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Acknowledgements

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Important Considerations for Users of this Manual

This manual is intended solely for use by Registered Nurses (RN) working in the Alberta Health Services (AHS) Edmonton, Calgary and Fort McMurray Sexually Transmitted Infection (STI) clinics, with approval and supervision by the designated physician for each of these clinics. This manual may be used as a resource to others developing their own STI clinical practice guidelines. Practice guidelines need to be drafted and tailored to reflect the scope of practice of each unique clinical practice environment.

The standards set out in this manual were developed by the Blue Book Working Group. In keeping with the College and Association of Registered Nurses of Alberta's Medication Administration Guidelines, the development of this manual has been a collaborative process involving a multidisciplinary team. The goal of the working group is to draw on the expertise of STI physicians, STI managers and STI clinical nursing educators to develop an updated manual that reflects the emerging issues and incorporates current evidence-based practice. It also draws from the *Canadian Guidelines on Sexually Transmitted Infections*. Numerous updates to the Blue Book have been written since 1986 to set standards of practice for the STI clinics in Alberta.

The manual includes the **minimum** history, physical exam and laboratory examination to be performed on clients at each clinic visit within the scope of the RN practicing in these STI clinics. Procedures for physical examination, obtaining the specimens, protocols for client management, treatment schedules and charting standards are included.

This manual replaces all previously printed materials and treatment regimens and is current as of the publication date. Updates to this manual will be made as new evidence emerges. It is recommended that the users of this manual ensure that they are utilizing the most current version of this blue book (most recent version will be posted on the Alberta Health Services external website: <https://www.albertahealthservices.ca/info/page1730.aspx>)

We are disseminating this document to clinical and Public Health professionals for informational purposes only. Adoption of these standards outside of the scope of clinical practice of STI clinics highlighted here is the sole responsibility of the individual(s) using the manual and must be tailored to the specific clinical environment.

Summary of Changes (Updates/Revisions) since April 2019

Chapter: Title	Subsection: Title	Page	Update/Revision
III. Routine STI Testing	B. Female	30	Added contraindications for speculum examination.
IV. Laboratory Procedures		50	Urinalysis and C&S lab procedure added
VI. Genital Ulcer Disease	F. Diagnosis of Genital Ulcer Disease 1. Syphilis G. Treatment of Genital Ulcer Disease 1. Syphilis Pregnant Adults H. Client Follow-up 4. LGV	58, 61, 63, 65, 67	Adjusted serology intervals for ruling out BFP Instruct client to abstain from sexual contact for 7 days following treatment or until after treatment with doxycycline. Fetal monitoring in pregnancy for Bicillin treatment over 20 weeks gestation clarified. Added abstinence guidelines. Adjusted timing of TOC.
VII. Urethritis VIII. Epididymo-Orchitis IX. Vaginal Discharge – Cervicitis and Vaginitis	E. Treatment I. Client Follow-up 4. PID H. Client Follow-up J. Cervicitis Algorithm	74, 76, 77, 80, 85, 92, 94, 95, 96, 100, 103	Updated Managing Penicillin-Allergic Patients: Penicillin-allergic clients receiving treatment with cephalosporins must be counseled regarding the <1% chance of cross-reactivity. Revised treatment for chlamydia of the eye Non-anaphylactic reaction greater than 10 years ago (e.g. childhood) give recommended regimen and observe in clinic 15 min. Instruct client to abstain from sexual contact for 7 days following treatment or until after treatment with doxycycline. Updated TOC recommendations for gonorrhea. Added alternate medication use requires physician consult Added: patient does not require further treatment if gonorrhea positive. Revised Cervicitis Algorithm
IX. Vaginal Discharge – Cervicitis and Vaginitis	II. Vaginitis E. Treatment	106	Updated preferred treatment regimen for Trichomoniasis.
XIV. Sexual Assault/Abuse	2. Management of Sexual	131	Updated time frame for referral to CSART (3 days to 7 days).

