic Inflammatory Disease
PITC	Provider Initiated Testing And Counselling
PreP	Pre-Exposure Prophylaxis
PWID	People Who Inject Drugs
RTI	Reproductive Tract Infection
SDG	Sustainable Development Goals
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
TV	Trichomonas Vaginalis
TPHA	Treponemoma Pallidum Haemagglutination Assay
UD	Urethral Discharge
VDRL	Venereal Disease Research Laboratory
VIA/VILLI	Visual Inspection Using Acetic Acid/Lugos Iodine
WHA	World Health Assembly
WHO	World Health Organization

GLOSSARY OF TERMS

Aetiology	The cause or set of causes or manner of causation of a disease or condition
Chancre	Painless ulcer particularly one that develops at the genitals in venereal disease
Immunity	Ability of the body to resist disease either through the activities of specialized blood cells or antibodies
Infection	The invasion and multiplication of organisms such as bacteria, viruses and parasites that are not normally present within the body
Menorrhagia	A medical term for menstrual periods with abnormally heavy or prolonged bleeding
Metrorrhagia	Irregular uterine bleeding at irregular intervals particularly between the expected menstrual periods
Pruritus	Severe itching of the skin as a symptom of various elements
Syndrome	A group of symptoms that consistently occur together or a condition characterized by a set of associated symptoms
Tenesmus	An ineffectual and painful straining for an extended time. Straining to defecate is rectal tenesmus while straining to urinate is vesicle tenesmus
Vesicles	A membranous and usually fluid filled pouch such as bladder, sac, cyst, vacuole, or cell within the body

EXECUTIVE SUMMARY

Sexually Transmitted Infections (STI) continue to be a public health crisis worldwide. At their core, they affect the quality of life of millions and can have far-reaching consequences on their victims, impacting on their reproductive health, affecting child health through infertility, are proven to cause cancer and in many cases cause severe pregnancy complications.

This guideline outlines prevention, management and control of STIs in the general population as well as specific key populations in a wide-array of settings. The guidelines are directly aligned with both the World Health Organization's Global Health Sector Strategy on STIs (2016-2021) and the Sustainable Development Goals enabling Kenya to contribute towards the achievement of global sexual and reproductive health targets.

STIs can be managed through aetiological, clinical and syndromic approaches, and in many cases a combination of all. This guidance maps out approaches and methods to directly deal with the advent of infection, while also providing for preventative methods and tactics towards curbing the spread. Irrespective of the approach used, all STI patients should be provided with a provider initiated testing and counselling services for HIV.

Syndromic approaches will remain the mainstay of STI treatment in Kenya because of the need for prompt treatment of large populations in settings without laboratory services. A limited number of referral health facilities will however be equipped to provide aetiological management of difficult STI cases and to generate data for antimicrobial resistance monitoring.

This guideline outlines how the building blocks of our health system will interrelate to provide efficient and effective STI services. In Kenya, the health system is describes as: service delivery, heath work force, health information systems, leadership & governance, access to essential medicines, health infrastructure and health financing.

The guideline applies the WHO recommended frameworks for STI surveillance, namely: case reporting, prevalence assessment, aetiologies' of STI syndromes, antimicrobial resistance monitoring, and special research to address emerging needs in STI management. Facilities will collect data on STI management using the appropriate MOH tools (clinical sheets, registers and tally sheets) and complete monthly summary forms which will subsequently be uploaded onto the DHIS as per the National Health Information System guidelines of Kenya.

Key components of quality assurance and control (QA/QC) to ensure that services are provided and reported in a standardized manner will include the following: training and continuous capacity development of providers, support supervision, client satisfaction surveys and exit interviews and laboratory proficiency testing. The quality improvement teams will routinely review performance gaps, plan, monitor progress, and pivot their plans as required to ensure sustainable and effective implementation.

This document will serve as a working tool for the national STI Control program and will serve as the premier guidance note for health workers in Kenya towards the management of STI related issues throughout the country.

CHAPTER 1

INTRODUCTION

CHAPTER 1: INTRODUCTION

1.1 Background Information

Sexually transmitted infections (STIs) are caused by viral, bacterial or parasitic microorganisms that spreads from person to person during sexual contact. However, other modes of transmission may include mother-to-child during pregnancy or childbirth, blood transfusion, or other contact with blood or blood products. As many as 30 distinct STIs have been identified globally. Some of these are easily treatable while some are not. HIV, the virus that causes AIDS, is perhaps the most serious STI.

Since 1990 Kenya adopted syndromic approaches to STI management to address the high cost of aetiological treatment, responding to the limited availability of laboratory services for STI identification. The initial algorithmic approach was validated for the first time in 1995 and remained in use until 2015, when the Rapid Advice was developed. The emergence of resistance to antimicrobial agents in the algorithm and the changing profile of aetiological agents associated with specific syndromes necessitated a review of the current national STI treatment guidelines. The new guidelines by the MoH includes the most current information required to effectively manage STIs through the syndromic approach as at the date of its release.

The revised guidelines exclude quinolones (e.g. Norfloxacin, Ciprofloxacin) from the list of drugs for treatment of Neisseria gonorrhoea due to increased resistance and repl aces them with cephalosporins (Cefixime and Ceftriaxone), as first line and second line drugs, respectively.

These guidelines are based on evidence from global (and national) data on aetiology of STI syndromes and antimicrobial susceptibility of their causative agents. It conforms to WHO guidelines that reinforce the need to treat STIs with the right medication, at the right dose, and the right time to reduce their spread and improve sexual and reproductive health.

The different categories of STIs are included together as syndromes for the following reasons:

- Prevention of STIs/reproductive tract infections (RTIs) and their complications require a common approach within reproductive health services
- The clinical appearances of different STIs overlap, 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 transmitted infections difficult
- Different approaches to management are needed to provide appropriate care and minimize stigma

The choice of antimicrobial agents included in this revised guidelines is based on:

1. The route of administration (oral route preferred)
2. Dosing frequency (single dose regimen preferred)
3. Cost (lower cost preferred)
4. Cross-resistance with other commonly used drugs (classes with no cross resistance preferred) and
5. Antibiotic spectrum (wider spectrum covering multiple syndromes preferred).

This guidance provides a systematic approach to improve risk assessments, promote evidence-based diagnosis and management, decrease complications, and decrease neonatal complications of untreated STIs.

1.2 Epidemiology

Globally, more than a million STIs are contracted every day. In 2012, an estimated 357 million new cases of curable STIs occurred among 15–49 year-olds worldwide (Newman et al., 2015). These include Chlamydia trachomatis (131 million), Neisseria gonorrhoea (78 million), syphilis (6 million), and Trichomonas vaginalis (143 million). Furthermore, an estimated 500 million people are infected with Herpes simplex (HSV) type 2, and approximately 290 million women are harbouring Human papillomavirus.

Unfortunately, there is little information on the incidence of STI's in Kenya but it is believed that similar trends are shared with other developing countries. A cross-sectional study conducted among women aged 18-49 years attending a family planning clinic at Kenyatta National Hospital found a high prevalence of Chlamydia trachomatis (13%), with the highest age-specific prevalence occurring in the 25-29 years age group (21%). None of the women were infected with Neisseria gonorrhoea (Maina et al., 2016). In the 2014 Kenya Demographic and Health Survey (KDHS) among respondents who had ever had sex, 2% reported having had an STI in the 12 months preceding the survey, while 6% of women and 2% of men reported having recently experienced an STI or STI symptoms (Kenya National Bureau of Statistics, 2014).

Key populations, often referred to as high risk populations are an important group in the efforts to control STIs. A study conducted by the National AIDS and STI Control Programme (NASCOP) found among people who inject drugs (PWID), prevalence of STIs was higher than that of the general population; chlamydia 4.2%, syphilis 1.7%, gonorrhoea 1.5%. It was found that female injection drug users had high prevalence of trichomoniasis and bacterial vaginitis at 38.1%, (Tun et al., 2015). NASCOP also found among MSM a significantly higher proportion (26.3%) of male sex workers infected with HIV than among non-sex workers (12.2%), it also found that the prevalence of syphilis, gonorrhoea, or chlamydia did not significantly differ between the groups (Muraguri et al., 2015). However, positive tests for one or more of these three STIs combined among sex worker MSMs was higher (15.0%) than among MSM who were not sex workers (5.3%). STIs were highest among study participants practicing receptive anal intercourse, where prevalence of rectal gonorrhoea and chlamydia was 5.6% and 3.2% respectively among non-sex worker MSM, and 5.0% and 4.3% among male sex workers. Furthermore, genital warts have been reported among MSMs attending KP clinics. The predominance of cases suffered from complications due to late identification.

The prevalence of reported infections among women who are currently married or living together with a partner is 6%, among those who are divorced, separated, or widowed is 7%, and the percentage for women who had never been married is 4%.

Among female sex workers (FSW), a surveillance study in Nairobi found the prevalence of trichomoniasis, bacterial vaginitis, and candidiasis ranged from 10% to 28%, with slightly higher STI rates among HIV infected women. The most frequent STI symptom reported was abnormal vaginal discharge (24%) followed by burning pain during urination (23%), vaginal ulcer or sore (8%), and anal ulcer or sore (1%). Significantly higher occurrences of abnormal vaginal discharge and vaginal ulcer or sore was observed among HIV-infected women. Surprisingly, the prevalence of biomarkers for syphilis, gonorrhoea, and chlamydia infection was low (<5%) among all participants, as well as among the HIV-infected participants.

In the future, anorectal and oropharyngeal STIs are expected to become more prevalent, especially with at risk communities. In a study by Muraguri et al., (2015), oropharyngeal gonoccocal infection was found to be an important source of gonorrhoea transmission. It also provided a microbiological environment conducive to the development of extended spectrum cephalosporin resistance through gene transfer with commensual Neisseria species that normally reside in the throat. In another study conducted in the Netherlands among MSMs and high risk women, the prevalence of isolated anorectal and oropharyngeal chlamydia and GC was high at 68.5% and 76%, respectively in the men and 22.8% and 58.5%, respectively in the women (Genevieve et al., 2013). Results from the TRANSFORM study conducted among MSMs in Nairobi, showed prevalence of oropharyngeal GC to be at 3.9% and anorectal GC at 12.5%. Another study conducted among MSMs in Kisumu, by the Nyanza Reproductive Health Society (Anza Mapema Study) showed an incidence of 7.7% in urogenital STIs and 2.5% in anorectal STIs.

STIs among pregnant women may be associated with adverse pregnancy outcomes. The WHO estimates that 2 million syphilis infections occur among pregnant women annually, with 65% of these resulting in adverse pregnancy outcomes (Newman et al., 2013). Studies of pregnant women in Sub-Saharan Africa (including Kenya) suggest that chlamydial infection prevalence are 6.9%. HIV positive pregnant women within the Southern Africa sub cohort showed a prevalence of 21.3% (Adachi et al., 2015). A recent study conducted among women attending an antenatal clinic in a rural setting in Kenya found that 20.8% of the study participants had a curable STI (Masha et al., 2017) with prevalence of C. trachomatis (14.9%), N. gonorrhoea (1%), T. vaginalis (7.4%), bacterial vaginitis (19.3%) and genital ulcers (2.5%).

Approximately 185 million people worldwide are infected with the Hepatitis C virus (HCV), more than

Among young adults, a cross sectional study conducted in Kisumu among women aged between the age of 18-24 years (Ombati et al..), showed that herpes simplex virus type 2 was the most prevalent STI at 30.4%, HIV was 6.7%, in addition, non-classical STIs such as bacterial vaginosis and yeast infection were diagnosed in 19.9% and 10.6% of the women, respectively. Neisseria gonorrhoea and syphilis had a prevalence of 0.6% while Chlamydia trachomatis was 4.5%. In bivariate analysis results indicated that, sexual debut before 18 years of age, HSV-2 sero-positivity, and low levels of education were associated with HIV infection.

five times as many people as are infected with HIV. The WHO World Health Assembly (WHA) in 2010 adopted a resolution to recognize the importance of addressing viral hepatitis, with a special focus on Hepatitis B (HBV) and Hepatitis C (HCV) as sexually transmitted infections. The estimated prevalence of chronic HBV infection in Kenya is 5.16% (Schweitzer et al., 2015). The prevalence of HCV infection among IDUs in Kenya is much higher (22.2%) as compared to that of the general population, which is estimated to be 0.2-0.9% (Muasya et al., 2008). Vaccination for the Hepatitis B negative cases has been recommended as a prevention strategy while treatment of Hepatitis C is being provided in targeted projects in the country.

1.3 Public Health Significance

Failure to diagnose and treat STIs early may result in serious complications:

1. Affecting the quality of life of the infected individual
2. Causing serious morbidity and mortality
3. Having a direct impact on reproductive and child health through infertility
4. Cervical cancer and
5. Pregnancy complications.

Mother-to-child transmission of STIs can result in:

1. Stillbirth
2. Neonatal death
3. Low-birth-weight babies
4. Prematurity
5. Sepsis
6. Pneumonia
7. Neonatal conjunctivitis and
8. Congenital deformities.

Syphilis during pregnancy can result in stillbirth, neonatal deaths, premature births or low birth weight babies (Newman et al., 2013). Human papillomavirus is responsible for an estimated 528,000 cases of cervical cancer and 266,000 cervical cancer deaths each year (WHO, 2016), while gonorrhoea and chlamydia are major causes of pelvic inflammatory disease (PID) and infertility in women, ophthalmia neonatorum a potentially blinding condition in new-borns, and may lead to urethral stricture and infertility in men.

The physical, psychological and social consequences of STIs severely compromise the quality of life of those infected. Adequate control of STIs will contribute to reducing disease and human suffering. Health care providers should recognize the serious stigma surrounding STIs and treat patients with respect and privacy.

Furthermore, STIs have an indirect impact through their role in facilitating sexual transmission of human immunodeficiency virus (HIV). Infection with syphilis, gonorrhoea, chlamydia or HSV does not only increase the risk of acquiring HIV infection, but also increases the risk of HIV transmission by increasing genital HIV load (Kalichman et al., 2011)

1.4 Common STI Syndromes and Aetiological Agents

The common STI syndromes and infections, their signs and symptoms and the causative agent associated with them are summarized in *Table 1.*

Table 1: Common STI syndromes, their aetiology, and their signs and symptoms

Syndrome/Infection	Signs and symptoms	Aetiology
Urethral Discharge (Urethritis)	Urethral discharge	Possible causes:
	Burning on urination	N. gonorrhoea
	Irritation in the distal urethra or meatus	C. trachomatis
	Meatal erythema	Trichomonas vaginalis Herpes simplex virus Mycoplasma genitalium Ureaplasma urealyticum
Vaginal discharge (Cervicitis)	Mucopurulent cervical discharge	Possible causes:
	Cervical friability	N. gonorrhoea
	Vaginal discharge	C. trachomatis
	Strawberry cervix	Trichomonas vaginalis HSV
Genital Ulcer syndrome	Ulcers (erosive or pustular)	Most common:
	Vesicles	Herpes simplex virus 1 or 2
	Papules	T. pallidum
	Inguinal lymphadenopathy	C. trachomatis (LGV serovars L1, L2 or L3) Haemophilus ducreyi Klebsiella granulomatis
Scrotal swelling	Unilateral testicular pain/swelling	Most common (varies with age):
	May have erythema and edema of the overlying skin	C. trachomatis
	With or without urethral discharge	N. gonorrhoea
	Fever	Coliforms Pseudomonas
Pelvic Inflammatory Disease	Lower abdominal pain	C. trachomatis
	Deep dyspareunia	N. gonorrhoea
	Abnormal bleeding	Genital tract mycoplasma
	Fever	Other aerobic or anaerobic bacterial species
Vaginal Discharge (Vaginitis)	Vaginal discharge	**Most common:**
	Vaginal odour	Bacterial vaginitis
	Vaginal/vulvar pruritus	Vulvovaginal candidiasis
	Vaginal/vulvar erythema Dysuria	Trichomoniasis

Anorectal Syndromes:	**Varies according to specific syndrome:**	Varies according to specific syndrome:
Proctitis	Mucopurulent rectal discharge	N. gonorrhoea
Proctocolitis	Anorectal pain	C. trachomatis (LGV and nonLGV serovars)
Anal/Genital Lesions/growths	Growths in anal/genital region or on mucous membranes	Human papillomavirus
	Multiple and or polymorphic	Molluscum contagiosum
	Asymmetrical	Skin tags ?fissures
	Non-inflammatory	Carcinoma
	May be accompanied by: Pruritus Bleeding/ Obstruction, depending on location (i.e., urethra or vagina)	Normal variations

1.5 Scope of the Guideline

This guideline outlines prevention, management and control of STIs in the general population and key populations in varied settings, which includes evidence-based treatment recommendations. It addresses the prevention and care of STIs including the application of specific aspects of syndromic management e.g. utilizing the anal infection management algorithm. However, these guidelines do not include Hepatitis and HIV prevention and treatment, which are addressed in the National Guidelines for Management of Hepatitis Virus in Kenya, and Guidelines for Use of Antiretroviral Drugs for Treatment and Prevention of HIV.

CHAPTER

2

PREVENTION AND CONTROL OF STIs

CHAPTER 2: PREVENTION AND CONTROL OF STIs

2.1 Introduction

This guideline seeks to support the realization of SDG 3 which outlines the targets to ensure healthy lives and promote well-being for all. SDG 3 advocates for ensuring universal access to sexual and reproductive health-care services, family planning information and education and the integration of reproductive health into national strategies and programmes.

The prevention and control of STIs are based on the following five major strategies:

- Education and counselling of persons at risk on ways to avoid STIs through changes in sexual behaviours and use of recommended prevention services.
- Identification of asymptomatically infected persons and of symptomatic persons unlikely to seek diagnostic and treatment services.
- Effective diagnosis, treatment, and counselling of infected persons.
- Evaluation, treatment, and counselling of sexual partners of persons who are infected with an STD
- Pre-exposure vaccination of persons at risk for vaccine-preventable STIs.

2.2 Prevention of STIs

2.2.1 Primary Prevention of STIs

Primary prevention of STIs begins with promoting changes to risky sexual behaviours that increase the risk of infection. Health care providers have a unique opportunity to provide education and counselling to their patients. As part of the clinical interview, health care providers should routinely and regularly obtain sexual histories from their patients and address management of risk reduction.

When engaging with an at risk patient, it is important for practitioners to begin a dialogue with their clients to assist them in reviewing their at risk behaviours, appraise them of the risk of STI contraction and provide preventative assistance where appropriate.

Effective interviewing and counselling skills, characterized by respect, compassion, and a non-judgmental attitude toward all patients, are essential to obtaining a thorough sexual history and to delivering prevention messages effectively.

It is important to encourage patients to utilize “primary prevention interventions” to keep them safe and free from infection.

2.2.2 Secondary Prevention of STIs

Secondary prevention curtails STIs onset and transmission through early diagnosis and treatment. Risk-reduction counselling must screen clients for infection, discourage risky sexual activities, and encourage partner notification of infections. Patient-initiated partner notification may encourage partner referral for STIs aetiological evaluation and treatment. Where appropriate laboratory facilities for investigations are unavailable the syndromic management approach is recommended.

2.2.3 Tertiary Prevention of STIs

Tertiary prevention requires medical treatment and should reduce local complications (e.g. urethral stricture) or systemic complications (e.g. pelvic inflammatory diseases and AIDS), and sequelae associated with untreated or incompletely treated infections.