	Assault/Abuse in Adults		
XV Caring for the Transgender, Non-binary and Two-spirited Client	1. Men and non-binary persons with vaginas	139	Masculinizing hormones may affect fertility however, are not adequate birth control, pregnancy testing and birth control counselling should be considered where appropriate.
XVIII. Accepted Abbreviations for Charting		149	Synchronized with CDOM and PNN abbreviations. Various added or removed.
Appendix 1. Nursing Guidelines	Patient Delivered Partner Therapy	161	Guideline added.
Appendix 2. Treatment Algorithms	NGU/MPC or Contact to CT/NGU/MPC	163-168	Combined algorithms

Notification of Sexually Transmitted Infections (STI) and Treatment

Treatment for both notifiable and non-notifiable STIs is outlined in this manual.

The treatment for notifiable STIs provided by Registered Nurses (RN) in designated Alberta Health Services STI Clinics are permitted pursuant to delegated authority of the Medical Officer of Health (MOH), as outlined in Section 7 of the Alberta *Public Health Act Communicable Diseases Regulation* [Alberta]. STI Clinic RNs are community health nurses delivering public health services under the authority of the Medical Officer of Health of Alberta Health Services, designated for each STI Clinic.

Medications for the treatment of notifiable STIs are provided free of charge directly to the client through the Provincial Drug Depot and are replaced following submission of a STI notification form to Alberta Health Services STI Services.

Non-notifiable medications may be supplied to the client directly for those unable to pay for the medication (without prescription drug coverage) or with prescriptions signed by the designated physicians for each clinic. These medications and prescriptions may be administered by the clinic RN under the approval of the designated physician.

Notifiable Disease Management Guidelines

The recommended and most current practices for the public health follow up of the notifiable STIs listed in this document are found at the following Alberta Health website:

<https://open.alberta.ca/publications/treatment-guidelines-for-sti-2018>

<https://www.alberta.ca/notifiable-disease-guidelines.aspx>

The Public Health Notifiable Disease Management Guidelines were developed by Alberta Health with input and advice from Medical Officers of Health, public health nurses, public health inspectors and medical infectious disease specialists.

Consent

Overview

The Alberta Health Services (AHS) Province-wide Consent to Treatment/Procedure Policy suite was developed and implemented in the fall of 2010. This policy and suite speaks to all aspects of the informed consent process and provides a consistent approach to obtaining informed consent province-wide, in compliance with legislative requirements. This document does not review all aspects of informed consent; therefore, please refer to the policy and suite for a complete review.

There are at least 4 provincial Acts that inform the new AHS consent policy and procedures:

- *Adult Guardianship and Trustee Act*
- *Human Tissue and Organ Donation Act*
- *Mental Health Act*
- *Family Law Act*

Consent by a client must be informed – this is a cornerstone principle within the policy and is reflected in both:

- *The Health Professions Act Standards of Practice, January 1, 2010, College of Physicians and Surgeons of Alberta*
- *Consent, A Guide for Canadian Physicians, 4th edition, Canadian Medical Protective Association*

The consent process consists of adhering to the following five steps:

1. **Determine capacity:** *as per continuum*
2. **Commence dialogue:** *as per rights & principles*
3. **Verify understanding:** *address barriers*
4. **Decision-making:** *client/alternate & provider*
5. **Document process & outcome:** *verbal or written as required or noted in health record.*

These five steps constitute the core elements that are articulated in the policy and procedures.

Before a procedure or treatment is provided there must be express (verbal or written) or implied informed consent

In the STI clinic setting, the vast majority of consent obtained will be **implied informed consent**.

Most Responsible Health Practitioner

Duty of Most Responsible Health Practitioner to inform the client of the following:

- *Nature of Treatment/Procedure*
- *Risks*
- *Benefits*
- *Alternatives*
- *Consequences*

Implied Consent

All clients attending the STI Clinics should have given informed implied consent and only cases that are charted by exception will be noted in the charting. Consent consists of the following components:

- *Consent inferred from the Client or Alternate Decision-Maker (if applicable)*
- *Presumed by actions and surrounding circumstances*
- *Example:*
 - *Presents voluntarily for an examination*
 - *Minor or less invasive treatment/procedure*
- *If there is any doubt that there is implied consent, the MRHP must obtain express consent either verbal or written*
- ***Implied consent must still be informed consent.***

Minors / Mature Minors

Clients must be a minimum of 14 years to receive care at an STI Clinic in Alberta. Exceptions can be made for as low as 12 years, though only through consultation with a clinic physician.

There is a presumption that those under the age of 18 years will not have the capacity to consent to health care related assessments and treatments unless an individual is assessed and consequently deemed to be a mature minor. The policy and procedures regarding consent for Minors/Mature Minors is well outlined and summarized in the following AHS documents:

1. *Policy – Consent to Treatment Procedures – Minors / Mature Minors PRR-01-03*
2. *Consent -Mature Minor Algorithm*
3. *Consent – Minor Algorithm*
4. *Summary Sheet – Consent to Treatment / Procedure(s) - Minors / Mature Minors*

All other aspects of the general consent guidelines apply – e.g., implied vs. written vs. expressed consent, documentation etc.

The AHS policy and Minors / Mature Minors procedure does not provide specifics about how the mature minor determination is made. Rather it is left to the MRHP to determine if the minor has the maturity to understand the nature, benefits, risks, consequences and alternatives of what is being proposed and the consequences of not undertaking the treatment both in the short term and longer term.

“Maturity” is difficult to measure:

- *“It is a sliding scale, with the adolescents' views becoming increasingly determinative, based on the ability to exercise mature, independent judgment (J.M. Leddy, 2008)*
- *Common law doctrine summarizes “mature minor” as: “a general recognition that children are entitled to a degree of decision-making autonomy that is reflective of their evolving intelligence and understanding.” This doctrine has been used to support minors making their own decisions about such matters as contraception and abortion (J.M. Leddy, 2008).*
- In Alberta, a minor child is any person who is under the age of 18 years.
- 13 is the commonly accepted minimum age for a mature minor in Alberta. Although in some provinces, 14 and 16 are thought to be important ages in determining whether a youth should be deemed a mature minor.

Assessment of Mature Minors

A client under the age of 18 may be assessed and determined to be a Mature Minor. Several factors must be considered while assessing whether a minor can be deemed to be a Mature Minor:

- 1. Age**
 - Age alone will not determine a Minor’s Capacity to provide consent. In exceptional circumstances, a Minor under the age of 14 may be deemed a Mature Minor.
- 2. Intelligence**
 - Understand the nature, benefits, risks, consequences and alternatives to medical care and treatment. The Minor’s decision-making capability and understanding and appreciation of critical information is important.
- 3. Maturity**
 - Provide reliable information and to make important decisions.
- 4. Serious health care related decision**
 - The importance, intrusiveness, complexity and seriousness of a Treatment/Procedure increases the required level of maturity.
- 5. Informed consent**
 - Minor is provided with the relevant information including nature, benefits, risks, alternatives, consequences and the consequences of refusal.
 - The Minors' consent must be voluntary and free of coercion.
- 6. Freedom from parental or Guardian control, self-supporting, married or has children**
 - Indications of independence that may support a Minor’s increased level of maturity.

When in doubt, please refer to AHS Province-wide Consent to Treatment/Procedure Policy suite document and document under the reason for visit why a client cannot be deemed a mature minor.

Documentation of Assessment

Following the initial mature minor assessment, the nurse will indicate “Mature Minor Status Confirmed” in the Reason for Visit section in the CD/OM DI. In this section, there is space for the assessing RN/MD to write notes on factors which were particularly important to their assessment or any other information that they deem appropriate to capture.

Consent via an Interpreter / Telephone / Fax

- Consent for treatment/procedures that is obtained with the participation of an interpreter must be recorded and signed by the interpreter on the Consent to Specific Treatment/Procedure form in the space provided.
- Consent for treatment/procedures that is obtained with the participation of an interpreter via the telephone i.e. Language Line, or provided on a FAX, must be recorded and signed by the MRHP.

Blood and Blood Products: Consent Policy:

- Express written consent shall be obtained for the transfusion of blood and blood products.
- Be specific when obtaining consent for the transfusion of blood and blood products. For example, when you are intending to give Hepatitis B Immunoglobulin (HBIG) that should be written in the **Details of Treatment** section of the form.

I. History

It is essential to obtain sufficient and accurate information from the client in order to provide quality client care. Taking a client's history should take place in the privacy of the examining room or clinic office. The client should be assured of confidentiality at the outset of the interview. Health care providers must be relaxed and non-judgmental in order to establish rapport with the client. Use language that the client understands. Do not use family or friends as interpreters. Book an interpreter or use the Language Line as required. When possible, discuss the nature of the interview with the interpreter in advance.

The pertinent features of the history must be documented on the client's chart as per *Section XVIII Charting Guidelines* and be reviewed at each visit. A complete history and physical exam should be done at least every twelve months or more frequently if it is a new presentation.