2.3 Control of STIs

RISKS FACTORS FOR STI'S ACQUISITION AND TRANSMISSION

a. Participation in unprotected vaginal, oral or anal sex (no condom or dental dam used)
b. Genital to genital sexual contact
c. Previous history of stis
d. Having multiple sexual partners
e. Use of non-barrier contraceptives, such as spermicides especially those containing n-9 due to disruption of the genital epithelium
f. Use of injection drugs, alcohol or other substances that can impair decision making ability
g. Use of prep which may lead to decreased use of condoms hence increased risk
h. Inconsistent and irregular use of condoms during sex
i. Vaginal practices e.G. Douching
j. Iud placement for women especially within the first 20 days of placement k) use of spermicides

The vision for STI control in line with WHO is to have zero new STIs, zero STI-related complications and deaths, and zero discrimination in a world where everybody has free and easy access to prevention and treatment services for STIs, resulting in people able to live long and healthy lives (WHO, 2016b). This guideline focuses primarily on three infections that require immediate action for control and that can be monitored:

- Neisseria gonorrhoea — because of the rising risk of untreatable gonorrhoea and the risk of co-infection with other STIs including Chlamydia trachomatis.
- Treponema pallidum — with the elimination of congenital syphilis, which implies that strong

Primary Prevention

- **Interventions**
- **Abstinence**
- **Condom promotion to increase their use, and reduce barriers to utilization**
- **Behavioural change interventions with explicit messages about the risks of STIs**
- **The HPV vaccine, bivalent, quadrivalent, or 9-valent, is recommended routinely for females aged 11 and 12 years and can be administered beginning at 9 years of age Vaccination is also recommended for females aged 13–26 years who have not yet received all doses or completed the vaccine series. The quadrivalent vaccine is recommended routinely for MSM through age 26 years; the efficacy of this vaccine in preventing HPV associated diseases in men aged >26 years is unknown.**
- **Hepatitis B vaccination for those who were not vaccinated when younger**
- **Vaccination against Hepatitis A and B for all MSM is recommended**
- **Outreach and peer-based interventions for high risk populations**
- **On-site individual counselling and HIV testing, mass communication regarding risk reduction, and multiple-component motivation (e.g. advertising campaigns) and skills education in STI clinics**

systems are in place to ensure screening and treatment of all pregnant women and control of syphilis in specific populations.

- Human papillomavirus — with an emphasis on vaccination towards the elimination of cervical cancer and genital warts.

The Global Health Sector Strategy on STIs has set ambitious targets to eradicate new infections by 2030, namely:

- A reduction of T. pallidum incidence globally by 90% (2018 global baseline).
- A reduction of N. gonorrhoea incidence globally by 90% (2018 global baseline).
- An incidence of 50 or fewer cases of congenital syphilis per 100,000 live births in 80% of countries.
- Sustenance of 90% national coverage and at least 80% coverage in every district (or equivalent administrative unit) in countries with the HPV vaccine in their national immunization programme.

Any effective control strategy requires identification of vulnerable populations and working towards mitigation strategies with them. An individual is vulnerable to STIs when his /her ability to avoid infection is diminished by inadequate personal knowledge or skills, cultural norms or circumstances.

These vulnerabilities include:

a. Having primary education or less for an individual and/or their spouse
b. Lack of formal employment
c. Poverty
d. Low income
e. Intra uterine device (iud) placement for women especially within the first 20 days of placement
f. Alcohol and substance abuse
g. Use of spermicides especially those containing n-9 due to disruption of the genital epithelium
h. Individuals and/or partners with multiple sex partners
i. Gender based violence
j. Mental and physical disability
k. Childhood sexual abuse
l. Child marriage
m. Key populations
n. Out of school adolescents
o. Early sexual debut
p. Disempowerment of women
q. People living with hiv
r. Conflict situations
s. Refugees/internally displaced persons and immigrants

2.4 Screening for STIs

For those who are sexually active, getting screened for STIs is important for protecting their health. This is especially true among key and priority populations who have a higher prevalence of STIs.

Regular screening for STIs during medical check-ups should be conducted by health care providers (HCP) on site and at outreaches. The HCP should take a detailed history and carry out a careful clinical examination to detect the presence of infections consisting of examination of oropharynx, anorectal and genitals including speculum and proctoscopy for all those who have a history of receptive anal intercourse. There are 5 P's (Annex 3) which are critical during STI screening that will help the HCP assess risk of STI in the client.

Screening for different types of STIs is dependent on risk and vulnerabilities of different population sub groups. Although STI services play an important role in the prevention and control of STIs, there are several barriers to uptake of these services. These include but are not limited to the following:

- Culture and religion
- Age and consent
- Asymptomatic STIs
- Limited access to STI information
- Stigma
- Fear of the partner notification process; treatment at local pharmacy shops
- Lack of youth friendly reproductive health centres where they could seek STI testing
- Confidentiality
- Commodity supply

2.5 Communication and Messaging

2.5.1 Information Education and Communication (IEC)

IEC is important to promote STI prevention and control. Messaging should target a number of different stakeholders to ensure that all levels of society is sensitized and able to formulate informed opinions on STIs, their prevention and their treatment.

Table 2: Target audience matrix for IEC

Target	Type of message	Media	Broad Messages
Policy Makers	Resource mobilization and strategic plans for ministry and donors to improve STI management	Fact sheets Policy briefs	Prioritization for the allocation of funds for STIs at national and county level
International and local donors	Resource mobilization and strategic plans for donors to improve STI management	Fact sheets Policy briefs	Prioritization for the allocation of funds for STIs at global level
Youth	Awareness creation Health Information	Social Media Twitter WhatsApp Snap chat Face Book Instagram Creative posters Champions of STIs Celebrities	Prevention measures and management Everyone is at risk Risky behaviours Mode of transmission of STIs Types of STIs Signs and symptoms of STIs
General Population & KPs	Awareness creation Health Information	Interpersonal Communication (IPC) Materials Brochures Posters Peer education job aids Documentaries Special website with online materials	Prevention measures and management Everyone is at risk Risky behaviours Mode of transmission of STIs Types of STIs Signs and symptoms of STIs
Prison staff	Screening on conviction	Outreaches Health education talks	Routine care during outreaches
MOH Health Care Service providers	Updates on STI management and treatment Routine Screening	Interpersonal Communication (IPC) Materials and equipment Counselling job aids Clinicians handbook Pre-service trainings for students Documentaries Guidelines Posters	

2.6. Advocacy for Prevention, Management and Control of STIs

2.6.1. Advocacy Definition:

Advocacy is seeking public support for or recommendation of a particular cause or policy on STIs prevention.

2.6.2. Advocacy Justification:

Advocacy is critical to fighting the stigma associated with STIs and their symptoms, to normalize conversations about sexual intercourse and sexual health, and to frame STI services as what they are: essential components of routine primary health care. Advocacy efforts can foster the political will and commitments required to scale up existing prevention services and develop new prevention tools. Strategies to fight STI stigma include education and awareness campaigns which provide clear, neutral, and non-judgmental information about STIs. These efforts could also improve STI care-seeking behaviour and reduce partner violence related to STI diagnoses. Advocacy efforts are required to be multi-dimensional, involving public and private sectors, professional and civil society organizations, and academic and other institutions. Special attention will need to be paid to reducing stigma among adolescents and other vulnerable populations, such as MSM and sex workers and PWID. The ability to simply and cost-effectively prevent hundreds of thousands of STI complications should not be held back because of lack of awareness and lack of political will related to stigmatization (WHO, 2013).

2.6.3 Advocacy Matrix

To be effective, advocacy should target various population groups.

Table 3: Target audience matrix for advocacy

Target Population	Media	Key Message
National Parliament (Health Committee, Senate)	Fact sheets Policy briefs	Prioritization for the allocation of funds for STIs at national level
County Assemblies Health Committees	Fact sheets Policy briefs	Prioritization for the allocation of funds for STIs at county level
MOH	Standard Operating Procedures National Guidelines Job aids for health care providers National Conferences	Regular CMEs on STIs
Professional medical bodies	National Conferences Dissemination of SOPs Newsletters	Policy direction with regards towards the Regulation/limit antibiotics.
CSOs to lobby	Fact sheets Newsletters	Stigma reduction
Community (Chief's barazas and targeted outreaches)	Pamphlets Posters Flip Charts	

Youth groups	Social Media Twitter Facebook Instagram Creative posters Champions of STIs (Celebrities)	
Media	Media sensitizations and training to build the capacity of media personnel to develop and promulgate supportive messages Improving the public's perception of prevention, control and care related to STIs Helping to mobilize political good will Helping to diminish stigmatization in society and communities Communicating prevention messages and raising awareness about the devastating consequences of STIs other reproductive tract infections Engaging bloggers on websites and platforms for key populations to disseminate STI prevention and treatment messages Establishing a hotline	
Churches, Mosques, other places of religious worship	Fact sheets Newsletters	Creating awareness Stigma reduction

CHAPTER

3

APPROACHES TO MANAGEMENT OF STI

CHAPTER 3: APPROACHES TO MANAGEMENT OF STI

STIs can be managed through aetiological, clinical and syndromic approaches; or through a combination of these approaches. The management of any STI through all of these approaches should follow these standard steps:

1. History taking
2. Physical examination
3. Establishment of diagnosis and treatment plan
4. Education and counselling to prevent re-infection
5. Education and counselling to enhance compliance
6. Condom promotion, demonstration and dispensing
7. Assisted partner notification

The last 4 steps are commonly referred to as 4Cs namely: Counselling, Compliance, Condoms and Contact Tracing. In addition, irrespective of the approach of management used, all STI patients should be provided with HIV testing services.

3.1 Aetiological Approach to STI Management

The aetiological approach to STI management requires that the clinician assesses the patient, procure a specimen of the infection, and provides treatment following proper diagnosis. Rapid tests are also available for some STIs. This approach requires a good laboratory setting and well-trained personnel to perform the necessary laboratory procedures.

Positive aspects of the aetiological approach:

- It is specific and reduces pill burden to the patient.
- It is good for monitoring surveillance of treatment outcomes.
- It reduces the need to buy excessive amount of drugs.
- It is appropriate for managing unexplained STIs treatment failures.

The aetiological approach to STI management has however failed in various parts of the developing world due to lack of sufficient resources e.G. Equipment and personnel. Many patients fail to return for their laboratory results and therefore do not receive treatment.

The disadvantages of the aetiological approach are;

- Delay in starting treatment if results are not availed promptly
- High cost of buying equipment, reagents and training personnel
- The sensitivity and the specificity of some laboratory tests can vary significantly hence need external quality control systems

For sites with the necessary equipment and trained personnel for an aetiological approach to management of STIs, details for collection and handling of biological specimens from clients for laboratory analysis is found in Annex 4.

3.2 Clinical Approach to STI Management

The clinical approach requires the presence of a skilled clinician to make a diagnosis based on his/her knowledge and experience before initiating presumptive treatment.

This method works well with the aetiological based approach to STI management and has the following advantages:

- It offers treatment to a bigger number of patients than aetiological based approach alone.
- It saves time.
- It reduces laboratory expenses.

Wide use of the clinical approach to STI management is limited by several disadvantages

- It requires high clinical skills.
- Mixed infections are often overlooked.
- It does not identify asymptomatic STIs.
- It is prone to errors.

3.3 Syndromic Approach to STI Management

The syndromic approach to STI management uses flowcharts to guide diagnosis and treatment of sexually transmitted infections. A syndrome is a combination of symptoms and signs that appear together and characterize a disease or medical condition (e.g. a combination of pain on passing urine and urethral discharge). Many common STIs present with similar signs and symptoms and can therefore be grouped into a small number of syndromes. The aim of the syndromic approach to STI management is to identify each syndrome and treat it with a combination of antimicrobial agents effective against the main causal pathogens. Flow charts used for syndromic management of STIs are graphic representations of logical sequences for decision-making towards the management of clients who present symptoms of STIs. It presents a series of consecutive decisions and actions that need to be taken, starting with specific symptoms and signs, through identification of syndromes and finally the choice of treatment.

The advantages of the syndromic approach to STI management are:

- The flow charts used in this approach represent a combination of simple, practical scientific information for decision making in primary health settings and in most cases does not require highly trained health care providers.
- STI managed is based on characteristic symptoms and signs without using expensive lab equipment.
- It allows for prompt initiation of STI treatment at first contact with clients reducing delays in diagnosis.
- The treatment covers the entire range of known causative agents for the syndrome, reducing chances of treatment failure and expediting effective treatment which reduces the risk of transmission and development of serious complications.
- The use of flow charts in this approach standardizes STI treatment across diverse settings and allows for comparative results across sites, builds client confidence, and allows for efficient centralized procurement of drugs.
- It allows for rapid, effective management of STIs in busy primary health care clinics.

- Syndromic approach to STI management however has one major disadvantage.
- Many patients may receive more drugs than they need hence resulting in their being over treated

Despite its disadvantages, the syndromic approach to STI management can lead to substantial improvements in quality and effectiveness of STI case management and control. It is recommended that this approach be utilized as the main approach for management of STIs in Kenya. In extreme cases of treatment failure, patients should be referred to the designated referral health facilities equipped to manage STIs etiologically.

CHAPTER

4

CASE MANAGEMENT OF STIs

CHAPTER 4: CASE MANAGEMENT OF STIs

The syndromic approach will remain the mainstay of STI treatment in Kenya because of the need for prompt treatment of large populations in settings without laboratory services. A limited number of referral health facilities are equipped to provide aetiological management of difficult STI cases (as described in chapter 3), and to generate data for antimicrobial resistance monitoring.

This guidance provides the following syndromic decision making flow charts that are to be used to diagnose patients:

- STI syndromes namely penile discharge (urethritis)
- Vaginal discharge (vaginitis and cervicitis)
- Lower abdominal pain in women (pelvic inflammatory disease)
- Sores on the male and female genitalia (genital ulcer syndrome)
- Abnormal growth on the genitalia or the neighbouring areas in both men and women (genital warts)
- Neonatal conjunctivitis (ophthalmia neonatorum)
- Abnormal swellings of the lymph nodes in the groin (bubos)
- Anorectal discharge
- Anorectal ulcers
- Scrotal swelling
- Oropharyngeal infection.

The diagnosis of STIs using the syndromic approach is based on careful history taking, physical examination and the use of a flowchart to guide the choice of first line drugs and alternative medication for clients who do not respond to first line drugs. STI diagnosis relies on identification of symptoms and signs and HCPs should elaborate on the chief complaints of the patient in order to determine the syndrome. The demographic characteristics of the patient including their age, sex, and marital status, and past medical and sexual history are all important components of the history. When addressing patients, the following questions should be asked to determine the syndrome and identify which flow chart to employ:

1. **Urethral discharge in men:** Duration, amount of discharge, colour of discharge, pain on micturition, history of multiple sexual partners, history of last unprotected casual sex.
2. **Vaginal discharge:** Duration, colour, amount and odour of the discharge, history of multiple sexual partners, history of last unprotected casual sex.
3. **Lower abdominal pain in women:** Duration, location of pain, type of pain, its severity, radiation, history of concomitant vaginal discharge, last menstrual period if the woman is pre-menopausal, and other systemic symptoms such as fever, nausea and vomiting, history of multiple sexual partners, history of last unprotected casual sex.
4. **Genital ulcer:** Duration, whether it is solitary or multiple, if painful the location, history of recurrence of the ulcer, history of multiple sexual partners, history of last unprotected casual sex.
5. **Neonatal conjunctivitis;** Duration, presence of unilateral or bilateral eye discharge, sticky eyes and swollen eyelids.

6. **Anorectal discharge:** Duration, history of sexual behaviour such as MSM or anal sex for women, history of multiple sexual partners, history of last unprotected casual sex.
7. **Anorectal ulcers:** Duration, present of pain, history of sexual behaviour such as MSM or anal sex for women, history of multiple sexual partners, history of last unprotected casual sex.
8. **Oropharyngeal infection:** History of sore throat, presence of oral ulcer, loss of voice, history of oral sex with multiple sexual partners, recent unprotected oral sex.
9. **Scrotal swelling:** Duration, presence of pain, history of trauma, history of concomitant urethral discharge.
10. **Inguinal Bubo:** Duration, presence of pain, ulceration, history of urethral discharge (males) or vaginal discharge (females), locations of the swelling, history of multiple sexual partners, history of last unprotected casual sex.
11. **Anogenital growths:** Growths on the lips, oral cavity, genital or rectal regions, duration of the growths, history of oral or anal sex, history of anal or oral sex with multiple sexual partners.

History taking should be followed by a systematic physical examination of the patient conducted in a secure and private place with:

- Proper lighting
- Examination table
- Vaginal speculum
- A proctoscope
- Examination gloves.

The health worker should make the patient feel relaxed while examining his/her sexual organs. Briefly, physical examination should include general inspection of the skin for rash, sores or warts followed by palpation for presence of enlarged lymph nodes, examination of the oral cavity, and the inguinal region. In men, the penis should be examined for ulcers, discharge or warts, and the scrotum and testicles for swelling and tenderness. In women, the lower abdomen should be examined for tenderness by digital bimanual examination, and the vulva and vagina for ulcers and vaginal discharge using a speculum. For MSM and women who engage in anal sex, the anal area should be inspected visually, and with a proctoscope (if necessary). For those who engage in oral sex and have symptoms of sore throat with a history of recent unprotected oral sex, the throat should be examined using a penlight touch with the tongue depressed with a tongue depressor.

Clients who fail to respond after completing extended treatment with alternative medication (i.e. after 14 days of syndromic treatment using first line and alternative medication) should be referred for aetiological management at designated referral health facilities.

4.1 Urethral Discharge Syndrome In Men

Urethral discharge is the presence of abnormal secretions from the opening of the urethra. This syndrome is the most common presentation of STIs among men in Kenya. Usually urethral discharge is accompanied by a burning sensation when passing urine (dysuria), by increased frequency of passing urine, and by an itching sensation in the urethra. It can be caused by different pathogens, but the two most common causative agents of urethral discharge in men are Neisseria gonorrhoea

and Chlamydia trachomatis. Other less frequent causative agents include Trichomonas vaginalis and Mycoplasma genitalium. Once a diagnosis of urethral discharge is made based on careful history taking and physical examination, a flowchart is used to guide decision-making.

4.1.1 Clinical Manifestation

- Urethral discharge (may be scanty or profuse, clear or purulent)
- Pain on passing urine
- Increased frequency of passing urine

4.1.2 Clinical Examination

- Elicit the discharge; if not, gently massage the penile base towards the urethra.

4.1.3 Syndromic Treatment of Urethral Discharge in Men

First Line Preferred:

Cefixime 400 mg PO stat AND Azithromycin 1 gm PO stat: 4 Cs OR

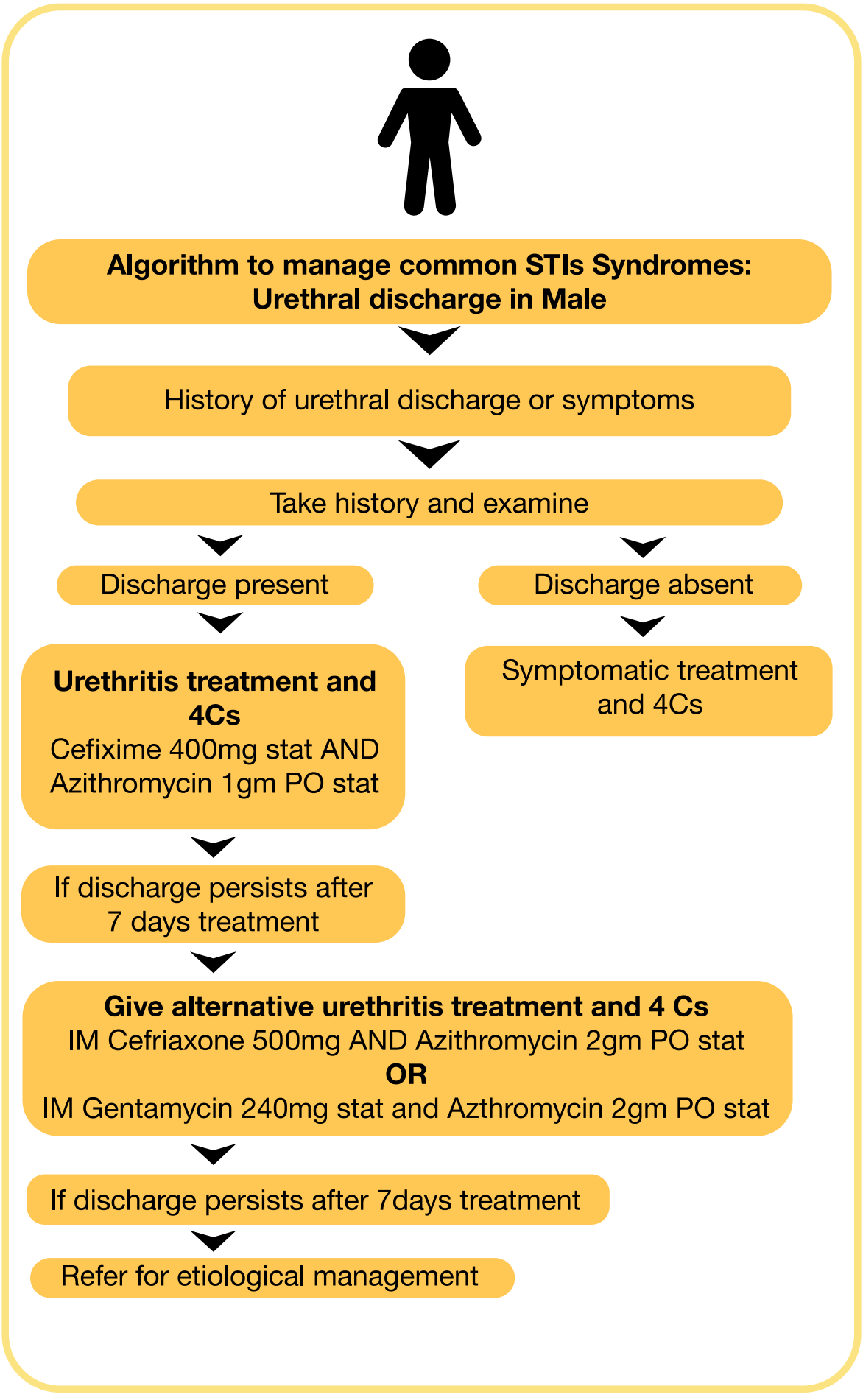
Second Line Preferred:

Ceftriaxone 500 mg IM stat AND Azithromycin 2 gm PO stat: 4 Cs

Continued evidence of urethral discharge despite syndromic management may be due to the following reasons:

- Re-infection from a non-treated sexual partner
- Non-gonococcal urethritis caused by m. Genitalium, t. Vaginalis or drug-resistant n. Gonorrhoea,
- These patients should be referred for aetiological management of the urethral discharge.