The following guidelines will assist in eliciting a history.

A. Chief Complaint

In the client's own words obtain a chronological record of his/her symptoms from inception of illness to present. The client should be questioned regarding associated symptoms, previous similar symptoms, if treatment was given (what, where, when and by whom) and the effect of this treatment. If the client is presenting for screening but is otherwise asymptomatic, this should also be recorded.

B. Functional Inquiry

By asking specific questions related to the genitourinary system a more complete history will be obtained.

1. Male

If this information has not already been obtained from the client's description of their chief complaint, specifically ask about:

- dysuria
- sores/lesions/rashes including oral lesions
- testicular discomfort
- testicular mass
- testicular swelling
- urethral discharge
- rectal discomfort/discharge (reporting receptive anal sex)
- time of last void
- fever/night sweats
- lymphadenopathy

2. Female

If this information has not already been obtained from the client's description of their chief complaint, specifically ask about:

- dysuria
- abdominal pain
- vaginal discharge
- sores/lesions/rashes including oral lesions
- vaginal odour/itch
- dyspareunia
- rectal discomfort/discharge (reporting receptive anal sex)
- time of last void
- fever/night sweats
- lymphadenopathy

The client should also be questioned regarding:

- LMP (last menstrual period)
- menstrual abnormalities
- gravida
- parity
- birth control
- date and result last Cervical Cancer Screening (papanicolaou) test
- If pregnant, estimated date of confinement (EDC)
- Any pregnancy in past year and outcome

C. Drug/Other Allergy

Ask client if they have any drug allergies with specific reference made to antibiotics, document the type of allergic reaction to differentiate true allergy from drug intolerance.

D. Concomitant Medication

Obtain history of present or recent (within past month) course of medications. Elicit type, dose, frequency, and reason for taking each medication. The client may not know the specific name of the medication. Ask for a description in their own words. Medication such as antibiotics may interfere with the test results if taken in the week prior to testing. Client medication may have adverse interaction with planned treatment.

E. Past History

Elicit information regarding past history of:

- Blood transfusions/donations (if ever donated)
- Born outside of Canada (arrival date and port of entry)
- Medical care outside Canada (e.g. history of treatment for STI such as syphilis, invasive medical or surgical procedures, etc.)
- STIs

- Non-prescription injection drug use including narcotics, anabolic steroids, etc., especially in past 6 months. Also ask about other substance use and drug equipment sharing
- Previous test for HIV, date and result for both client and their sexual and/or drug equipment sharing partner(s)
- Previous test for hepatitis B, date and result for client and if appropriate, both their sexual and/or drug equipment sharing partner(s)
- Previous history of HPV immunization
- Previous history of hepatitis B immunization
- Previous history of hepatitis A immunization
- Previous test for hepatitis C (HCV), date and result for both client and if appropriate, for drug equipment sharing partner(s)
- If client is HCV positive ask if they have ever been immunized for hepatitis A and B
- Significant medical and surgical history

F. Social History

It is important to obtain relevant information about the client as a person and the individual's life situation. The social history assesses the client using a holistic approach. For example, information in the following areas may or may not be addressed:

- Home situation, significant others and relationships
- Occupation
- Cultural beliefs (relevant to perceptions of health, illness, and treatment)
- Substance use, i.e., use of alcohol, drugs, and other related substances
- Percutaneous risk other than drug injection, i.e., tattoos/piercings

When inquiring about behaviours, it is helpful to use questions that do not require a 'yes' or 'no' response. Examples of questions that might be useful when inquiring about alcohol and non-prescription drug use are as follows:

- 'How much alcohol do you drink?'

Depending on the answer more exploration may be required. Specific questions about the duration, frequency, and quantity of drinking may be useful. For example:

- 'When did you start to drink? What do you drink? How much do you drink on an average weekday/weekend?'
- 'Have you had sex while under the influence of alcohol or other substances?'

Similarly, questions about non-prescription drug use are as follows:

- 'What about injection drug use? Cocaine? Heroin?'

In particular, questions about needle sharing should be asked:

- 'Have you ever shared needles or equipment used to inject/take drugs?'
 - 'When did you last use _____?'
- See *Section XVI* for details about client education and counselling

G. Sexual History

A sexual history is necessary for all clients to provide information to guide risk-reduction counselling, to identify those at risk for sexually transmitted infections, including HIV, and to identify what anatomic sites are suitable for STI screening (see section XV. Caring for the Trans, Non-Binary and Two-Spirit Client, if applicable).

Note: The term partner will be used throughout this document to describe a person who has sexual contact with the client.

Document the following:

- Sexual preference/orientation. Avoid terms such as “gay” or “straight”. Instead ask, ‘When you have sex, is it with men, women, trans, non-binary?’
- Age first sexually active. In cases where the age of sexual debut is under the legal age of consent, also ask ‘Did you want to have sex with that person at that time?’
- History of sexual abuse/assault. ‘Have you ever had sex with someone when you said ‘no’ and they didn’t stop?’; “Has anyone ever touched you sexually when you didn’t want them to?”
- Number of partners in past 2 and 12 months
- Date of contact relevant to symptoms, with whom (steady vs. casual known/unknown, sex trade worker)
- Geographic location and origin of sexual contact(s). ‘In what city or town did this contact occur?’, ‘Is this partner from here, or from outside the city/town?’, ‘Where did you meet the partner?’ i.e., bars, bathhouse, online, park, etc.’
- Type of contact
 - oral genital (giving or receiving)
 - vaginal
 - anal (insertive/receptive) sex/play
 - use of sex toys – shared or not
- Safer sex practices for each type of contact, especially in past 2 months. Ask about condom use and condom problems, i.e., slippage, breakage.
- High-risk activities, practices. To help identify high-risk activities, ask ‘Have you ever exchanged sex for drugs, food or a place to sleep?’
- Partners with high risks (HIV, IVDU, involvement with sex workers, bisexual men, from HIV endemic country, etc.)
- Conclude this part of the interview with, ‘Is there anything you would like to ask me or that you think I should know?’

H. Identifying Vulnerable or At Risk Clients

Assessing a client’s degree of vulnerability may be necessary when creating care plans and determining supports required. Factors to consider are:

- Multiple barriers to accessing care (e.g. remote location, lack of transportation or childcare)
- Risk for loss to follow-up (e.g. homelessness, no contact information, addictions)
- Potential for severe sequelae (e.g. pregnant, immunocompromised)
- Cognitive impairment (e.g. mental illness, developmental delay)
- Ability to prevent transmission (e.g. domestic violence, survival sex)

II. Physical Examination

Verbal consent must be obtained for the physical examination. For clients under the age of eighteen (18) years, they should be assessed and determined to be a mature minor, and this should be documented on the client chart.

A. Environment and Equipment

- Privacy is essential
- Client should be warm and adequately draped
- Adequate illumination
- Infection Prevention and Control guidelines are followed
- Provide chaperone or assistant when requested by client.

B. Psychological Assessment

- Recognize emotional events such as separation and rejection causing anger, hurt, guilt, and embarrassment.
- Recognize existence of stress related to financial, occupational, domestic or sexual matters.
- Recognize existence of fear of physical exam, testing procedures, treatments, HIV/AIDS, cancer, and herpes.
- Clinician should at all times maintain a non-judgmental position.
- For psychological assessment of the trans client, see section XVI. Caring for the Trans, Non-Binary and Two-Spirit Client

C. General Outline

- Explain all procedures and tests to the client. Recognize the client has the right to refuse.
- For serology supine positioning is preferred due to the potential for a fall and lack of readily available assistance. If concern arises regarding supine positioning, use nursing judgement for the best alternative or modification.
- Genital specimens must be collected with the client in the supine position
- Mouth and pharyngeal examination if history warrants
- Inspection of the skin and pubic hair
- Palpation for lymphadenopathy
- Examination of external genitalia
- Perianal inspection if history warrants, e.g. anal sex

D. Specific Examination

1. Mouth and Throat

- The oral cavity and pharynx are examined with the use of a tongue blade and good illumination.
- Observe and note the presence of erythema, lesions, candidal plaques, sores or pus on the lips, tongue, oral cavity, tonsillar crypts or posterior pharyngeal wall.

2. Skin and Pubic Hair

- A general inspection of the hands, palms, soles (if rash reported), forearms, lower abdomen, inguinal areas, thighs and genitals will reveal inflammation, sores, rashes or lesions. Particular attention should be paid to the interdigital spaces and pubic hair for nits, lice and burrows of scabies.