Figure 1: Algorithm for the Management of Urethral Discharge Syndrome in Men



4.2 Vaginal Discharge Syndrome

Women physiologically produce normal vaginal discharge, which is white, mucoid, odourless, non-irritating, either thin or thick depending on the stage of the menstrual cycle. Abnormal vaginal discharge which is most often associated with an STI is described in terms of quantity, colour or odour and most commonly indicates one or more of the following:

- Vaginal infection
- Vaginitis
- STIs such as Chlamydia (Chlamydia trachomatis), Trichomoniasis (Trichomonas vaginalis), Mucopurulent cervicitis due to gonorrhoea (Neisseria gonorrhoea)
- Non-STIs such as Bacterial vaginitis (multiple organisms) or yeast infection (Candida albicans)

4.2.1 Clinical Manifestation

Clinical differentiation between vaginal infection and vaginitis is difficult. An assessment of the woman's risk status may help in making a diagnosis of cervicitis. If the risk assessment is negative, treat for vaginitis. Where it is not possible to differentiate the two and/or the risk assessment is positive, treat patients for both cervicitis and vaginitis.

4.2.2 Clinical Examination

A speculum examination should be mandatory, when available, to exclude cervical erosion or ectopy.

4.2.3 Syndromic Treatment of Vaginal Discharge

All women presenting with abnormal vaginal discharge with a negative risk assessment should receive treatment for bacterial vaginitis and trichomoniasis. Additional treatment for yeast infections is indicated when clinically apparent as manifesting with a white, curd-like discharge, redness of the vulva and vagina, and itching. Yeast infections are a common cause of vaginitis during pregnancy. *See Figure 2 for Algorithm for the Management of Vagina Discharge Syndrome.*

In absence of lower abdominal pain or tenderness then vaginal discharge should be treated as;

4.2.3.1 Vaginitis

First Line Preferred: Clotrimazole pessaries 100 mg intravaginally OD for 6 days AND Metronidazole 2 gm PO stat: 4 Cs

OR

Second Line Preferred: Fluconazole150 mg PO stat AND Metronidazole 2 gm PO stat: 4Cs

In pregnancy: Give Clotrimazole pessaries 200 mg intravaginally OD for 3 days NOTE: Metronidazole is contraindicated in the 1st trimester of pregnancy.

In a situation where the above treatment fails after 7 days or where the risk assessment is positive then treat as;

4.2.3.2 Cervicitis;

First Line Preferred: Cefixime 400 mg PO stat AND Azithromycin 1gm PO stat: 4Cs

OR

Second Line Preferred: Ceftriaxone 500 mg IM stat AND Azithromycin 1gm PO stat; OR Gentamicin 240 mg IM stat AND Azithromycin 1gm PO stat: 4Cs

In case the client is pregnant and has cervicitis then use the following;

First Line Preferred: Cefixime 400 mg PO stat AND Azithromycin 1gm PO stat: 4Cs

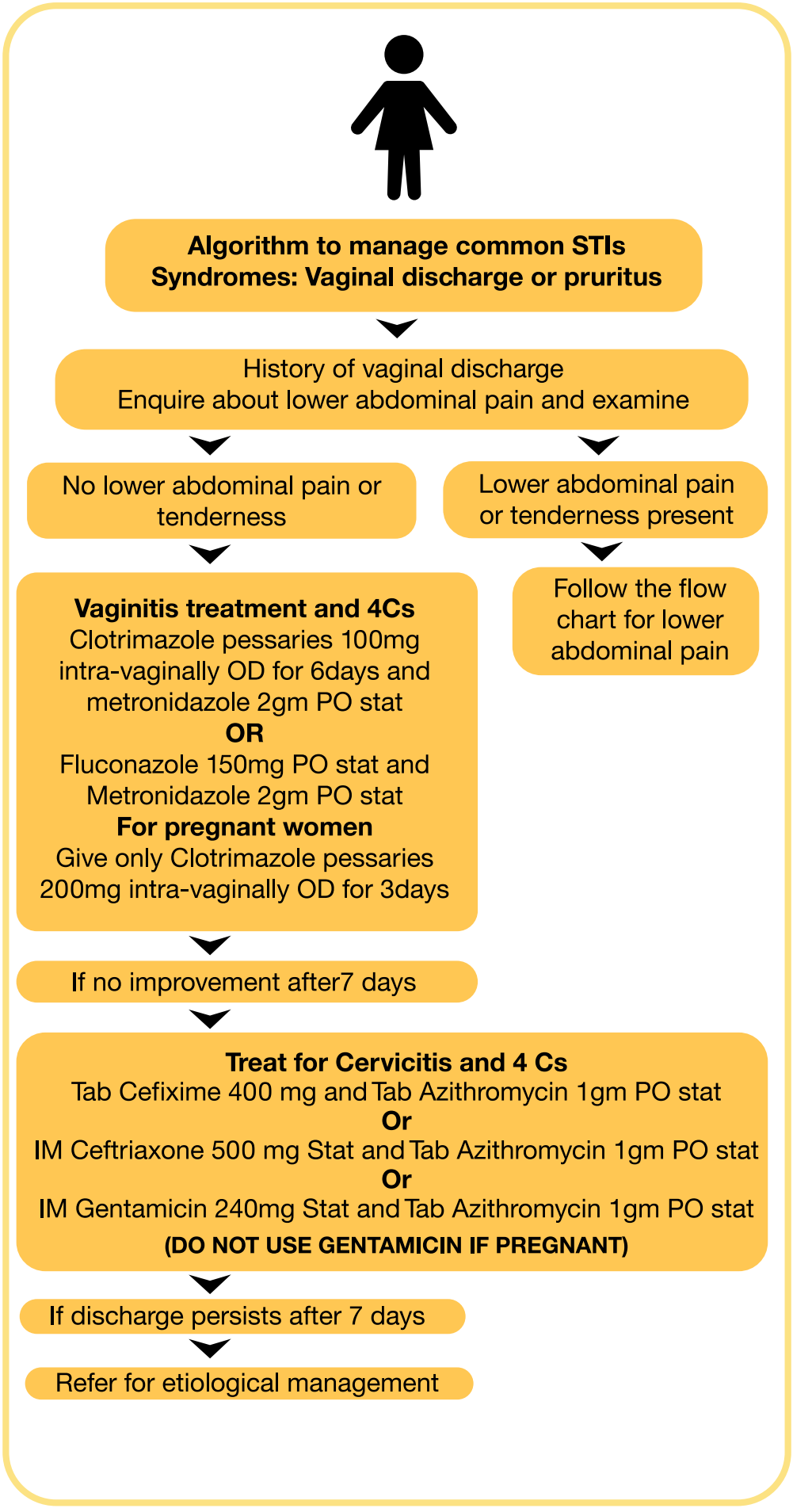
OR

Second Line Preferred: Ceftriaxone 500 mg IM stat AND Azithromycin 1gm PO stat: 4Cs

NOTE:

Gentamicin is contraindicated in pregnancy. Where all the above treatment fails then refer clients to a health facility for relevant investigations and aetiological management

Figure 2: Algorithm for the Management of Vagina Discharge Syndrome



4.3 Lower Abdominal Pain Syndrome In Women

All sexually active women presenting with lower abdominal pain should be carefully evaluated for signs of pelvic inflammatory disease (PID). Women with other genital tract symptoms should have routine abdominal and bimanual examinations when possible, given that some women with PID will not complain of lower abdominal pain. Symptoms suggestive of PID include the following:

- Lower abdominal pain
- Pain on intercourse (dyspareunia)
- Bleeding after sex or between periods
- Pain associated with periods (if this is a new symptom)
- Vaginal discharge
- Pain on urination (dysuria)
- Fever, nausea and vomiting may also be present

4.3.1 Clinical Manifestations

Clinical signs of PID are varied and may be minimal. Commonly patients will present with lower abdominal pain with or without an abnormal vaginal discharge.

4.3.2 Clinical Examination

PID is highly probable when a woman has lower abdominal, uterine or adnexal tenderness, evidence of lower genital tract infection, and cervical motion tenderness. Enlargement or indurations of one or both fallopian tubes, a tender pelvic mass, and direct or rebound abdominal tenderness may also be present. The patient's temperature may be elevated but is often normal.

4.3.3 Syndromic Treatment of Lower Abdominal Pain in Women:

Suspected PID, which presents, as lower abdominal pain syndrome in women should be treated promptly to avoid complications associated with it. *See Figure 3 for Algorithm for the Management of Lower Abdominal Pain Syndrome in Women.*

First Line Preferred:

Cefixime 400 mg PO stat AND Doxcycline 100 mg PO BD for 14 days AND Metronidazole 400 mg PO TDS for 14 days: 4Cs

OR

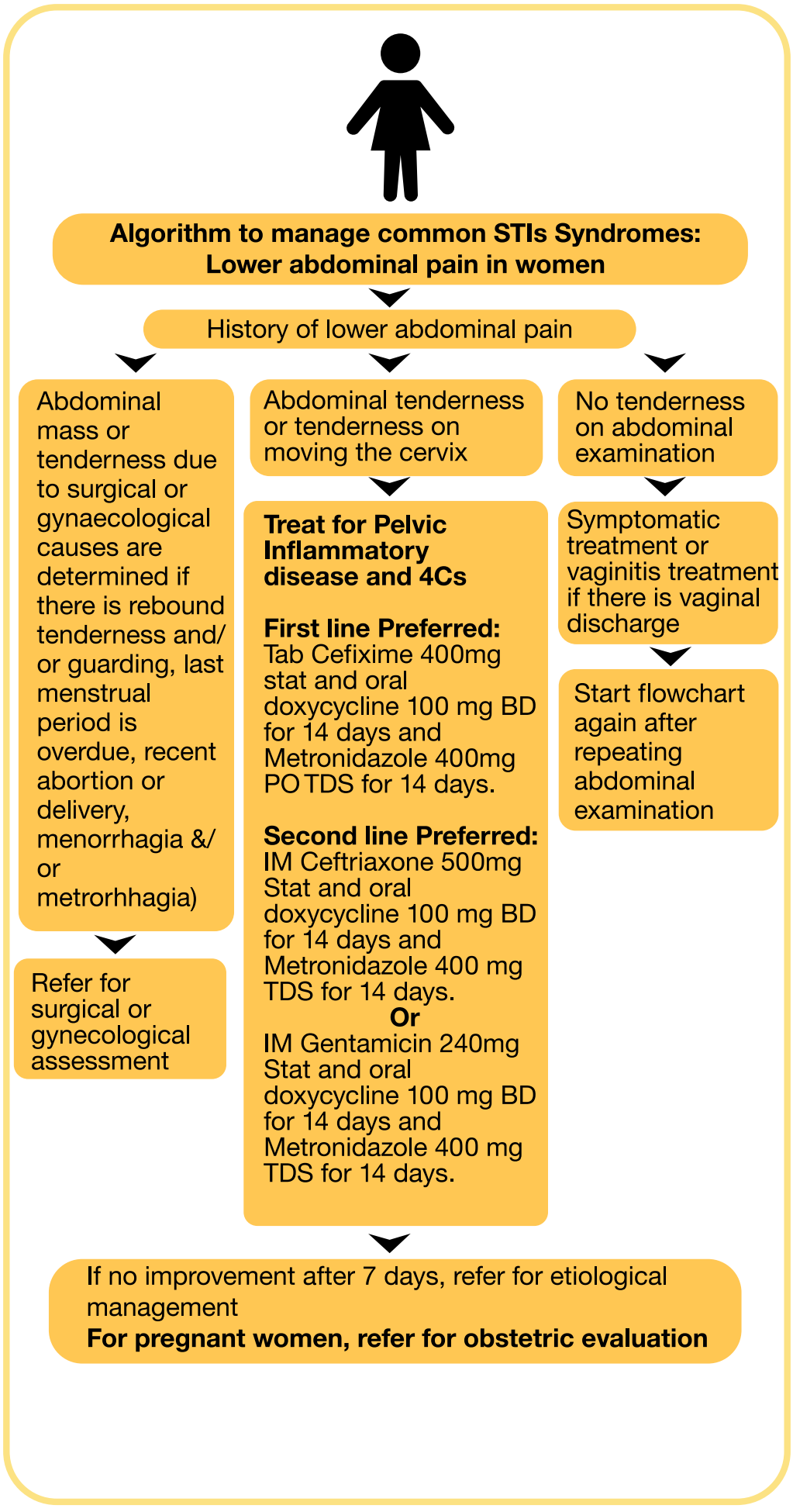
Second Line Preferred:

Ceftriaxone 500 mg IM stat AND Doxcycline 100 mg PO BD for 14 days AND Metronidazole 400 mg PO TDS for 14 days: 4Cs

OR

Gentamicin 240 mg IM stat AND Doxcycline 100 mg PO BD for 14 days AND Metronidazole 400 mg PO TDS for 14 days: 4Cs

Figure 3: Algorithm for the Management of Lower Abdominal Pain Syndrome in Women



4.4 Genital Ulcer Syndrome

Genital ulcers in both men and women resulting from STIs are a result of either syphilis or chancroid if solitary, or of viral herpes if multiple and vesicular.

4.4.1 Syphilis

Treponema pallidum is the causative organism for syphilis. Syphilis has 4 stages of clinical presentation:

Primary Stage

This is characterized by a local lesion at the site of entry, which ulcerates to form an ulcer. The classical ulcer known as a chancre, is usually single, painless and relatively clean. This may be unnoticed by the patient. Left untreated the chancre persists for about 3-6 weeks and then heals spontaneously. In most cases regional lymphadenopathy develops within a week of appearance of the chancre. The lymph nodes are non-tender, painless and often bilateral.

Secondary Stage

In this stage, Treponema pallidum disseminates widely throughout the body about 3-6 weeks after the appearance of the chancre. It is at this stage that the disease is seen to be systemic. Common symptoms of secondary syphilis include skin rashes, itch mainly at the palms and soles, generalized lymphadenopathy and mucosal ulceration, among others. All manifestations of secondary syphilis resolve with or without treatment.

Latent Stage

This stage of syphilis is asymptomatic after resolution of the clinical manifestations seen in secondary syphilis. However, during this stage the patients have a positive syphilis serology tests.

Tertiary Stage

Tertiary syphilis can affect many different organs in the body, including the heart, blood vessels, brain (neurosyphilis) and the eyes (ocular syphilis). Neurosyphilis may present with severe headaches, difficulty in coordinating muscular movements, paralysis, numbness and mental disorders. Symptoms of ocular syphilis include changes in vision and even blindness.

Chancroid

This is caused by Haemophilus ducreyi, a gram-negative bacillus. It manifests clinically as ulcerative lesions or inguinal tenderness. The ulcer is usually quite painful with ragged undermined edges, is sharply outlined without indurations, and sometimes bleeds on scrapping. Painful inguinal bubo may be present and disfiguring of genitalia is a possible complication

4.4.2 Herpes Simplex Virus-2

Clinical manifestation of HSV-2 includes intact or ruptured vesicles forming multiple shallow and tender ulcers. The patients can also have tender local lymphadenopathy. The ulcers may be recurrent.

4.5 Syndromic Treatment of Genital Ulcer Syndrome

The HCP should examine for the presence of the ulcers to quantify the number of ulcers. If there is an ulcer or ulcers, treat for syphilis, chancroid and HSV 2. *See Figure 4 Algorithm for the Management of Genital Ulcer Syndrome.*

4.5.1 Non-vesicular Ulcer

First Line Preferred Treatment: Benzathine penicillin 2.4 MU IM weekly for 3 weeks AND Azithromycin 2 gm PO stat: 4Cs

OR

Second Line Preferred Treatment: Ceftriaxone 1 gm IM stat AND Doxycycline 100 mg PO BD for 14 days: 4Cs. Doxycycline is contraindicated in pregnancy

If a patient has a known allergy to penicillin Azithromycin 2 gm PO stat should be given instead of Benzathine penicillin or Ceftriaxone.

4.5.2 Vesicular Ulcers

First Line Preferred Treatment: Azithromycin 2 gm PO stat AND Acyclovir 400 mg PO TDS for 10 days: 4Cs

OR

Second Line Preferred Treatment: Acyclovir 400 mg PO TDS for 5 days or 800 mg PO TDS for 2 days if there is a history of recurrent HSV 2: 4Cs

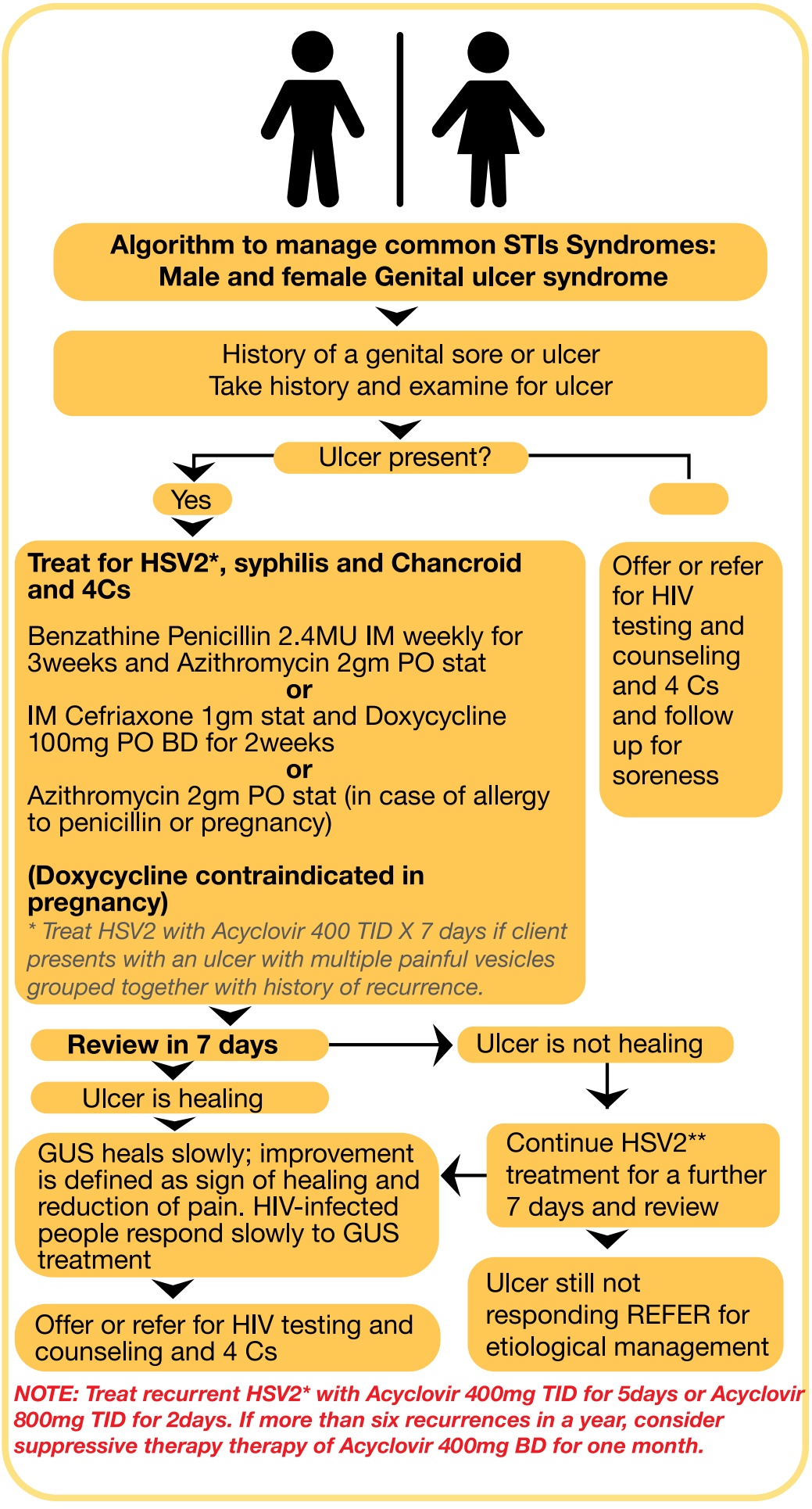
* For HIV infected patients use Acyclovir 400 mg TDS for 10 days

4.5.3 Treatment of Aetiologically Diagnosed Syphilis

If primary syphilis, secondary syphilis or history of non-reactive RPR test within the past 2 years: Benzathine penicillin G 2.4 million units IM stat Or Ceftriaxone 1gm IM daily for 8-10 days in case of penicillin allergy

If infected more than two years ago or no prior history of non-reactive RPR test (unknown duration): Benzathine penicillin G 2.4 million units IM weekly for 3 weeks Or Erythromycin 500 mg po QID for 30 days

Figure 4: Algorithm for the Management of Genital Ulcer Syndrome



4.5.4 STI Management in Children and Adolescents

The occurrence of STIs in children, with the exception of neonatal infections and congenital syphilis invariably indicates sexual abuse. Health workers therefore, should arrange for emotional as well as legal support for the child as part of the comprehensive management.

Management of children who have STIs requires close cooperation between clinicians, laboratory personnel, and child-protection authorities and in certain cases, legal investigations should be initiated promptly. Some infections (e.g., gonorrhoea, syphilis, and chlamydia) if acquired after the neonatal period, are virtually 100% indicative of sexual contact, but for other infections (e.g., HPV and vaginitis), the association with sexual contact is not as clear.

The rates of many STIs are highest among adolescents who are sexually active. They tend to be at higher risk for STIs:

- Because they frequently have unprotected intercourse
- Are biologically more susceptible to infection
- Are engaged in sexual partnerships frequently of limited duration
- Face multiple obstacles to using health care.

Several of these issues can be addressed by health care providers who provide services to adolescents. Health care providers can address adolescents' lack of knowledge and awareness regarding the risks and consequences of STIs by offering guidance concerning healthy sexual behaviour. Health care providers should ensure privacy and confidentiality when providing services for adolescents.

Table 4: Syndromic Management of STIs in Children and adolescents

Syndrome	Infectious agent	Regimen
Urethral Discharge	N. gonorrhoea C. trachomatis M.genitalium	**Adolescents:** Ceftriaxone 125 mg IM stat **Plus** Azithromycin 1gm PO stat/Doxycycline 100mg BD for 7 days **Children:** Ceftriaxone 125mg IM stat **Plus** Erythromycin 10mg/kg QID for 7 days **Note:** Use metronidazole 10 mg/kg BD for 7 days for persistent symptoms and 500mg BD for 7days in Adolescents:

Vaginal Discharge	N. gonorrhoea C. Trachomatis T. vaginalis Bacterial vaginitis(BV) Vulvovaginal candidiasis (VVC)	**Adolescents:** Ceftriaxone 125 mg IM stat Plus Azithromycin 1gm PO stat/Doxycycline 100mg BD for 7 days **Plus** metronidazole 500mg BD for 7 days **Children:** Ceftriaxone 125mg IM stat **Plus** Erythromycin 10mg/kg BD for 7 days **plus** Metronidazole 10 mg/kg BD for 7 days
Genital Ulcer	H SV type 2 T. pallidum H. ducreyia	**Adolescents:** Acyclovir 400mg TDS for 10 days **Plus** Benzathine penicillin 2.4 million units IM stat **Plus** Erythromycin 500mg QID for 7 days **Children:** Acyclovir 10 mg/kg TDS for 7 days **Plus** B. penicillin G 100,000 units/kg IM single dose **Plus** Erythromycin 10mg/kg QID for 7 days
PID	N. gonorrhoea C. Trachomatis Anaerobics	**Adolescents:** Ceftriaxone 125mg stat **Plus** Azithromycin 1gm PO stat/Doxycycline 100mg BD for 14 days/ Erythromycin 500mg QID for 14 days **Plus** Metronidazole 500mg BD for 14 days

Note:

The dose of ceftriaxone for children and adolescent weighing less than 45 kg is 125 mg IM stat.

For those who are greater than 45 kg, use the adult dose of 500 mg IM stat.

4.6 Neonatal Conjunctivitis (Ophthalmia Neonatorum)

Neonatal conjunctivitis of the new-born appears as ocular redness, swelling and draining which is sometimes purulent and occurs within the first month of life. This condition is referred to as ophthalmia neonatorum (ON). All new-born babies, regardless of maternal signs or symptoms of infection, should receive prophylaxis against ophthalmia neonatorum due to gonorrhoea or chlamydial infection.

4.6.1 Aetiology of Neonatal Conjunctivitis

Neonatal conjunctivitis is caused by a bacterial infection, acquired by the baby during passage through an infected birth canal. The most common viral agent is Neisseria gonorrhoea, with the second most common to be Chlamydia trachomatis. Babies born to women with untreated chlamydial infection at

delivery have a 30-50% chance of developing ophthalmia neonatorum.

The incubation period is usually as follows:
C. trachomatis: 5-14 days

N. gonorrhoea: 3-5 days

Other bacteria that cause ON include Haemophilus, Streptococcus, Staphylococcus and Pseudomonas. Viral infections causing ON are less common and include Herpes simplex virus, adenovirus or enterovirus. The neonatal conjunctiva is particularly vulnerable to infection because of the lack of immunity and the absence of local lymphoid tissue at birth.

4.6.2 Clinical Manifestations

ON may be asymptomatic, especially in the case of C. trachomatis. Symptoms in symptomatic cases include redness, an eye discharge, which may be profuse in gonococcal infection, and swelling of the lids, which may be severe. Symptoms are usually bilateral.

4.6.3 Syndromic Treatment of Neonatal Conjunctivitis

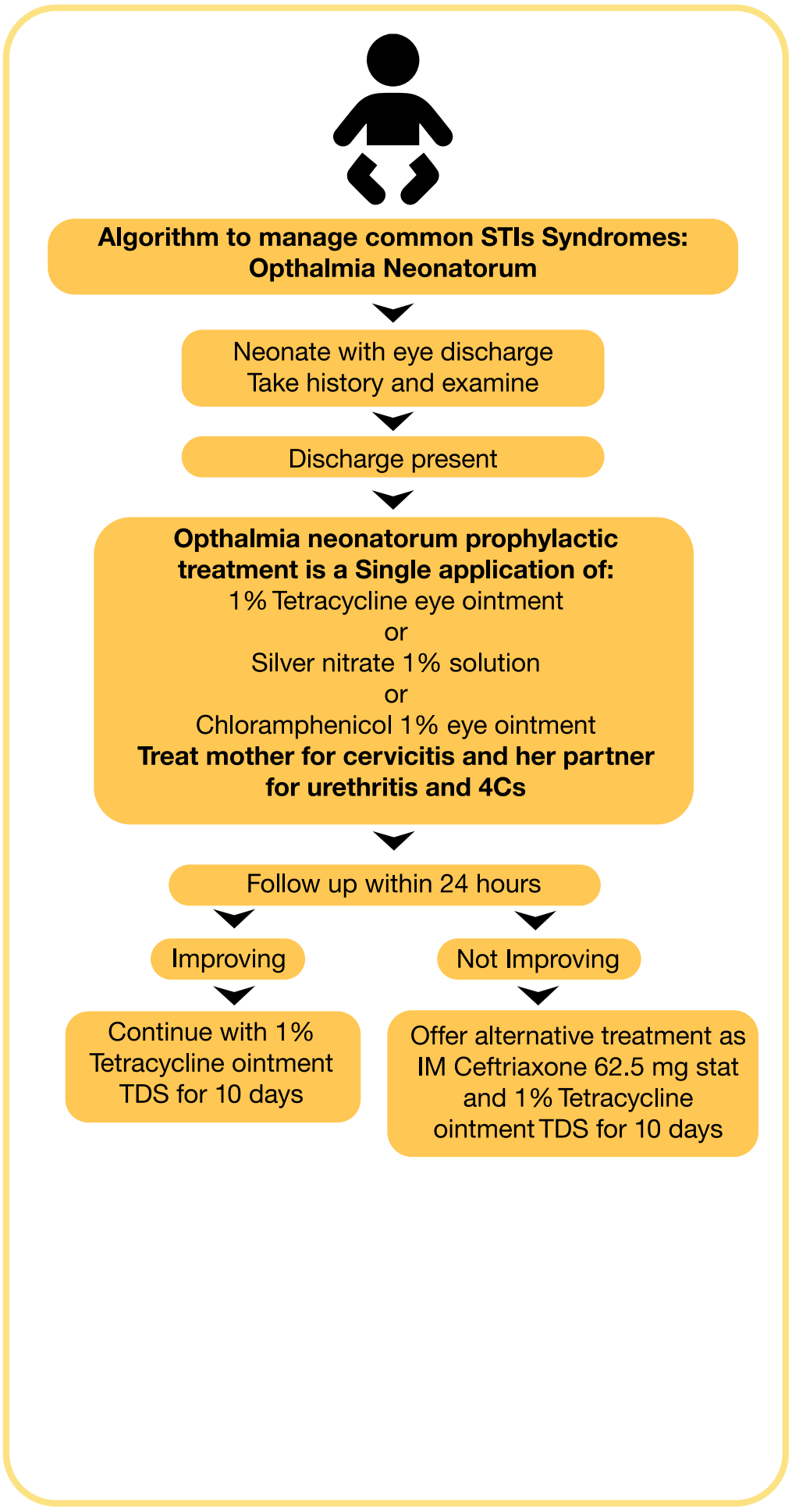
It is recommended to use one of the following options for topical application to both eyes immediately after birth or within one hour of birth:

- Tetracycline hydrochloride 1% eye ointment (Single application) OR
- Silver nitrate 1% solution (Single application)

OR

- Chloramphenicol 1% eye ointment (Single application)

Figure 5: Algorithm for Management of Neonatal Conjunctivitis Syndrome



4.7 Anorectal Discharge

In men, anorectal discharge typically occurs among MSMs and who engage in anal receptive intercourse and is uncommon in heterosexual men. This is particularly concerning because gonococcal proctitis (the cause of anorectal discharge) increases the possibility of HIV infection threefold.

In women, anal discharge caused by N. gonorrhoea and C. trachomatis is more likely to be seen in female sex workers. It can be transmitted to the anal canal via a genital infection due to the proximity of the vagina, even in the absence of receptive anal intercourse. Prevalence of infection may be high in women reporting receptive anal intercourse.

History of risk behaviour followed by physical examination is crucial to syndromic management of anorectal discharge. Ask the patient for their history of risk behaviour, duration of the discharge, and examine the anal opening of the patient using a proctoscope.

4.7.1 Clinical Presentation

STI presenting with anorectal discharge may manifest with pain, pruritus, tenesmus, mucopurulent or purulent discharge with or without rectal bleeding, or mucopurulent exudate and inflammatory in the rectal mucosa. Less commonly it may present with rectal abscesses.

4.7.2 Clinical Examination

An anal examination using a proctoscopy is highly recommended for visual confirmation of the extent of internal mucous membranes involvement and to exclude presence of polyps, warts or hemorrhoids.

4.7.3 Syndromic Treatment of Anorectal Discharge

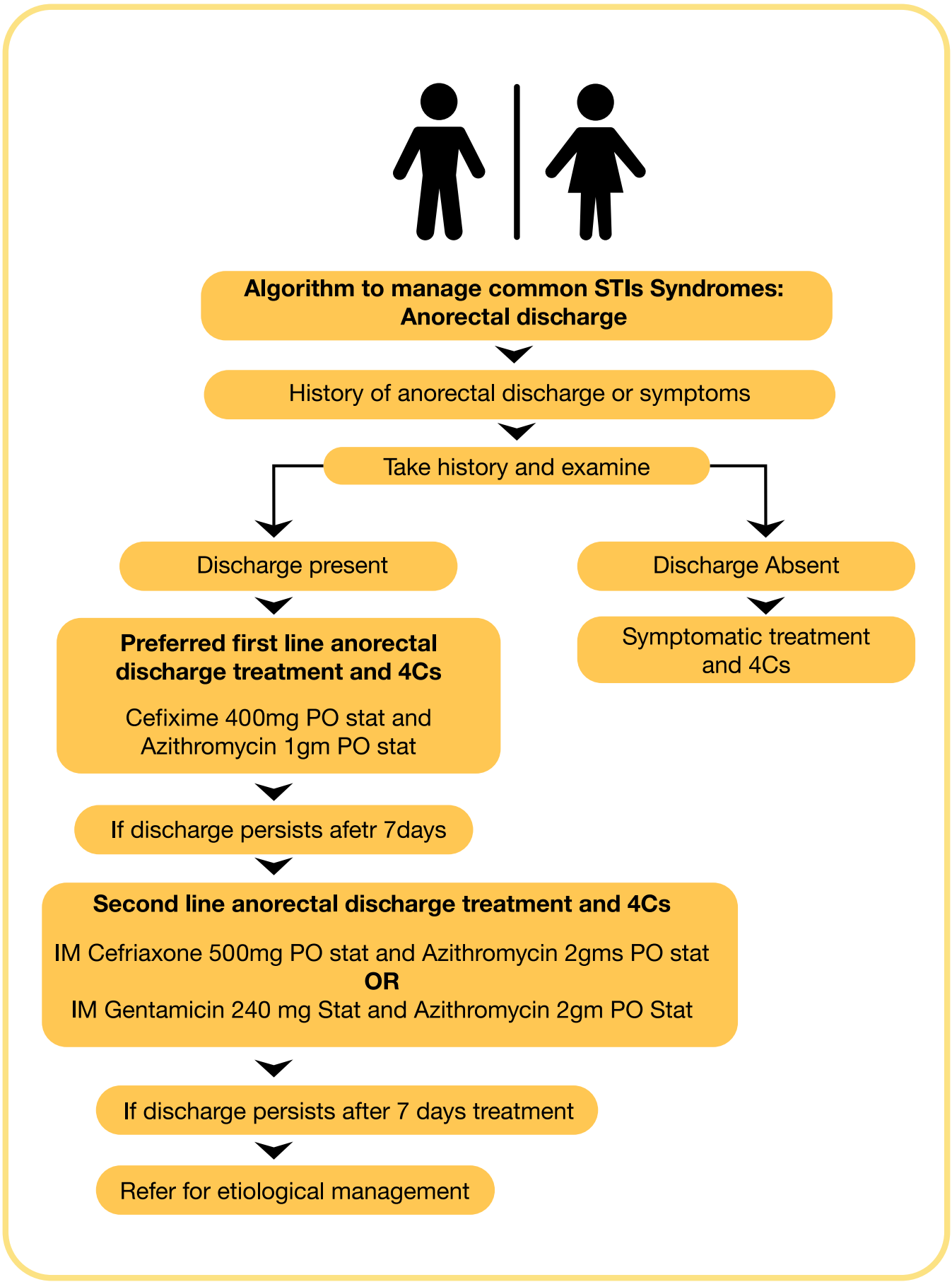
Since the causative agents for anorectal discharge is similar to those of urethral discharge in males, treatment for these syndromes are similar. See Figure 6: Algorithm for Management of Anorectal Discharge Syndrome

First Line Preferred: Cefixime 400 mg PO stat AND Azithromycin 1gm PO stat: 4 Cs

OR

Second Line Preferred: Ceftriaxone 500 mg IM stat AND Azithromycin 2 gm PO stat: 4 Cs

Figure 6: Algorithm for Management of Anorectal Discharge Syndrome



4.8 Anorectal Ulcer Syndrome

Anogenital ulcers can be caused by a wide variety of STIs and non-infectious conditions. STIs that cause anorectal ulcers are Herpes simplex viruses (HSV), syphilis, chancroid, lymphogranuloma venereum (LGV), donovanosis. Other conditions that may cause anorectal ulcers include: drug eruptions, stress ulcers, trauma, carcinoma, Crohn's disease and Entamoeba histolytica.

4.8.1 Clinical Manifestation

Herpetic ulcers are generally painful, commence as vesicles and are often associated with tender inguinal lymph nodes. Ulcers caused by other STIs are less typical.

4.8.2 Clinical Examination

The clinician should examine for ulcer or multiple vesicles. If there are no vesicles, treat for genital ulcers. If they have multiple vesicles treat for HSV 2.

4.8.3 Syndromic Treatment of Anorectal Ulcers

Since the causative agents for anorectal ulcers are similar to those of genital ulcer syndrome, treatment for these syndromes are similar. *See Figure 7 Algorithm for the Management of Anorectal Ulcer Syndrome*

4.8.3.1 Non-vesicular Ulcer

First Line Preferred Treatment: Benzathine penicillin 2.4 MU IM weekly for 3 weeks AND Azithromycin 2 gm PO stat: 4Cs

OR

Second Line Preferred Treatment: Ceftriaxone 1 gm stat IM AND Doxycycline 100 mg PO BD for 14 day if allergic to penicillin: 4Cs. **Note: Doxycycline is contraindicated in pregnancy.**

4.8.3.1 Vesicular Ulcers

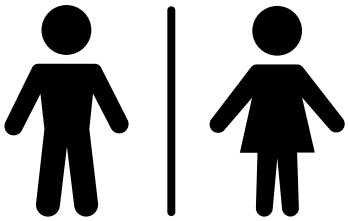
First Line Preferred Treatment: Azithromycin 2 gm PO stat AND Acyclovir 400 mg PO TDS for 10 days: 4Cs

OR

Second Line Preferred Treatment: *Acyclovir 400 mg PO TDS for 5 days or 800 mg PO TDS for 2 days if recurrent HSV 2: 4Cs

Note: For HIV use Acyclovir 400mg TDS for 10 days

Figure 7: Algorithm for the Management of Anorectal Ulcer Syndrome



Algorithm to manage common STIs Syndromes: Anorectal ulcers

History of an anorectal ulcer

Take history and examine

Ulcer present?

Yes

Treat for HSV2*, syphilis and Chancroid and 4Cs

Benzathine Penicillin 2.4MU IM weekly for 3weeks and Azithromycin 2gm PO stat
or
IM Cefriaxone 1gm stat and Doxycycline 100mg PO BD for 2weeks
or
Azithromycin 2gm PO stat (in case of allergy to penicillin or pregnancy)

(Doxycycline contraindicated in pregnancy)

** Treat HSV2 with Acyclovir 400 TID X 7 days if client presents with an ulcer with multiple painful vesicles grouped together with history of recurrence.*

Review in 7 days

Ulcer is healing

GUS heals slowly; improvement is defined as sign of healing and reduction of pain. HIV-infected people respond slowly to GUS treatment

Offer or refer for HIV testing and counseling and 4 Cs

Ulcer is not healing

Continue HSV2** treatment for a further 7 days and review

Ulcer still not responding REFER for etiological management

NO

Offer or refer for HIV testing and counseling and 4 Cs and follow up for soreness

NOTE: Treat recurrent HSV2* with Acyclovir 400mg TID for 5days or Acyclovir 800mg TID for 2days. If more than six recurrences in a year, consider suppressive therapy therapy of Acyclovir 400mg BD for one month.

4.9 Oropharyngeal Non-Ulcer STI

Oropharyngeal gonorrhoea and chlamydia have become more frequent as a result of engaging in oral sex. Of particular concern is the development of antimicrobial resistance by N. gonorrhoea isolated from the throat. Patients presenting with oropharyngeal gonorrhoea give a history of having engaged in oral sex recently and usually suffer from symptoms of a sore throat and a hoarse voice. Therefore, like in other syndromic management of STI, history and physical examination is crucial. An examination of the back of the throat for inflammation and presence of a discharge is required. Syndromic treatment should focus on the most common pathogens causing oropharyngeal non-ulcers which are N. gonorrhoea and C. trachomatis.