3. Lymphadenopathy

- Palpate cervical, axillary, inguinal, and femoral areas for adenopathy as appropriate.

4. Male

i) External Genitalia

- General inspection will demonstrate if external genitalia appear normal or whether the penis is edematous, has scars, lesions or is circumcised.
- If the client is uncircumcised, the foreskin should be examined for growths and lesions.
- The foreskin should be retracted and the glans examined for growths and lesions.
- The external urethral meatus should be examined for discharge, lesions, growths, and congenital anomalies such as hypospadias.
- Finally, the penile shaft should be gently palpated for masses or nodules.

ii) Scrotum

- Supine position is preferred; however, client should be standing when examining for hernias and varicoceles.
- The scrotum should be inspected for skin changes and obvious swelling.
- Using one hand, GENTLY palpate each testicle for size, tenderness, and masses.
- Holding the testicle in place with one hand, with the other hand palpate the epididymis along its entire route from the lower margin of the testicle up to the spermatic cord. Swelling, nodules, and tenderness should be noted.
- Discuss testicular self-examination with all clients.

iii) Anus

- Client may lie on their side with their knees drawn up towards their chin, or assume the knee-chest lithotomy position
- Spread buttocks widely
- Inspect perianal region for warts, lesions, hemorrhoids, fissures or discharge.

5. Female

i) External Genitalia

- With client in lithotomy position, examine labia for erythema, growths or lesions.
- Separate the labia and examine for erythema, growths, lesions or discharge.
- Inspect introitus and urethra for inflammation, lesions and discharge.

ii) Vaginal Speculum Examination (Lithotomy Position)

- Use warm speculum. If lubricant is required use warm water only.
- Hold the speculum in one hand and separate the labia with the thumb and index finger of the other hand.
- Turn the handle of the speculum approximately 45-90° and insert posteriorly into the vagina, avoiding pressure on the urethra.
- Advance the speculum gently at the same time rotated back to the axis of the midline.
- The blades of the speculum are opened and the cervix viewed for discharge, growths or lesions.
- Inspect the lateral vaginal wall and fornices for erythema, discharge and lesions.
- Specimens are obtained from the vaginal wall, endocervix, fornices (if appropriate) and any lesions.
- The speculum is partially closed and slowly withdrawn. During this procedure it should be rotated 90° to view the anterior and posterior vaginal walls.

iii) Bimanual Pelvic Examination (Lithotomy Position)

- Insert lubricated index and middle fingers of one hand along posterior vaginal wall. The palm of the hand should remain perpendicular to the floor throughout the examination.
- Examine contour of cervix with fingers and then holding cervix between two fingers, the size, shape, position, mobility, consistency and tenderness (if any) can be judged. The normal cervix is freely movable for 2-3 cm in any direction.
- Move fingers to left, right and posterior fornix and note tenderness or masses.
- The uterus is examined bimanually with one hand cooperating with the other. The fingers of the abdominal hand are placed flat on the abdomen about halfway between the symphysis pubis and the umbilicus. Gently apply pressure with the abdominal hand and elevate the cervix and therefore the uterus with the other hand. As soon as pressure is made on the uterus with the abdominal hand, it will be perceived by the vaginal hand. Size, mobility, position and tenderness of the uterus should be noted.

- The adnexa is examined by placing the vaginal fingers in each lateral fornix and directing them slightly laterally and anteriorly. The abdominal hand should apply deep pressure in the corresponding abdominal area and adnexa will be felt between the two hands.
- Ovarian size, tenderness and masses as well as fallopian tube masses and tenderness should be noted. The normal fallopian tubes are not palpable.

iv) Perineum and Anus (Lithotomy Position)

- Inspect perineal and anal region for warts, lesions, hemorrhoids, fissures or discharge.

6. Surgically Constructed Sex Organs (see section XV. Caring for the Trans, Non-Binary and Two-Spirit Client)

III. Routine STI Testing

Informed verbal consent must be obtained for each laboratory test performed. For clients under the age of eighteen (18) years, they should be assessed and determined to be a mature minor, and this should be documented on the client chart.

Supine positioning is preferred for phlebotomy due to the potential for a fall and lack of readily available assistance in the clinic room. If supine positioning is not possible, nursing judgement should be used to determine the best alternative or modification.