4.9.1 Clinical Manifestation of Oropharyngeal Non-ulcer STI

Patients present with a history of sore throat, loss of voice, and a history of recent unprotected oral sex.

4.9.2 Clinical Examination for Oropharyngeal Non-ulcer STI

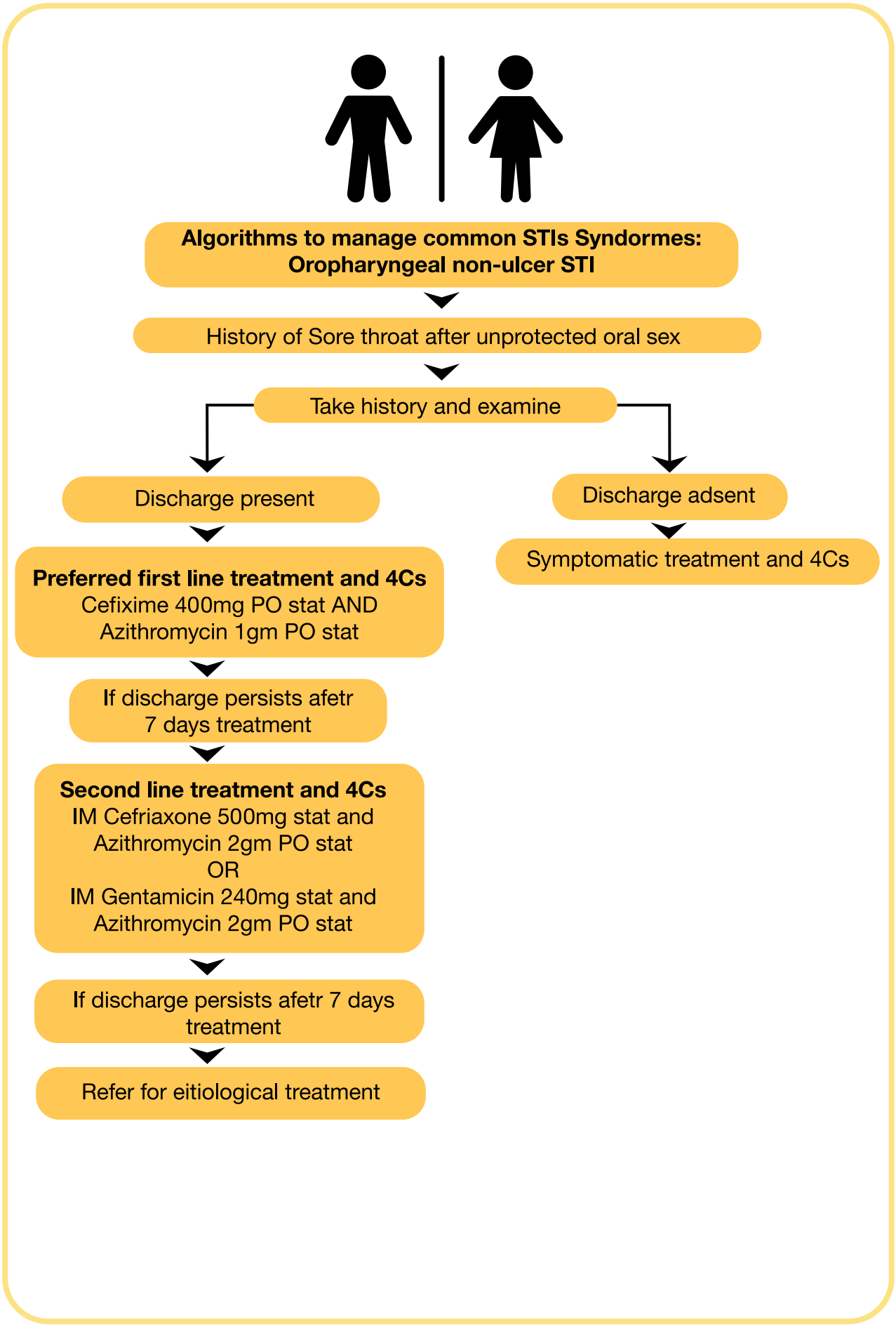
Clinical finding may include an inflamed throat, with exudate

4.9.3 Syndromic Treatment of Oropharyngeal Non-ulcer STI

Since the causative agents for oropharyngeal non-ulcer STI are similar to those of urethral discharge in men, treatment for these syndromes are similar. See Figure 8 Algorithm for the Management of Oropharyngeal Non-ulcer STI

First Line Preferred: Cefixime 400 mg PO stat AND Azithromycin 1gm PO stat: 4 Cs
OR
Second Line Preferred: Ceftriaxone 500 mg PO stat AND Azithromycin 2 gm PO stat: 4 Cs

Figure 8: Algorithm for the Management of Oropharyngeal Non-ulcer STI



4.10 Painful Scrotal Swelling

STIs may present with painful scrotal swelling as a result of inflammation of the epididymis and testis, also known as epididymorchitis. This mostly occurs in younger men aged below 35 years and is caused by N. gonorrhoea and C. trachomatis. However, there are other causes of non-STI scrotal swelling such as those caused by trauma, tumour, torsion of the testis, inguinal hernia, tuberculosis, mumps virus and lymphatic filariasis. Some of these may require urgent referral for surgical intervention and it is thus important that they should be excluded carefully. A proper medical history and physical examination are essential in arriving at a conclusion of STI scrotal swelling

4.10.1 Clinical Manifestation of Painful Scrotal Swelling

Scrotal swelling can manifest itself with different signs and symptoms including pain, tenderness, reddening of the skin of the scrotum, urethral discharge and micturition.

4.10.2 Clinical Findings of Painful Scrotal Swelling

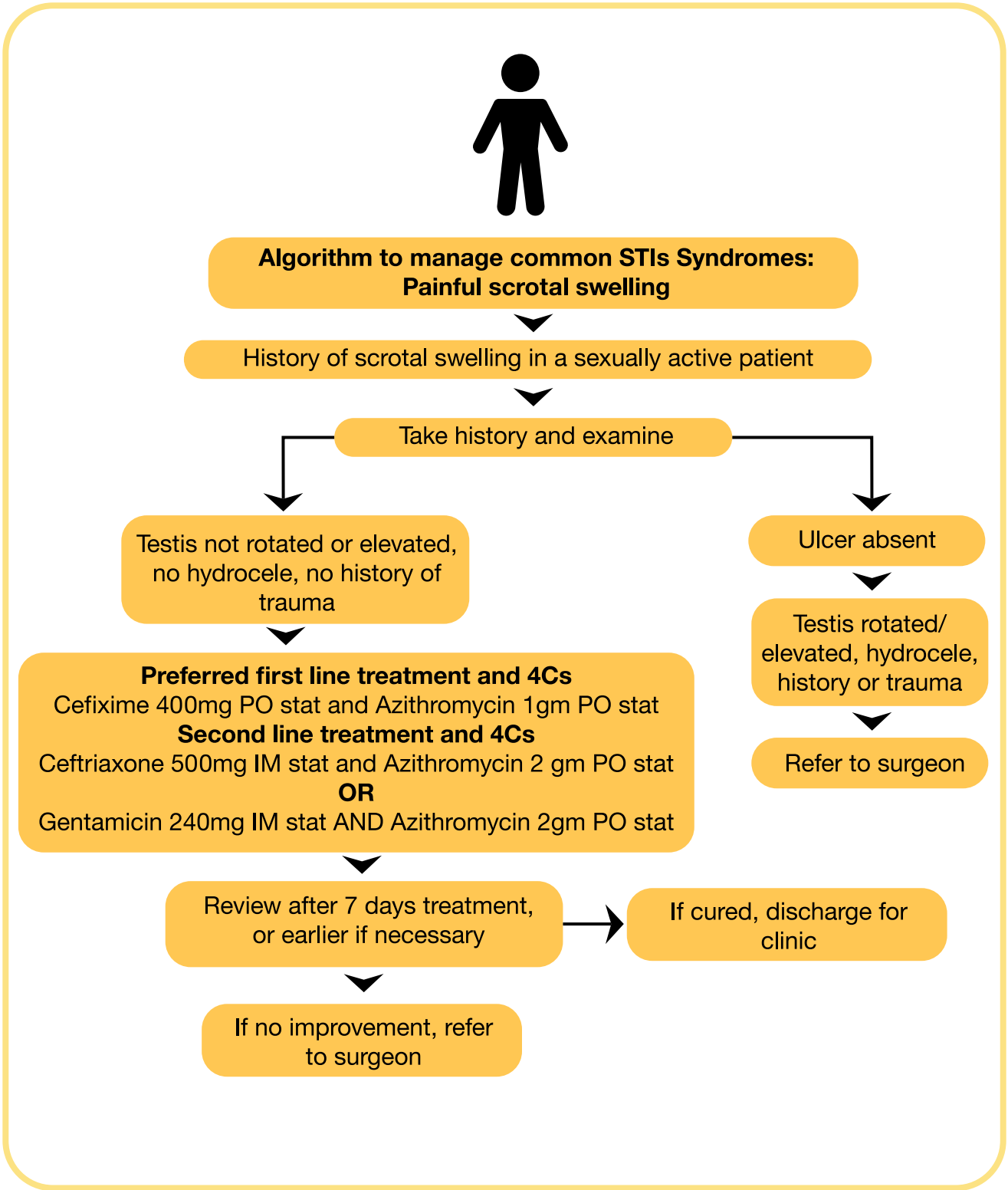
The patient is found to have scrotal swelling and tenderness. This is often on only one side of the scrotum. The patients may also have scrotal oedema and fever.

4.10.3 Syndromic Treatment of Scrotal Swelling

Since the causative agents for painful scrotal swelling caused by STIs are similar to those causing urethral discharge in men, treatment for this condition is similar to that of syndromic treatment of urethral discharge in men after ruling out other possible causes of the swelling. *Figure 9 Algorithm for the Management of Painful Scrotal Swelling.*

First Line Preferred: Cefixime 400 mg PO stat AND Azithromycin 1 gm PO stat: 4 Cs
OR
Second Line Preferred: Ceftriaxone 500 mg IM stat AND Azithromycin 2 gm PO stat: 4 Cs
Review after 7 days and if cured discharge from the clinic. If there is no improvement, refer to a surgeon

Figure 9: Algorithm for the Management of Painful Scrotal Swelling



4.11 Painful Swelling Groin (Inguinal Bubo)

Inguinal bubos are localized enlargement of the lymph nodes in the groin, which are painful and often fluctuant on palpation. They are usually associated with lymphogranunolma venereum caused by Chlamydia trachomatis and chancroid caused by Haemophilus ducreyi. Other STIs that cause inguinal bubo include Treponema pallidum and Klebsiella granulomatosis. There are other causes of enlarged inguinal lymph nodes such as infections in the lower limbs or in the perineum and should be carefully excluded. A proper medical history and physical examination are essential in arriving at a conclusion of an inguinal bubo.

4.11.1 Clinical Manifestation of an Inguinal Bubo

Inguinal bubos manifest as painful swelling in the groin, which are often fluctuant. In many cases of chancroid associated inguinal bubo, there is often an accompanying genital ulcer.

4.11.2 Clinical Findings of Painful Inguinal Bubo

The patient is found to have a swollen, often fluctuant swelling in the groin which is tender on palpation. The patients may also have fever.

4.11.3 Syndromic Treatment of Inguinal Bubo

Patients should be treated for inguinal bubo after ruling out other possible causes of the inguinal swelling. *Figure 10 Algorithm for the Management of Painful Inguinal Swelling (Inguinal Bubo)*

If there is an accompanying genital ulcer, follow syndromic management of non-vesicular genital ulcers. See Figure 4.

First Line Preferred Treatment: Benzathine penicillin 2.4 MU IM weekly for 3 weeks AND Azithromycin 2 gm PO stat: 4Cs

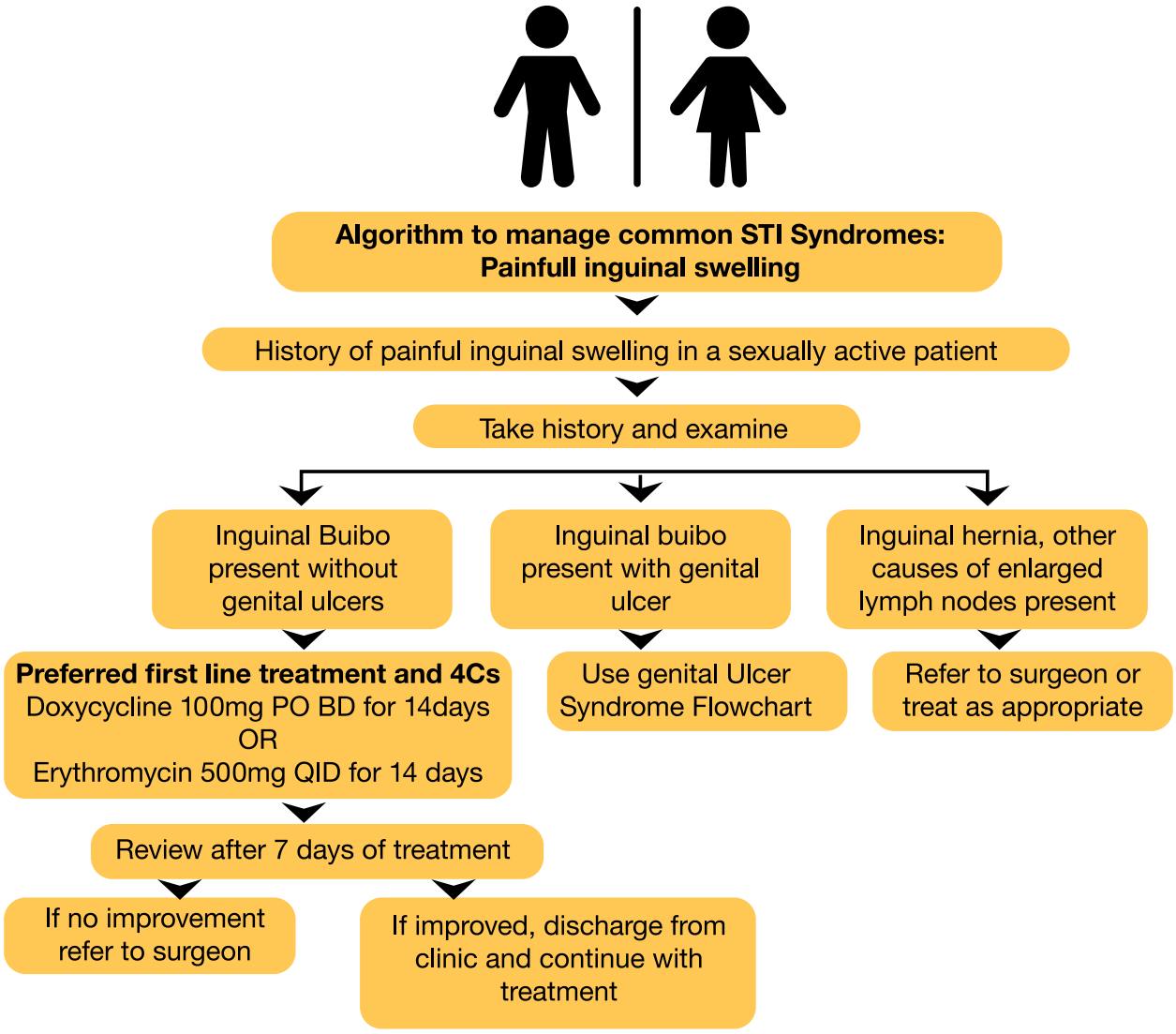
OR

Second Line Preferred Treatment: Ceftriaxone 1 gm IM stat AND Doxycycline 100 mg PO BD for 14 days: 4Cs. Doxycycline is contraindicated in pregnancy. If there is no accompanying genital ulcer, treat for lymphogranuloma venereum.

First Line Preferred Treatment: Doxycycline 100mg PO BD for 14 days OR Erythromycin 500 mg PO QID for 14 days: 4Cs. Doxycycline is contraindicated in pregnancy

In either case, that is if there is an accompanying genital ulcer or not, review after 7 days and if cured discharge from the clinic. If there is no improvement, refer to a surgeon

Figure 10: Algorithm for the Management of Painful Inguinal Swelling (Inguinal Bubo)



Note: Fluctuant buibos should be aspirated with a wide bore needle through intact skin. Surgical incision of buibos is contraindicated.

4.12 Anogenital Growths

STI growths in the anogenital region are largely caused by Human papilloma virus. The growths appear as warts and may be on the penis, vulvar, or at the anal opening. In some cases the warts are visible while in other cases they may be internal in the vagina or the anal canal making them not easily visible. Diagnosis requires taking of a detailed history followed by a physical examination to rule out other causes of growths in the region (haemorrhoids). Sexual partners should be examined carefully for evidence of warts. Patients with anogenital warts should be made aware that they are highly infectious to their sexual partners and should use condoms to help reduce the risk of transmission of infection to them.

4.12.1 Syndromic Treatment of Anogenital Growths

If the Warts are Small and Few

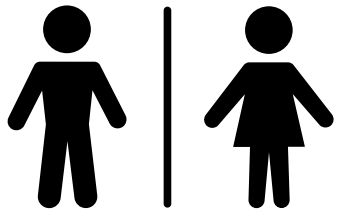
First Line Preferred Treatment: If the warts are small in size or few in number (less than 3) use Podophyllin 10-25% application weekly until the warts fall off. This should be done at the health facility. For warts in the vagina or the anal canal, Podophyllin should applied with the use of a speculum or a proctoscope and allowed to dry before removing the appliance.

Alternative Treatment: Imiquimod 5% cream can be applied by the patient with a finger/cotton swab at bedtime, left on overnight, 3 times a week or every other day for 16 weeks. The treated area should be washed with soap and water 6-10hours after application.

If the warts are many (more than 3) or large: Refer patients to a higher health level facility for surgical excision.

For a Flow chart for management of anorectal warts *see Figure 11.*

Figure 11. Algorithm for the Management of Anogenital Growths



Algorithm to manage common STIs syndromes: Anogenital growths

History of growth in the genital or anorectal region

Take history and examine for growths in anogenital region

Warty lesions present on genital or anorectal regions

If less than 3 or small and small in size:

Podophyllin (10-25%) OD at the health facility until warts fall off
OR
Imiquimod 5% application 3 times a week for 16weeks

If large or more that 3 in number:
Refer to a higher-level health facility

No warty lesions on genital or anorectal regions present

Offer or refer for HIV testing and counseling and 4CS and follow up for soreness

Kitting of STI Medicines

STI management through pre-packed treatment kits has been proven as an approach to strenghthen the syndromic approach of STI treatment and is highly recommended in these guidelines. In addition to the recommendations drugs for the specific syndrome, the package will comprise of condoms, partner referral card, information sheet on adherence and illustrative pictures.

Kitting eases prescription, dispensing, storage, distribution and uses of STI medicines.

CHAPTER

5

IMPLEMENTATION CONSIDERATIONS

CHAPTER 5: IMPLEMENTATION CONSIDERATIONS

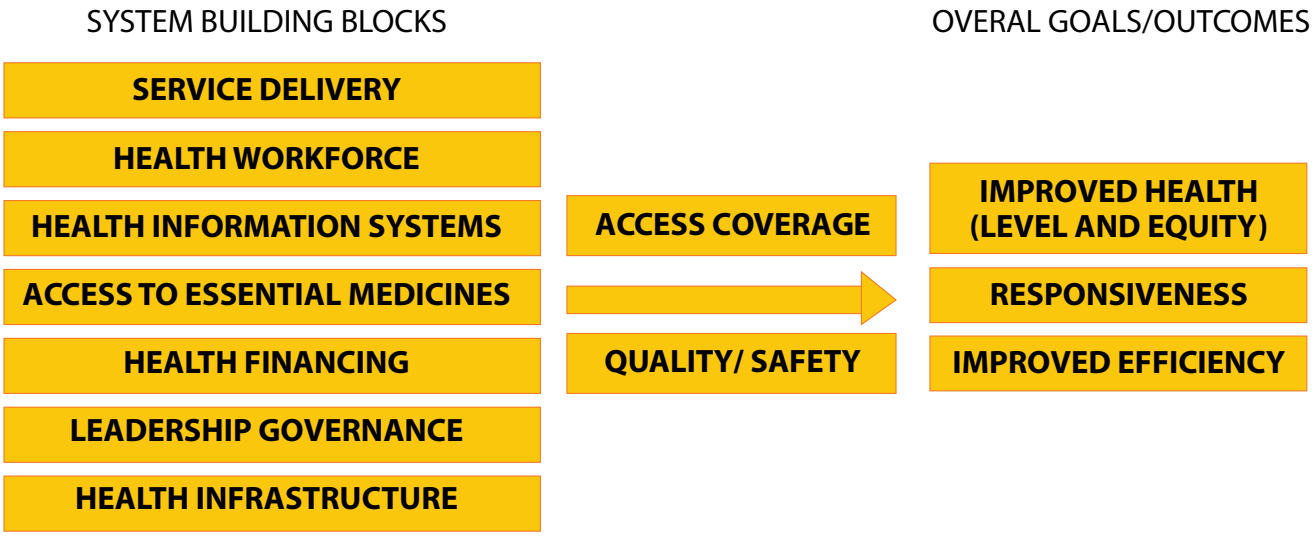
5.1 Introduction

Strengthening sexually transmitted infections (STI) management service delivery is crucial to the achievement of the health-related Sustainable Development Goals (SDGs).

A functional health system is a key determinant of quality of services. In order to provide efficient, effective and sustainable STIs services, the following health system building blocks (7 pillars) as outlined in the Kenya Health Sector Strategic and Investment Plan (2013-2017) and shown below, are essential:

Figure 12: The seven building blocks of a health system: Aims and desirable attributes (Adapted from WHO health systems framework)

Health System Building Blocks



5.2 Service Delivery

STI management service provision or delivery is an immediate output of the inputs into the health system, such as the health workforce, procurement and supplies, and financing. Increased inputs should lead to improved STI management service delivery and enhanced access to these services.

Ensuring availability of services that meet a minimum quality standard and securing access to them are key functions of Ministry of Health through NASCOP.

5.3 Health Work Force

The health workforce can be defined as "all people engaged in actions whose primary intent is to enhance health." These human resources for health include clinical staff such as physicians, nurses, laboratory technologists, pharmacists and dentists, as well as management and support staff. To deliver quality and effective STI services, a skilled workforce with requisite knowledge is necessary.

Table 5: Cadre of Required Skilled Workforce and their Roles

CADRE	ROLES
• **Medical officers** • **Clinical officers** • **Nurses**	Diagnosis and management of STI cases Provision of health education and counselling Maintenance of records on cases managed Reporting on STI cases
Pharmacists/Pharm techs	Preparation & Dispensing Adverse effect monitoring STI commodity management
Lab technologist/technicians	Assist in aetiological diagnosis of different STIs, collect sample and perform tests Assist in research and investigations on STIs including antimicrobial sensitivity tests
Health Records & Information Officers	Collect, collate, store, analyse and retrieve records on STI cases
Counsellors	Offer risk assessment and risk reduction counselling to the clients as well as help them develop adequate coping mechanisms
CHVs/ Peer educators	Deliver health education on STIs, distribute IEC materials, condoms and offer referrals to suspected cases of STIs to health facilities

5.4 Training

Training of health care service providers is crucial to a delivery of quality and effective STI services. The health care service providers are required to undergo a 5-day STI Management training program, based on the national approved curriculum. Service providers to be trained include medical officers, clinicians, nurses, counsellors, pharmacists, peer educators and CHVs. The training is delivered through mixed methods, anchored on principles of adult learning.

5.5 Health Infrastructure

Infrastructure is the foundation for planning, delivering, evaluating, and improving public health services and includes institutions, capacity, knowledge (public and professional) and commodities (physical infrastructure).

STI Management Service delivery Points

- Health facilities
- Mobile clinics / Comprehensive outreaches
- National and County referral sites
- KP drop in/wellness centres
- Prevention centres

The service delivery points should have the following:

- Service providers competent in STI management
- STI commodities
- Privacy, adequate space and conducive environment.

Kenya utilizes the syndromic management approach of STIs across primary facilities. Complicated STI cases are referred to designated health facilities for aetiological management.

5.6 Integration, Linkage and Referrals

5.6.1 Integration

WHO defines integrated service delivery as “the organization and management of health services so that people get the care they need, when they need it, in ways that are user friendly, achieve the desired results and provide value for money”.

STIs management is integrated at the following service delivery points:

a. Outpatient department (OPD)
b. Maternal and Child Health/Family Planning (MCH/FP) services
c. During medical outreaches
d. Comprehensive Care Clinics (CCCs) and TB clinics
e. Pharmacy
f. Any other service delivery point

5.6.2 Linkages and Referrals

Linkages refer to the relationships that the health centres maintain with other facilities and organizations in the district that provide services needed by patients that are not provided directly by the health centre. Linkages are both internal and external. Internal linkages are between clinics organized within the health centre or between clinicians and the pharmacy and lab. External linkages are systematic and effective referral of STI clients and their contacts from one service to another within the health system or network.

5.7 Leadership and Governance

The concepts of leadership and governance encompass strategic direction, plans and policies, effective oversight, regulation, motivation, and partnerships that integrate all health system building blocks to achieve results. The Government is the overall authority to oversee and guide the whole health system, private as well as public, in order to protect the public interest. This requires both political and technical action as it involves reconciling competing demands for limited resources in changing circumstances. The MOH through NASCOP ensures appropriate stewardship is in place and guarantees adherence to STI management standards. County governments monitor STI management and ensure high quality of services.

5.7.1 Laws

The Kenya Public Health Act, Cap 242, section 5 should be amended and aligned with the Kenyan constitution 2010 that upholds human rights.

5.7.2 Regulations

The key mandate of NASCOP is to lead the health sector response to HIV and AIDS, and STIs which involves policy and guidelines formulation, procurement, supply chain management coordination, capacity building, and monitoring and evaluation of the HIV response. Specifically, in regard to STIs, NASCOP provides;

- Treatment guidelines and recommended drug regimens
- Training curriculum and certification
- Updates as necessary

Health care providers are directed to follow and adhere to recommendations for syndromic management treatment regiments of STIs as stipulated in the National Guidelines for Prevention, Management and Control of STIs

Regulations on: -

1. Community involvement in STI prevention
2. Formulation of task shifting policies for the health service providers
3. Free access of STI management including drugs
4. Bundle packaging of STI drugs according to syndrome and gender

5.8 Health Care Financing

Health financing refers to the "function of a health system concerned with the mobilization, accumulation and allocation of money to cover the health needs of the people, individually and collectively, in the health system. The purpose of health financing is to make funding available, as well as to set the right financial incentives to providers, to ensure that all individuals have access to effective public health and personal health care (Bokhari, 2016)."

The national and county governments are required to prioritize STI management and ensure that the county budgets have factored STI commodities, trainings and other related costs in their annual health budgets.

5.9 Access to Essential Medicines

5.9.1 STI Commodity Management

Commodities play a central role in supporting testing, prevention and treatment of STIs. Various guidelines/protocols are in place to ensure the effective supply chain for these commodities.

5.9.1.1 Medicines

Antibiotics and antimicrobial agents that are classified as:

- Oral-these include cefixime, doxycycline, azithromycin, metronidazole
- Injectable-these include gentamicin, ceftriaxone, benzathine penicillin
- Antifungal agents such as clotrimazole pessaries and oral fluconazole

5.9.1.2 Commodities for IPC

Infection prevention and control forms an integral part of STI management. Key commodities that are required are:

- Disinfectants and antiseptics such as sodium hypochlorite (JIK), chlorhexidine and povidone iodine
- Commodities for hand hygiene such as alcohol hand rub, surgical hand scrub, soap, liquid hand wash and hand sanitizers
- Personal protective equipment (PPE) includes protective clothing and barriers, gloves (including surgical gloves), masks, gowns, plastic aprons, footwear etc. The selection of type and number of PPE to be used for a given procedure is dictated by the type of procedure to be conducted. For more information on this, please refer to the IPC section above. `
- Coded bins-red, yellow and black for waste segregation and disposal.

5.9.1.3 Other commodities

Lubricants, condoms, IEC, STI testing kits and laboratory reagents

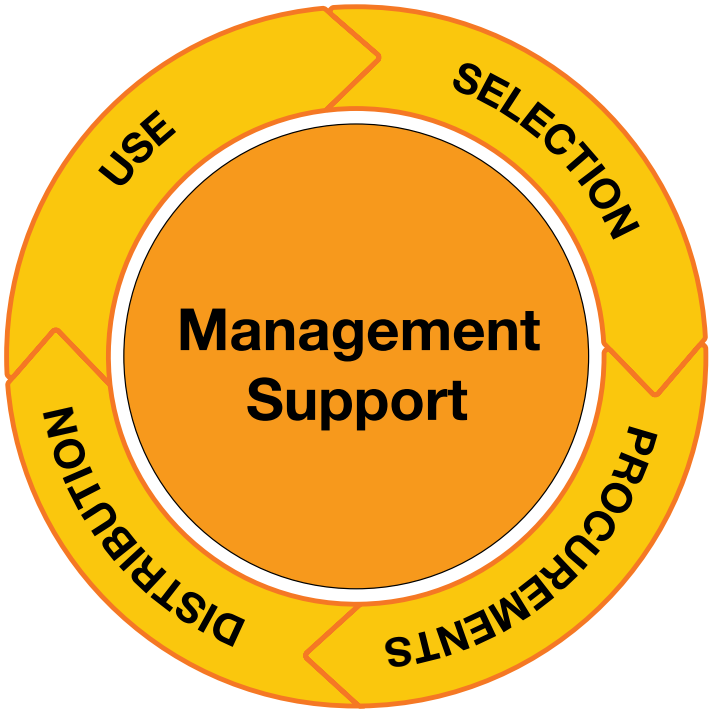
5.9.2 Commodity Management

The commodity management approach is split into four key areas:

- Selection
- Procurement
- Distribution
- Rational use of commodities.

Use the MOH, 2016 Kenya Essential Medicine List for commodity management guidance

Figure 13: Key aspects of commodity management



5.10 Infection Prevention

Preventing and Controlling infection in health care facilities involves two levels of precautions: standard and additional (transmission-based). Standard precautions are practices taken to reduce the risk of transmitting blood-borne pathogens from both recognized and unrecognized sources. These precautions should be used, as a minimum, in the care of all patients in health care settings, regardless of their diagnoses or presumed infection status. These include hand hygiene, PPE, prevention of needle stick injuries and other sharp injuries, respiratory hygiene, cough etiquette, environmental hygiene and waste disposal. See National NASCOP IPC Guidelines 2015.

5.11 STIs Services for Special Populations

5.11.1 Pregnant Women

All pregnant women and their sex partners should be asked about STIs, counselled about the possibility of prenatal infections, and provided access to screening and treatment, if needed.

Recommended Screening Tests

- HIV Screening for pregnant women: As per National HIV guidelines.
- A serologic test for syphilis should be performed for all pregnant women at the first prenatal visit. Any woman who delivers a stillborn infant should be tested for syphilis.
- All pregnant women should be routinely tested for hepatitis B surface antigen (HBsAg) at the first prenatal visit even if they have been previously vaccinated or tested.
- All pregnant women aged <25 years and older women at increased risk for infection should be routinely screened for other STIs.

All pregnant women with past or current history of injection drug use should be screened for Hepatitis C antibodies at first prenatal visit

5.11.2 FSW/MSWs (Female Sex Workers/Male Sex Workers)

Female sex workers (FSW) and Male Sex Workers (MSWs] are considered a high-risk group for acquisition of sexually transmitted infections (STIs), due to their social vulnerability and factors associated with their work, such as a history of multiple sex partners, inconsistent condom use, delayed STI treatment, or co-infection with other STIs.

STIs Screening:

- Quarterly HIV and other STI screening is recommended.
- STI screening begins with the service providers obtaining a sexual history from the sex worker.
- STI screening consists of either etiological testing (lab tests) to identify the specific STI and/or Syndromic diagnosis (presence of STI symptoms). Screening for anal, oral and genital STIs is recommended for all sex workers.

After identification, STI treatment is provided based on syndromic diagnosis or aetiological diagnosis where feasible.

STI Treatment:

STI Syndromic Management: Sex workers should be screened and provided treatment for STIs by the syndromic approach as outlined in the National Guidelines for Prevention, Management and Control of STIs.

Partner STI treatment of SWs: Implement expedited partner therapy or encourage them to bring their sex partner into the service delivery site for treatment.

5.11.3 MSM [Men who have Sex with Men]

MSM remain at disproportionate risk for HIV and STI acquisition and transmission. Factors that increase the risk for infection in MSM include unprotected anal sex and drug/alcohol abuse or drugs that enhance sexual performance.

The following screening tests should be performed quarterly for sexually active MSM.

- HIV serology on quarterly basis
- Syphilis serology to establish whether persons with reactive tests have untreated syphilis, have partially treated syphilis, are manifesting a slow serologic response to appropriate prior therapy.
- Screening for genital, anal and oropharyngeal STIs.
- All MSMs should be tested for HBsAg to detect chronic HBV infection.

5.11.4 PWID [People Who Inject Drugs]

PWIDs are considered to be a high-risk group for acquisition of HIV/STI due to drug abuse. STI screening test for all PWIDs should include the following:

- Screening for STI syndromes
- Syndromic screening for HCV on quarterly basis, with serologic testing for HCV annually.
- Testing for HIV on quarterly basis
- Testing for HBsAg to detect chronic HBV infection.

5.11.5 Adolescents and young women

In Kenya, prevalence rates of many sexually acquired infections are highest among adolescents and young adults. Persons who initiate sex early in adolescence are at higher risk for STIs. Factors contributing to this increased risk during adolescence include having multiple sexual partners, having sequential sexual partnerships of limited duration, failing to use barrier protection consistently and correctly, having increased biologic susceptibility to infection, and facing multiple obstacles to accessing health care. STI management services must remain friendly to this young population and ensure that they are acceptable, available and accessible.

5.11.6 STI Exposed Infants

A mother, who has an STI, can infect the foetus or the new-born. Some STIs, including chlamydia, gonorrhoea, genital herpes, and cytomegalovirus can be passed from mother to infant during delivery when the infant passes through an infected birth canal.

STI testing as a part of prenatal care can determine if an expectant mother or her sexual partner has an infection that can be cured with drug treatment. Early treatment decreases the chances that the infant will contract the disease. While not all STDs/STIs can be cured, the mother and her health care provider can take steps to protect her and her infant. These interventions should include the following:

- To reduce the chance of certain STIs e.g. Herpes spreading to the infant during delivery, the recommendation is a caesarean delivery.
- Routine treatment with an antibiotic ointment (tetracycline eye ointment) shortly after birth to prevent blindness due to exposure to gonorrhoea or chlamydia bacteria during delivery if the pregnant woman had an undetected infection.
- Pregnant women with extensive vaginal warts should undergo caesarean section.
- Neonates whose mothers' syphilis serologic test were reactive during pregnancy and were not fully treated should be followed up.

5.11.7 Children

Management of children who have STIs requires close cooperation between guardians, clinicians, laboratory technicians, and child-protection authorities. Official investigations, when indicated, should be initiated promptly. Certain infections (e.g. gonorrhoea, syphilis, and chlamydia), if acquired after the neonatal period, strongly suggest sexual contact. For other infections (e.g., HPV and vaginitis), the association with sexual contact is not as clear. STI Management of children infected with STIs should be as per the national guidelines using syndromic management flow chart.

CHAPTER

6

SURVEILLANCE, MONITORING AND EVALUATION

CHAPTER 6: SURVEILLANCE, MONITORING AND EVALUATION

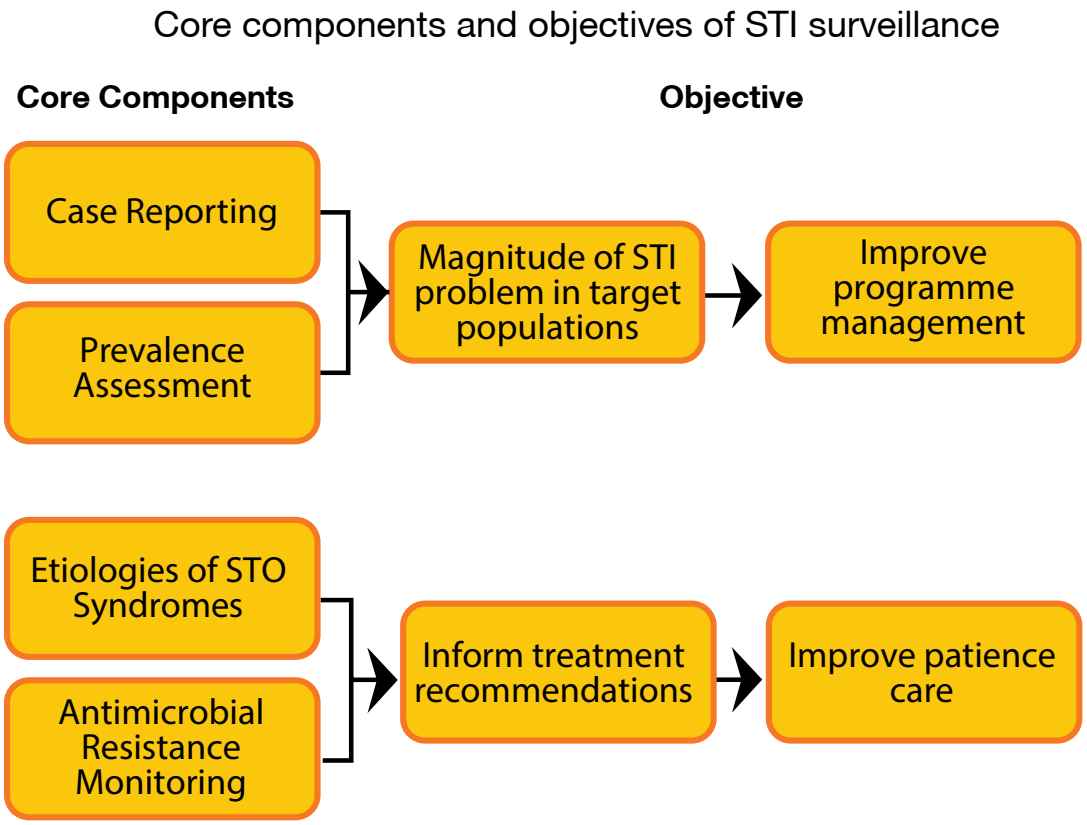
This chapter highlights the surveillance, monitoring and evaluation system refinements for STIs. It is paramount to have STI surveillance systems which ensure the continuous, systematic collection, analysis and interpretation of STI related data. This data is needed for the planning and implementation of prevention, management and control of STI programmes. The STI surveillance system will serve as an early warning system for impending public health emergencies such drug resistant strains and changes in the epidemiology of STIs in the country.

The STI monitoring and evaluation platform will place emphasis on the collection of data on agreed upon measurable indicators and results of the programme. The surveillance, monitoring and evaluation system will document the impact of various interventions as outlined by this guideline and/or track progress towards reducing the burden of STIs in Kenya. STI surveillance, monitoring and evaluation guidelines will provide a platform for monitoring epidemiological trends of STIs, to allow priorities to be set and to inform public health policy and strategies in Kenya.

6.1 Surveillance

Kenya will apply the WHO recommended framework for STI surveillance that is illustrated below:

Figure 14: Core Component and Objectives of STI Surveillance



Source: Strategies and laboratory methods for strengthening surveillance of sexually transmitted infection 2012. Geneva: WHO: 2012

6.1.1 Case Reporting

Case reporting entails providing succinct STI data and information to the Ministry of Health by health care providers including laboratories. STIs will be reported syndromically and/or etiologically, given the availability of laboratory tests. Case reporting will:

- Assess the disease burden by providing incidence of recently acquired infections.
- Monitor trends in incidence of recently acquired infections.
- Provide information required for management of patients and their sex partners.
- Provide information on major STIs, to assist in planning program efforts.
- Provide data for managing health services (for example, pharmaceutical distribution).