Genital specimens should be collected with the client in a supine position except for rectal specimens which can be obtained with the client in a side-lying position.

If sexual contact with a new partner occurred less than 48 hours prior to clinic visit, bacteriological (culture) specimens may be unreliable. (i.e., falsely negative) and clients should be encouraged to have testing repeated when at least 48 hours have elapsed since-exposure or non-culture methods such as Nucleic Acid Amplification Technology (NAAT)¹ testing should be used. Nevertheless, if it has been less than 48 hours since last sexual contact at the time of testing, the client should be advised to consider repeating testing if symptoms arise post screening.

If a client reports antibiotic use within the previous week complete testing for GC/CT using a non-culture method such as NAAT.

Average STI screening should be every 3-6 months for individuals who are at ongoing risk but the maximum frequency should be testing monthly, unless symptomatic.

A. Male

- Urethral culture for gonorrhea² and Gram stain of urethral smear if history of urethral discharge, dysuria or testicular pain, or if contact to *Neisseria gonorrhoeae* (N.gonorrhoeae, gonorrhea, GC), *Chlamydia trachomatis* (C.Trachomatis, chlamydia, CT), Mucopurulent Cervicitis (MPC), Non-gonococcal Urethritis (NGU), Pelvic Inflammatory Disease (PID). (See Algorithm for Asymptomatic Persons with a Penis Presenting to STI Clinics for Screening).
- Urine for gonorrhea and chlamydia NAAT
- Rectal and/or throat culture for gonorrhea if indicated (reports ever having receptive anal, or current rectal symptoms, or active oral with a person with a penis) (See note below)

¹ Type of NAAT tests include Polymerase Chain Reaction (PCR) or Transcription-mediated amplification (TMA)

² Culture is the recommended method because of antimicrobial susceptibility testing, which ensures continued surveillance for antimicrobial resistance.

- Rectal and/or throat swab for chlamydia and gonorrhea NAAT if indicated (reports ever having receptive anal or current rectal symptoms) (See note below)

Note: Do not need to offer/perform rectal testing if no reported history of receptive anal sex since last STI test (which included rectal CT/GC testing) and not reporting rectal symptoms.

- Eye swab for chlamydia, gonorrhea, HSV and syphilis if symptomatic from eyes (redness, discharge) with available test (culture, NAAT, PCR)
- *Serologic Testing:*

- Syphilis antibody serology (syphilis enzyme immunoassay (STS-EIA)).
- HIV serology by enzyme immunoassay (HIV-EIA) after pre-test counselling.
- Hepatitis C antibody serology (anti-HCV)

Note: All STI Clinic clients should be offered baseline Anti-HCV testing. Further testing can be based on nursing assessment and/or reported risk factors.

- Pre-immunization serology for Hepatitis A (HAV IgG) is recommended for the following individuals as per *Alberta Health Services Immunization Program Standards Manual* and as follows:

- Individuals born prior to 1945
- Individuals from a hepatitis A endemic country (all countries other than those listed below are considered endemic for hepatitis A):

For purposes of pre-immunization serology the following countries are NOT endemic:				
Aland Islands	Andorra	Australia	Austria	Belgium
Canada	Denmark	Faroe Islands	Finland	France
Germany	Greece	Greenland	Iceland	Ireland
Italy	Japan	Liechtenstein	Luxembourg	Monaco
Netherlands	New Zealand	Norway	Portugal	San Marino
Spain	Sweden	Switzerland	United Kingdom	USA

- Individuals diagnosed with hepatitis B and/or C infection
- **Note:** Perform pre-immunization serology for clients who report a history of having Hepatitis A infection to confirm immunity.
- Pre-immunization serology for Hepatitis B (anti-HBsAg and HBsAg) if no history of 3 documented doses of Hepatitis B immunization and/or no previous documented immunity to Hepatitis B (i.e. Anti-HbsAg \geq 10 IU/L).
- Screen annually for HBsAg in clients with ongoing risks for Hepatitis B (and are not vaccinated and/or don't have documented immunity) and/or present with symptoms of acute hepatitis (e.g. jaundice, abdominal pain, nausea, vomiting).