Though case reporting will be for all syndromic diagnoses, key syndromes for monitoring are urethral discharge (UD) in males and genital ulcer syndrome (GUS) in both men and women. In addition, key etiologic diagnoses for surveillance are N. gonorrhoea and T. pallidum. Data on incidence and prevalence of STIs among the general population, MSM, FSWs and PWIDs will be obtained from routine service delivery data in the health information system (including antenatal clinic data), special surveys and sentinel surveillance. This data will include both syndromic case reporting and where necessary etiologic case reporting. Case reporting will be universal for the key populations and sentinel site based (especially for the general population). All healthcare providers at key population clinics and at sentinel sites will be trained on syndromic management of STIs and surveillance reporting to avoid disruption of the system due to staffing changes.

6.1.1.1 Private Sector and Laboratory Reporting

Approximately half of all health facilities in Kenya are privately owned and a large percentage of Kenyans seek healthcare from the private sector (USAID, 2014). As such, case reporting (syndromic and etiologic) will be collected from sentinel private facilities and laboratories for surveillance. Efforts to support these facilities in case reporting will include periodic site visits, training and dissemination of reporting tools.

6.1.1.2 Data Elements and Confidentiality

Core data elements will be collected using routine clinic/hospital records and logs. Essential data elements for STI surveillance will include:

- Diagnosis
- Reporting site
- Date of visit
- Sex
- Age/Date of Birth/age group

Every effort to maintain the confidentiality of data should be made. Personal identifiable information (PII) of persons with STIs will be maintained only at the local sites/facilities. PII will be maintained under strict regulations to ensure privacy.

6.1.1.4 STI Case Reporting Analysis

Case reporting data will be analysed on a quarterly basis resulting in annual reports. Key analyses will include:

- Comparison of cases reported each quarter with a similar time period in the previous year

- Evaluation of quarterly trends including prevalence comparisons with previous 1-2 years. This will include sub-analysis by county, sex, age, reporting site and provider type (e.g. FP clinic, KP clinic, STI clinic, general provider, private facility, and laboratory). This can also be done annually.
- Annual trends in population STI rates using census data and/or population estimates, stratified by county, sex, age, reporting site and provider type (e.g. FP clinic, KP clinic, STI clinic, general provider, private facility, laboratory).

6.1.2 Prevalence assessment and monitoring

Prevalence assessment and monitoring involves actual determination of prevalence of STIs within communities or facilities in Kenya.

STI prevalence assessment and monitoring will be conducted to enable:

1. Identification of population subgroups with high prevalence of STIs.
2. Monitoring of trends in STI prevalence among defined populations.
3. Identification of subgroups that are at high risk for HIV infection as evidenced by high rates of STIs.
4. Funding and resource allocation for STI and HIV prevention programs.
5. Monitoring the effectiveness of STI and HIV prevention programs.
6. Development of national and county estimates of STIs.

Routine systematic recording and reporting of numbers of symptomatic and asymptomatic STI patients seen at health care facilities can provide an important source in determining national and county STI prevalence estimates. Clients with asymptomatic STIs accessing health facilities for services unrelated to STIs should be screened etiologically. Laboratory diagnosis is thus key in prevalence assessment and monitoring among the general population and key population. It is recommended that routine STI services be integrated into health care facilities. For populations undergoing periodic routine screening for STIs such as key populations and pregnant women, syndromic and/or etiologic STI data will be used to determine prevalence.

Prevalence assessment and monitoring may also comprise of surveys with nationally representative samples such as:

a. Kenya Population-based HIV Impact Assessment (KENPHIA) which also assesses STIs prevalence.
b. The Integrated Bio-behavioural Surveys (IBBS) for the key population which aims to estimate the prevalence of HIV and STIs among key populations in Kenya.

6.1.3 Assessment of Aetiology of Infection

Periodic assessment of aetiologies of STI syndromes such as urethral discharge, genital ulcer syndrome or vaginal discharge should be conducted with the aim of:

a. Obtaining data to guide STI syndromic management
b. Guide the interpretation of syndromic case reports
c. Enable the assessment of disease burden caused by specific pathogens
d. Re-evaluate the syndromic management algorithms

Aetiological assessment should be conducted at sentinel sites and/or sites with adequate laboratory infrastructure. Testing should be done as outlined in chapter 4.

6.1.4 Antimicrobial Resistance Monitoring

There has been an increase in antimicrobial resistance observed globally (WHO, 2014). As such, it is important for the country to monitor antimicrobial resistance in Neisseria gonorrhoea to obtain data that will inform detection of emerging resistance and the subsequent development of treatment guidelines. The primary objectives are:

a. To obtain data necessary to determine treatment guidelines for N. gonorrhoea.
b. To detect newly emerging resistance.

Antimicrobial resistance monitoring should be conducted annually at selected sentinel sites within the country.

6.1.5 Special research

Data should be collected from special research on STI prevalence conducted by universities, the Ministry of Health and other research groups within the country. The aim will be to provide information to complement STI surveillance for conditions not routinely monitored as part of the national program. These studies may include:

a. Incidence and prevalence of complications of STIs, e.g. PID, ectopic pregnancies and cervical cancer.
b. Prevalence of viral STIs e.g. Human papillomavirus, hepatitis and herpes,
c. Prevalence of bacterial vaginitis and its sequelae in certain groups e.g. sex workers, young women,
d. STI incidence and prevalence among HIV infected individuals or incidence of HIV among those with STIs.
e. Evaluation of syndromic treatment algorithm
f. STI incidence and prevalence e.g. chancroid, mycoplasma genitalium among key populations
g. Other implementation and operational research imbedded in programmes

6.2 Monitoring and Evaluation for STI programme

Monitoring and evaluation is a critical part of program implementation as it allows program staff to plan, assess progress, refine activities and evaluate out come and impact.

Facilities will collect data on STI management using the appropriate MOH tools (clinical sheets, registers and tally sheets) and complete monthly summary forms. These are required to be uploaded onto the DHIS as per the National Health Information System Guidelines.

Table 6 Indicators

The following indicators will be reported by service delivery points providing STI prevention and treatment services using available data sources and the shown frequency. Data will be aggregated to show STIs in the general population, disaggregated by gender, age, and key populations typology.

Though the country is using STI syndromic management as the standard of care, some facilities may provide both syndromic and aetiological management. In such facilities, data on both syndromic and aetiological management should be collected.

Table 6: Indicators

Indicator	Numerator/ Denominator	Age/Population/ KP typology disaggregation	Data Sources	Frequency
Syndromic				
% of male clients screened for urethral discharge	N: Male clients screened D: Total male clients seen	Age, General population, MSM, MSW, PWIDs	Enrolment form and clinic visit form, outpatient register (MOH 504B), ANC, Family Planning register	Quarterly
% of male clients treated for urethral discharge	N: Treated clients D: Screened positive clients	Age, General population, MSM, MSW, PWIDs	STI treatment form,, Enrolment form and clinic visit form, outpatient register (MOH 504B), ANC, Family Planning register	Quarterly
% of female clients screened for vaginal discharge	N: Female clients screened D: Total female clients seen	Age, General population, FSW, TG, PWIDs	STI screening clinic visit form Enrolment form and clinic visit form, outpatient register (MOH 504B), ANC, Family Planning register	Quarterly
% of female clients treated for vaginal discharge	: Treated Screened Positive clients	Age, General population, FSW, TG, PWIDs	STI treatment form, Enrolment form and clinic visit form, outpatient register (MOH 504B), ANC, Family Planning register	Quarterly
% of female clients screened for lower abdominal pain (LAP)	N: Female clients screened D: Total female clients seen	Age, General population, FSW, TG, PWIDs	STI treatment form clinic visit form Enrolment form and clinic visit form, outpatient register (MOH 504B), ANC, Family Planning register	Quarterly
% of female clients treated for LAP	N: Treated clients D: Screened positive clients	Age, General population, FSW, TG, PWIDs	STI treatment Enrolment form and clinic visit form, outpatient register (MOH 504B), ANC, Family Planning register	Quarterly
% of clients screened for Genital Ulcer Syndrome (GUS)	N: Clients screened D: Total clients seen	Age, General population, Gender, MSM, MSW, FSW, TG, PWIDs	STI screening clinic visit form Enrolment form and clinic visit form, outpatient register (MOH 504B), ANC, Family Planning register	Quarterly
% of clients treated for GUS	N: Treated clients D: Screened positive clients	Age, General population, Gender, MSM, MSW, FSW, TG, PWIDs	STI screening clinic visit form Enrolment form and clinic visit form, outpatient register (MOH 504B), ANC, Family planning register	Quarterly
% of clients treated for genital/Anal warts	N: Treated clients D: Screened positive	Age, General population, Gender, MSM, MSW, FSW, TG, PWIDs	STI screening clinic visit form Enrolment form and clinic visit form, outpatient register (MOH 504B), ANC, Family Planning register	Quarterly

% of clients screened for anorectal discharge	N: Clients screened D: Total clients seen	Age, Gender, General population, MSM, MSW, FSW, TG, PWIDs	STI screening clinic visit form Enrolment form and clinic visit form, outpatient register (MOH 504B), ANC, Family Planning register	Quarterly
% of clients treated for anorectal discharge	N: Treated clients D: Screened Positive clients	Age, Gender, General population, MSM, MSW, FSW, TG, PWIDs	STI treatment clinic visit form Enrolment form and clinic visit form, outpatient register (MOH 504B), ANC, Family Planning register	Quarterly
% of clients with oropharyngeal symptoms	N: Positive clients D: Screened clients	Age, Gender, General population, MSM, MSW, FSW, TG, PWIDs	STI treatment, clinic visit form Enrolment form and clinic visit form, outpatient register (MOH 504B), ANC, Family Planning register	Quarterly
% of clients treated for oropharyngeal infections	N: Treated clients D: Screened Positive clients	Age, Gender, General population, MSM, MSW, FSW, TG, PWIDs	STI treatment clinic visit form Enrolment form and clinic visit form, outpatient register (MOH 504B), ANC, Family Planning register	Quarterly
Pregnant women				
% of ANC attendees tested for syphilis	N: Number of women attending ANC services tested for syphilis D: Total number of ANC attendees	First visit, Any visit	ANC register, MOH 711	Quarterly
% of reactive syphilis tests among ANC attendees	N: Positive tests D: Total tests done	First visit, Any visit	ANC register, Lab register, MOH 711	Quarterly
% of syphilis cases treated	N: Treated cases D: Screened Positive cases	First visit, Any visit	ANC Register*	
Congenital conditions				
% of neonates provided with prophylaxis for neonatal conjunctivitis	N: Number of neonates provided with prophylaxis for neonatal conjunctivitis D: number of live births	Gender	Maternity Register*	Annually
Rate of congenital syphilis	N: Number of cases of congenital syphilis reported within past 12 months (Live and still births) D: Number of live births	Gender	Surveillance case reporting	Annually
Aetiology indicators				
% of GUS clients tested for syphilis	N: Laboratory tests for syphilis D: GUS clients who needed testing	Age, Gender, General population, MSM, MSW, FSW, TG, PWIDs	Lab register,	Quarterly

% of clients positive for syphilis	N: Positive tests D: Total tests conducted	Age, Gender, General population, MSM, MSW, FSW, TG, PWIDs	Lab register,	Quarterly
% of positive clients treated for syphilis	N: Positive clients put on treatment D: Total positive results	Age, Gender, General population, MSM, MSW, FSW, TG, PWIDs	OPD register*	Quarterly
% of clients with urethral and vaginal discharge tested for Neisseria Gonorrhoea (NG)	N: Number of clients with urethral or vaginal discharge tested for NG D: Number of clients with urethral and vaginal discharge eligible for NG testing	Age, Gender, General population, MSM, MSW, FSW, TG, PWIDs	Lab register	Quarterly
% of clients with anorectal discharge tested for Neisseria Gonorrhoea (NG)	N: Number of clients with anorectal discharge tested for NG D: Number of clients with anorectal discharge eligible for NG testing	Age, Gender, General population, MSM, MSW, FSW, TG, PWIDs	Lab register	Quarterly
% of clients with oropharyngeal STI tested for Neisseria Gonorrhoea (NG)	N:Number of clients with oropharyngeal symptoms tested for NG D: Number of clients with oropharyngeal symptoms eligible for NG testing	Age, Gender, General population, MSM, MSW, FSW, TG, PWIDs	Lab register	Quarterly
% of clients positive for NG	N: Positive NG tests D: Total tests done	Age, Gender, General population, MSM, MSW, FSW, TG, PWIDs	Lab register	Quarterly
% of clients treated for NG	N: Clients treated for NG D: Total positive results	Age, Gender, General population, MSM, MSW, FSW, TG, PWIDs	OPD register*	Quarterly
% of clients treated for sexually transmitted Hepatitis B	N:Clients treated for sexually transmitted Hep B D:Total positive clients	Age, Gender, General population, MSM, MSW, FSW, TG, PWIDs	STI clinic register	Quarterly
% of clients treated for sexually transmitted Hepatitis C	N:Clients treated for sexually transmitted Hep C D:Total positive clients	Age, Gender, General population, MSM, MSW, FSW, TG, PWIDs	STI clinic register	Quarterly
STI prevention				
% of 10-11 year old boys and girls vaccinated against HPV	N: numbers of boys and girls 10-11 years old vaccinated against HPV D: Total number of boys and girls 1011 years old	Age, Gender	Census data, HPV vaccination register*	At zero, 2 and 6 months post-vaccination

6.2.2 Data Use for Decision Making

At all levels of care, data should be utilized to assess coverage and trends over time for effectiveness of STI prevention and treatment programs among the general and key populations. Service delivery points (SDP) should conduct monthly data reviews to inform program management at site level and assess quality issues. As a good practice, a summary of achievements for key indicators should be displayed at the SDP.

Roles and responsibilities for STIs M&E under HMIS

The roles and responsibilities of various institutions that will collect and report STIs data in the health sector are outlined below:

Table 7: Roles and responsibilities for STI monitoring and evaluation

Institution	Role	Frequency	Reporting tool
Health facilities	Report on STIs screened, tested, positives, treated, referred	Monthly	MOH711
Sub County health records and information officer	Collate STIs data	Monthly	From MOH 711 to DHIS
County health records and information officer	Review, data validation and approvals	Monthly	DHIS
County AIDS and STIs Coordinating Officer	Provide STIs data for review and decision making at county level	Quarterly	DHIS
NASCOP	Review DHIS, collate national data, liaise with stakeholders and MOH to address emerging issues	Quarterly, Annually	Progress report
MOH	Collate Global AIDS Response Progress Report	Annually	GARRP

6.2.3 STIs Data and Information Flow

The diagram below indicates how data will flow from health service delivery points through DHIS to HMIS. Service delivery points will collate and submit data monthly. Data will be collated monthly at the sub-county level and uploaded to the DHIS. Data on the DHIS will be collated on a quarterly basis to provide county and national level guidance. The data required for decision-making at each level is outlined in *Figure 15.*

Figure 15 Data Collection and Dissemination Flow

LEVEL OF DATA FLOW	DATA GENERATED AND USE
MOH HMIS	National prevalence of STIs
	National incidence of STIs
	National STIs estimated
	Global AIDS Response Progress Report developed
	% budget allocated to STIs management
	Assess key outcomes of the STIs program
	STIs estimated
DHIS 2 NASCOP	County STIs profiles
	County STIs prevalence and incidence maps
	Trends in STIs incidence, treatment, referrals
	Consolidated biannual STIs report
	Trends in antimicrobial resistance
	Commodity security
DISTRICT HEALTH INFORMATION SYSTEM 2	County STIs incidence and prevalence
	% county budget allocated to STIs management
	% of health care workers trained in STIs management
	County STIs estimates
	Commodity security
STIs SERVICE DELIVERY POINTS	Incidence of STIs
	Proportion of individuals treated for STIs
	Proportion of individuals referred for further STIs management
	Turnaround time for etiological tests
	Proportion of individuals who return for review
	Rate of partners of STI patients treated
	Commodity security

CHAPTER

7

QUALITY MANAGEMENT

CHAPTER 7: QUALITY MANAGEMENT

This chapter provides guidance on quality management, acknowledging that this is a critical dimension of social justice and human rights principles, and forms one of the pillars of the available and sustainable healthcare system, Kenya Quality Model of Health 2011). It is therefore imperative that STI prevention, management and control services be provided with the highest level of quality management approaches. The critical elements of quality management, in an STI programme are quality assurance/quality control and continuous quality improvement.

7.1 Quality Assurance and Quality Control

Quality assurance and control (QA/QC) ensures that services are provided and reported in a standardized manner that is strictly adhered to. Key components of QA/QC in STI management will include the following:

a. Training and Continuous Capacity Development of Providers

Health care workers providing STI services will receive training on STI diagnosis and treatment using the updated STI training curriculum and shall provide services in line with the most recent Kenya national STI guidelines. Training will be provided by NASCOP certified trainers of trainers (ToTs). Health care workers will be oriented on STI diagnosis, management and reporting using the standardized Ministry of Health tools.

After training, all health care workers should receive continuous capacity development through continuous medical education (CMEs), on-the-job-trainings (OJT), sensitizations, mentorship and orientation sessions.

b. Support Supervision

County and sub-county departments of health services will provide routine (quarterly) support supervision to sites providing STI prevention and treatment services. The supervision will use standardized checklists and tools to ensure quality provision of services. Gaps identified during supervision will be addressed by the facility and quality improvement teams and followed up by the county and sub-county health teams.

c. Client Satisfaction Surveys and Exit Interviews

STI prevention and treatment service delivery points are encouraged to conduct routine client satisfaction surveys and exit interviews, which will assist in identification of clients' concerns about service provision, detect gaps for improvement, and help sites provide equitable quality health services.

d. Laboratory Proficiency Testing

Laboratory staff at STI prevention and treatment sites that perform etiological diagnosis will undergo proficiency testing semi-annually to ensure correct and consistent results. It is recommended that internal quality assurance and external quality assurance testing be conducted monthly and semi-annually using samples from an accredited laboratory.

7.2 Quality improvement

Quality Improvement (QI) is a continuous ongoing effort to monitor processes aimed at improving efficiency, effectiveness, performance, accountability, outcomes, and other elements of quality service delivery to achieve equity and improve the health of targeted communities. In line with the Kenya Quality Model for Health (KQMH), service delivery points are encouraged to use defined processes, such as Plan-Do-Study-Act (PDSA), to review performance standards, identify performance gaps and their root causes, and plan locally acceptable interventions that are responsive to improving the performance of the identified weak areas to the desired standards. The quality improvement teams should routinely review performance gaps, plan, monitor progress, plan again as required and adopt good practices for sustainable improvement. The quality standards that will be monitored regularly by the STI program are shown below:

Table 8: Quality Indicators for STIs Management

Quality Indicator	Data Source	Frequency
Service coverage		
All ANC attendees screened for syphilis once	ANC register	M/Q
All KPs screened quarterly for STIs	Clinic visit form, enrolment form	M/Q
All individuals screened/ tested positive for STIs receive treatment	Clinic visit form/ OPD register, STI treatment form	M/Q
100% referral for all patients needing to be referred to another service for ongoing STI management	Referral register	M/Q
Patient outcomes		
% of patients who return for review	OPD register, Cohort register	M/Q
% of patients who complete referrals for further investigation	Referral register	M/Q
Laboratory		
Turn-around time for STIs test results		M/Q
% of laboratories that pass proficiency tests	PT results	Biannual
Health care professionals		
All healthcare professionals managing STIs trained on revised national treatment guidelines	Training lists/ reports/ copies of certificates	Q
Staff maintain confidentiality and proper documentation of client records	Registers appropriately stored	M/Q
Commodities		
No STIs commodity stock out during the reporting period	Stock cards, bin cards, physical count of stocks	M/Q

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Annex 1: Case Studies

Urethral discharge

Kamau is a 23yr old university student and visits Mla Leo clinic with a history of pain while passing urine and a slight urethral discharge. He reports that 3 days ago, he had unprotected sex with a lady he met at a nightclub.

1. What is the diagnosis?
2. How will you manage Kamau?

Genital ulcer syndrome

A 24yr old healthy secretary is seen with a very painful sore on her vulva. Her husband is her only sexual partner. She is ill with fever and difficulty in voiding urine because of pain. She has many small sores filled with clear fluid on both the labia majora and minora.

1. What is the diagnosis?
2. What is the management?
3. How do you discuss this with her husband?

Vaginal discharge

Kadzo is a middle-aged woman who presents with a thick-yellowish discharge from the vagina accompanied with burning sensation while passing urine.

1. What is the most likely diagnosis?
2. What management will be appropriate?
3. Seven (7) days later she comes to the clinic with no improvement (still has the discharge), what action will you take?

Lower Abdominal pain

Maria 26yr old, came in with complains of lower abdominal pains on and off for 2 weeks, no history of trauma, no recent delivery, no surgery and no vaginal discharge. Per abdominal examination reveals tenderness in the hypogastric region and positive cervical motion tenderness.

1. What is the likely diagnosis?
2. How would you treat Maria?
3. What are some of the complications?
4. What are the differential diagnosis?

Annex 2: History Taking Guide for Key Populations

History-Taking Guide for Female Sex Workers	
Present illness (Presenting complaints and duration)	
If a vaginal discharge	Itching? Odour? Colour and consistency of discharge?
If lower abdominal pain	Vaginal bleeding or discharge? Painful or difficult pregnancy of childbirth? Painful or difficult or irregular menstruation? Missed or overdue period? History of recent delivery or abortion? Painful vaginal intercourse? Fever?
If rectal pain or discomfort	Rectal bleeding or discharge? Diarrhoea? Abdominal pain or cramping? Fever?
If a genital or peri-anal ulcer	Site? Painful? Recurrent? Appearance? Spontaneous onset?
If urinary symptoms	Urge to pass urine, pain when passing urine, frequency, abdominal pain. Pain when passing urine? Frequency?
If oral or pharyngeal symptoms	Sore throat or ulcers?
Any other symptoms Discomfort	Warts? Lumps? Skin rashes?
Medical History (Focus on reproductive and STI history)	
Regular STI check-ups	Date of last STI check-up? Medications provided?
Past STI	Type? Dates? Any treatment and response? Results of any prior tests?
Obstetric history	Pregnancies and outcomes? Date of last menstrual period? Contraceptive use?
Other illness	Type? Dates? Any treatment and response? Results of tests?
Medications	Current medication?
Drug allergies?	Name of drugs? Type of reactions (rash, hives, etc.)
Drug and alcohol use?	Types of drugs/alcohol used? Patterns and frequency of use? Injection drug use? Risk minimization strategies?
Risk Assessment	
	Duration of sex work? Number of partners in last working day/week? Sites of sexual exposure (oral, vaginal, anal)? Regular partner? Symptomatic partner? Condom use with paying clients? Condom use with regular partners? Partner violence?

History-Taking Guide for Male and Transgender Sex Workers	
Present illness (Presenting complaints and duration)	
If a urethral discharge	Colour and consistency of discharge? Difficulty or pain with urination? Frequency of urination?
If rectal pain or discomfort	Rectal bleeding or discharge? Diarrhoea? Abdominal pain or cramping? Fever?
If a genital or peri-anal ulcer	Site? Painful? Recurrent? Appearance? Spontaneous onset? Pain and swelling in the inguinal region?
If oral or pharyngeal symptoms	Sore throat or Ulcer?
Other Symptoms	Warts? Lumps or swelling? Skin rashes?
If oral or pharyngeal symptoms	Sore throat or ulcers?
Any other symptoms Discomfort	Warts? Lumps? Skin rashes?
Medical History (Focus on reproductive and STI history)	
Regular STI check-ups	Date of last STI check-up? Medications provided?
Past STI	Type? Dates? Any treatment and response? Results of any prior tests?
Other illness	Type? Dates? Any treatment and response? Results of tests?
Medications	Current medication?
Drug allergies?	Name of drugs? Type of reactions (rash, hives, etc.)
Drug and alcohol use?	Types of drugs/alcohol used? Patterns and frequency of use? Injection drug use? Risk minimization strategies?
Risk Assessment	
	Duration of sex work? Number of partners in last working day/ week? Types of sexual behaviour practiced (oral, anal, receptive or penetrative role)? Gender of sexual partner? Contraceptives use by female partners? Regular partner? Symptomatic partner?
	Condom use with paying clients? Condom use with regular partners? Partner violence?

Annex 3: 5 Ps In Taking Sexual History

Partners	• "Do you have sex with men, women, or both" • "In the past 2 months, how many partners have you had sex with?" _____ • "In the past 12 months, how many partners have you had sex with?" _____
Prevention of Pregnancy	• "Are you or your partner trying to get pregnant" Yes No • "If no, what are you doing to prevent pregnancy?" _____
Protection from STIs	• "What do you do to protect yourself from STIs (sexually transmitted infections) or HIV?" _____ _____
Practices	"To understand your STI risk, I need to understand the kind of sex you had recently." • "Have you had vaginal sex?" Yes No • "If yes, do you use condoms?" never sometimes always • "Have you had anal sex?" Yes No • "If yes, do you use condoms?" never sometimes always • For condom answers, if never, "Why don't you use condoms?" _____ • "If sometimes, in what situations/with whom, do you not use condoms?" _____ _____ • "Have you had oral sex?" Yes No
Past history of STIs	• "Have you ever had a sexually transmitted infection?" Yes No Name of infection(s): _____ _____

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Algorithms for Managing Common STI Syndromes

Algorithm to manage common STIs Syndromes: Urethral discharge in Male

History of urethral discharge or symptoms

Take history and examine

Discharge present

Discharge absent

Symptomatic treatment and 4Cs

Urethritis treatment and 4Cs
Cefixime 400mg stat AND Azithromycin 1gm PO stat

If discharge persists after 7 days treatment

Give alternative urethritis treatment and 4 Cs
IM Cefriaxone 500mg AND Azithromycin 2gm PO stat
OR
IM Gentamycin 240mg stat and Azthromycin 2gm PO stat

If discharge persists after 7days treatment

Refer for etiological management

**For syndromic treatment of anorectal discharge and oropharyngeal non-ulcer STI, follow the urethral discharge flow chart since the causative agents are similar.*

Algorithm to manage common STIs Syndromes: Vaginal discharge or pruritus

History of vaginal discharge
Enquire about lower abdominal pain and examine

No lower abdominal pain or tenderness

Lower abdominal pain or tenderness present

Follow the flow chart for lower abdominal pain

Vaginitis treatment and 4Cs
Clotrimazole pessaries 100mg intra-vaginally OD for 6days and metronidazole 2gm PO stat
OR
Fluconazole 150mg PO stat and Metronidazole 2gm PO stat
For pregnant women
Give only Clotrimazole pessaries 200mg intra-vaginally OD for 3days

If no improvement after7 days

Treat for Cervicitis and 4 Cs
Tab Cefixime 400 mg and Tab Azithromycin 1gm PO stat
Or
IM Ceftriaxone 500 mg Stat and Tab Azithromycin 1gm PO stat
Or
IM Gentamicin 240mg Stat and Tab Azithromycin 1gm PO stat
(DO NOT USE GENTAMICIN IF PREGNANT)

If discharge persists after 7 days

Refer for etiological management

Algorithm to manage common STIs Syndromes: Lower abdominal pain in women

History of lower abdominal pain

Abdominal mass or tenderness due to surgical or gynaecological causes are determined if there is rebound tenderness and/or guarding, last menstrual period is overdue, recent abortion or delivery, menorrhagia &/or metrorrhagia)

Refer for surgical or gynecological assessment

Abdominal tenderness or tenderness on moving the cervix

Treat for Pelvic Inflammatory disease and 4Cs

First line Preferred:
Tab Cefixime 400mg stat and oral doxycycline 100 mg BD for 14 days and Metronidazole 400mg PO TDS for 14 days.

Second line Preferred:
IM Ceftriaxone 500mg Stat and oral doxycycline 100 mg BD for 14 days and Metronidazole 400 mg TDS for 14 days.
Or
IM Gentamicin 240mg Stat and oral doxycycline 100 mg BD for 14 days and Metronidazole 400 mg TDS for 14 days.

No tenderness on abdominal examination

Symptomatic treatment or vaginitis treatment if there is vaginal discharge

Start flowchart again after repeating abdominal examination

If no improvement after 7 days, refer for etiological management
For pregnant women, refer for obstetric evaluation

Algorithm to manage common STIs Syndromes: Male and female Genital ulcer syndrome

History of a genital sore or ulcer
Take history and examine for ulcer

Ulcer present?

Yes

NO

Offer or refer for HIV testing and counseling and 4 Cs and follow up for soreness

Treat for HSV2*, syphilis and Chancroid and 4Cs

Benzathine Penicillin 2.4MU IM weekly for 3weeks and Azithromycin 2gm PO stat
or
IM Cefriaxone 1gm stat and Doxycycline 100mg PO BD for 2weeks
or
Azithromycin 2gm PO stat (in case of allergy to penicillin or pregnancy)

(Doxycycline contraindicated in pregnancy)

** Treat HSV2 with Acyclovir 400 TID X 7 days if client presents with an ulcer with multiple painful vesicles grouped together with history of recurrence.*

Review in 7 days

Ulcer is not healing

Ulcer is healing

GUS heals slowly; improvement is defined as sign of healing and reduction of pain. HIV-infected people respond slowly to GUS treatment

Continue HSV2** treatment for a further 7 days and review

Ulcer still not responding REFER for etiological management

Offer or refer for HIV testing and counseling and 4 Cs

NOTE: Treat recurrent HSV2* with Acyclovir 400mg TID for 5days or Acyclovir 800mg TID for 2days. If more than six recurrences in a year, consider suppressive therapy therapy of Acyclovir 400mg BD for one month.

****For syndromic treatment of anorectal ulcer syndrome follow the the flow chart for genital ulcer syndrome since the causative agents are similar.***

Algorithm to manage common STIs Syndromes: Opthalmia Neonatorum

Neonate with eye discharge
Take history and examine

Discharge present

Opthalmia neonatorum prophylactic treatment is a Single application of:
1% Tetracycline eye ointment
or
Silver nitrate 1% solution
or
Chloramphenicol 1% eye ointment
Treat mother for cervicitis and her partner for urethritis and 4Cs

Follow up within 24 hours

Improving

Not Improving

Continue with 1% Tetracycline ointment TDS for 10 days

Offer alternative treatment as IM Ceftriaxone 62.5 mg stat and 1% Tetracycline ointment TDS for 10 days

FIGHT AIDS! REMEMBER THE 4Cs OF GOOD STI MANAGEMENT

Counselling

- Emphasize on the risks of STIs including HIV
- Discuss other 3 Cs
- Offer HIV testing and counseling services

Compliance

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

Condoms

- Proper use of condom is the only other alternative to abstinence to protect from STIs
- Give condoms to your patients
- Explain and demonstrate the correct use of condoms

Contact treatment

Your patient should:
- Tell all his/her sexual partners to seek medication

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MINISTRY OF HEALTH
NATIONAL AIDS AND STI CONTROL PROGRAMME

Algorithms for Managing Common STI Syndromes

Algorithm to manage common STIs Syndromes: Painful scrotal swelling

History of scrotal swelling in a sexually active patient

Take history and examine

Testis not rotated or elevated, no hydrocele, no history of trauma

Preferred first line treatment and 4Cs
Cefixime 400mg PO stat and Azithromycin 1gm PO stat
Second line treatment and 4Cs
Ceftriaxone 500mg IM stat and Azithromycin 2 gm PO stat
OR
Gentamicin 240mg IM stat AND Azithromycin 2gm PO stat

Review after 7 days treatment, or earlier if necessary → If cured, discharge for clinic

If no improvement, refer to surgeon

Ulcer absent

Testis rotated/ elevated, hydrocele, history or trauma

Refer to surgeon

Algorithm to manage common STI Syndromes: Painfull inguinal swelling

History of painful inguinal swelling in a sexually active patient

Take history and examine

Inguinal Buibo present without genital ulcers

Preferred first line treatment and 4Cs
Doxycycline 100mg PO BD for 14days
OR
Erythromycin 500mg QID for 14 days

Review after 7 days of treatment

If no improvement refer to surgeon

Inguinal buibo present with genital ulcer

Use genital Ulcer Syndrome Flowchart

If improved, discharge from clinic and continue with treatment

Inguinal hernia, other causes of enlarged lymph nodes present

Refer to surgeon or treat as appropriate

Note: Fluctuant buibos should be aspirated with a wide bore needle through intact skin. Surgical incision of buibos is contraindicated.

Algorithm to manage common STIs syndromes: Anogenital growths

History of growth in the genital or anorectal region

Take history and examine for growths in anogenital region

Warty lesions present on genital or anorectal regions

If less than 3 or small and small in size:

Podophyllin (10-25%) OD at the health facility until warts fall off
OR
Imiquimod 5% application 3 times a week for 16weeks

If large or more that 3 in number:
Refer to a higher-level health facility

No warty lesions on genital or anorectal regions present

Offer or refer for HIV testing and counseling and 4CS and follow up for soreness

FIGHT AIDS! REMEMBER THE 4Cs OF GOOD STI MANAGEMENT

Counselling

- Emphasize on the risks of STIs including HIV
- Discuss other 3 Cs
- Offer HIV testing and counseling services

Compliance

Your patient should:
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- Take the full course of medication and not to share or keep it
- Follow your other instructions

Condoms

- Proper use of condom is the only other alternative to abstinence to protect from STIs
- Give condoms to your patients
- Explain and demonstrate the correct use of condoms

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Your patient should:
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Annex 5: Collection and Handling Of Biological Specimens for Laboratory Analysis to confirm Aetiology Of STIs

Adapted from the CDC; Sexually Transmitted Diseases Treatment Guidelines, September 28, 2006. For more information, visit www.cdc.gov.

Genital condition	Diagnostic Test	Site(s) & sampling device/specimen needed	Specimen Transport/ Laboratory Requirement
Gonorrhoea	Culture/PCR Gram-negative intracellular diplococci within PMNL on microscopy.	Endocervical, urethral swabs and first catch urine specimen	Swab specimen for culture: Charcoal transport media or direct plate onto selective culture media, and transport in CO_2 rich atmosphere. Do not refrigerate. Swab specimen for PCR add 0,2 ml of transport medium to specimen. Urine specimen for PCR: Aliquot specimen in 2ml screw capped vials. Storage conditions PCR specimens Store samples at 2–8 °C for no longer than 24 hours, or freeze at –20/80 °C packed with charged Ice packs, and transported before they thaw. Frozen in liquid nitrogen or dry shipper.
Chlamydia	PCR or LCR (Nucleic acid amplification tests),	First catch urine or Endocervical swab Urethral swab for men, rectal and pharyngeal swabs	Swab specimen: add 0,2 ml of Transport medium Urine specimen: Aliquot specimen in 2ml screw capped vials. Storage conditions PCR specimens Store samples at 2–8 °C for no longer than 24 hours, or freeze at –20/80 °C packed with charged ice packs, and transported before they thaw. Frozen in liquid nitrogen or dry shipper.
Pelvic Inflammatory Disease	Clinical diagnosis test for chlamydia and gonorrhoea	Endocervical swab	2SP (0.2 mol/l sucrose in 0.02 mol/l phosphate buffer supplemented with 10% foetal calf serum for C. trachomatis MTM, Amies charcoal, and Jembec chamber for N. gonorrhoea
Mucopurulent Cervicitis	Clinical diagnosis test for chlamydia and gonorrhoea	Endocervical swab	2SP (0.2 mol/l sucrose in 0.02 mol/l phosphate buffer supplemented with 10% foetal calf serum for C. trachomatis MTM, Amies charcoal, and Jembec chamber for N. gonorrhoea
Early Syphilis	Serology: positive non-treponemal test (e.g. RPR or VDRL) and treponemal test (e.g. FTA-ABS, TPPA). Or TPHA, Nucleic acid amplification tests (NAATS)	CSF (for CNS invasion) serum or plasma	In cryovials packed with charged Ice packs, and transported before they thaw. Frozen in Liquid nitrogen or dry shipper

Trichomoniasis	Wet smear/prep demonstrates motile flagellated protozoa PCR	First catch urine High vaginal swab. Urethral swab in male	Specimens for wet smear: Transported to in Stuart's transport media. Swab specimen for PCR add 0,2 ml of transport medium to specimen. Urine specimen for PCR: Aliquot specimen in 2ml screw capped vials. Storage conditions PCR specimens Store samples at 2–8 °C for no longer than 24 hours, or freeze at –20/80 °C packed with charged ice packs, and transported before they thaw. Frozen in liquid nitrogen or charged dry shipper.
Non-gonococcal urethritis	Gram stained urethral smear shows >=5PMNL /high-power (x1000) microscopic field, averaged over 5 fields with concentration of PMNLs. Exclude chlamydia	Urethral swab. Only used in making diagnosis in males.	2SP (0.2 mol/l sucrose in 0.02 mol/l phosphate buffer supplemented with 10% foetal calf serum for C. trachomatis MTM, Amies charcoal, and Jembec chamber for N. gonorrhoea
Herpes	Herpes simplex virus isolation by cell culture HSV PCR Type-specific antibody assays	Vesicle fluid or swab from ulcer base; Swab of area of skin where symptoms possibly due to HSV are experienced Lesion Blood	Specific transport medium required Maintain specimen at – 40°C after collection and during transport
Viral Hepatitis: Hepatitis A	Serology: anti-HAV IgM positive Serology: anti-HAV IgG positive	serum or plasma	Specimen storage conditions Store samples at 2–8 °C for no longer than 24 hours, or freeze at –20/80 °C Transport: Short distance: Use charged ice packs before they thaw. Long distance : Use frozen liquid nitrogen or charged dry shipper
Viral Hepatitis: Hepatitis B	Serology: antiHBc total positive, anti-HBc IgM positive, anti-HBs positive, HBsAg positive HBsAg positive for > 6 months; HBeAg positive antiHBeAg positive HBV DNA	,serum or plasma	Specimen storage conditions Store samples at 2–8 °C for no longer than 24 hours, or freeze at –20/80 °C Transport: Short distance: Use charged ice packs before they thaw. Long distance : Use frozen liquid nitrogen or charged dry shipper

Viral Hepatitis: Hepatitis C	Serology: anti-HCV positive; Biochemistry: LFTs HCV PCR: qualitative and quantitative HCV sequencing and genotyping	Whole blood, serum or plasma Dried blood spots(DBS)	Specimen storage conditions Serum/plasma Store samples at 2–8 °C for no longer than 24 hours, or freeze at –20^{0}c/80^{0}c Transport: Short distance: Use charged ice packs before they thaw. Long distance : Use frozen liquid nitrogen or charged dry shipper Dried blood spot (DBS) Store and transport
Warts	Clinical diagnosis Unusual or persistent lesions should be biopsied Using microscopy	Genital lesion Genital swab for PCR and Culture of the HPV	Samples prepared in Preserve Cyt, STS, Seracare CB and SurePath And samples run by HC2 DNA method
Bacterial vaginitis	Clinical Diagnosis: 3 of criteria 1-4 Homogenous noninflammatory discharge pH of vaginal fluid >4.5 “fishy” odour of vaginal discharge before or after addition of 10% KOH (“whiff test”) 4. “clue” cells present on microscopy of vaginal fluid	Lateral vaginal wall	Simple microscopy (Gram stain or wet prep).
Candidiasis: vulvo-vaginal	Clinical Diagnosis: Signs or symptoms of inflammation with demonstration of yeasts or hyphae on microscopy of vaginal fluid or Culture of vaginal or vulval swab	High vaginal swab	Direct inoculation onto Sabouraud’s Dextrose Agar (SDA medium)
Pubic Lice	Clinical Dx: Confirmation by observing lice directly	Louse from skin or louse egg adherent to hair shaft	Whole lice in 10% formal saline
Scabies	Clinical diagnosis Demonstrate mites by microscopy	Skin scrapings from burrows	Skin Scrap in NS or 10% for histological studies

Annex 6: List of contributors and affiliated institutions

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Annex 7: List of Participating Organizations and Agencies

NHRL	National HIV Reference Lab
NASCOP	National Aids and STI Control Program
RCT	Reachout Center
KRCS	Kenya Red Cross Society
NIAK	Neighbors In Action Kenya
MoH	Ministry of Health
KANCO	Kenyan AIDS NGOs Consortium
UoM	University Of Manitoba
BHESP	Bar Hostess Empowerment and Support Programme
CDC	Centers for Disease Control (CDC)
IRDO	Impact Research and Development Organization
TOP	The Omari Project
MEWA	Muslim Education and Welfare Association
WHO	World Health Organization
SAPTA	Support for Addictions Prevention and Treatment in Africa
HWWK	Hope World Wide Kenya
AMURT	Ananda Marga Universal Relief Team
SWOP	Sex Workers Outreach Project
UoN	University Of Nairobi
KEMRI	Kenya Medical Research Institute

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