B. Female

- POC pregnancy test indicated prior to cervical examination if pregnancy suspected or client feels they may be late for menses

- Vaginal wet mount and/or gram stain, with assessment of pH and “Whiff” test if vaginal symptoms present.
- Cervical examination for edema/friability and endocervical culture for gonorrhea, if client reports dysuria, abdominal pain, vaginal discharge, post-coital or abnormal bleeding, or if contact to gonorrhea, chlamydia, Non-gonococcal Urethritis (NGU) or Epididymo-orchitis.

Note: Contraindications for speculum examination include:

- Therapeutic abortion in the past 2 weeks
- Client under 6 weeks postpartum
- LEEP procedure in past 3 weeks
- Consult with physician if other invasive pelvic procedures in the past 6 weeks
- When patient has symptoms that warrant speculum exam, but speculum exam is contraindicated due to recent pelvic procedure, patient should be urgently referred to the physician or clinic that performed the procedure.
- Bimanual exam if indicated (reports vaginal and/or cervical symptoms)
- Rectal and/or throat culture for gonorrhea if indicated (reports ever having receptive anal, or current rectal symptoms, or active oral with a person with a penis.) (See note below)
- Endocervical swab, vaginal swab or urine for chlamydia and gonorrhea NAAT.
- Rectal and/or throat swab for chlamydia and gonorrhea NAAT if indicated (reports ever having receptive anal or current rectal symptoms) (See note below)

Note: Do not need to offer/perform rectal testing if no reported history of receptive anal sex since last STI test (which included rectal CT/GC testing) and not reporting rectal symptoms.

- Eye swab for chlamydia, gonorrhea, HSV and syphilis, if symptomatic from eyes (redness, discharge) with available test (culture, NAAT, PCR)

Considerations

- Hysterectomy:
 - gonorrhea culture from suture line or posterior vaginal wall, as indicated above
 - vaginal swab or urine for chlamydia and gonorrhea NAAT
 - throat and rectal specimens as indicated above
- Pregnant:
 - Urine for chlamydia and gonorrhea NAAT
 - Defer Cervical Cancer Screening test until after pregnancy unless following up from previous abnormal result (Consult with clinic MD before proceeding)
 - May perform speculum exam to obtain vaginal swab for wet mount and/or gram stain if vaginal symptoms present.
 - throat and rectal specimens as indicated above
 - Do NOT perform bimanual exam.
- Cervical Cancer Screening Test:
 - May offer cervical cancer screening for clients at age 25 or three years after their first intimate sexual activity, whichever occurs LATER.
 - Optional screening for ages 21-24 based on informed patient choice and/or where beneficial, i.e., those at higher risk.
 - DO NOT SCREEN under the age of 21
 - (Intimate sexual activity includes intercourse as well as digital or oral sexual activity involving the genital area with a partner of either gender.)
 - Regardless of the Cervical Cancer Screening test findings, clients with a visibly abnormal cervix or abnormal bleeding should be referred appropriately.
 - Refer to the *Alberta Cervical Cancer Screening Guidelines* for further information.

- Online Link: <http://www.screeningforlife.ca/cervical/>
 - Health provider resources: <https://screeningforlife.ca/for-health-providers/>
 - **Serologic Testing:**
 - Syphilis antibody serology (syphilis enzyme immunoassay (STS-EIA)).
 - HIV serology by enzyme immunoassay (HIV-EIA) after pre-test counselling.
 - Hepatitis C antibody serology (anti-HCV)
- Note:** All STI Clinic clients should be offered baseline Anti-HCV testing. Further testing can be based on nursing assessment and/or reported risk factors.
- Pre-immunization serology for Hepatitis A (HAV IgG) is recommended for the following individuals as per *Alberta Health Services Immunization Program Standards Manual* and as follows:
 - Individuals born prior to 1945
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For purposes of pre-immunization serology the following countries are NOT endemic:				
Aland Islands	Andorra	Australia	Austria	Belgium
Canada	Denmark	Faroe Islands	Finland	France
Germany	Greece	Greenland	Iceland	Ireland
Italy	Japan	Liechtenstein	Luxembourg	Monaco
Netherlands	New Zealand	Norway	Portugal	San Marino
Spain	Sweden	Switzerland	United Kingdom	USA

- Individuals diagnosed with hepatitis B and/or C infection
- **Note:** Perform pre-immunization serology for clients who report a history of having Hepatitis A infection to confirm immunity.
- Pre-immunization serology for Hepatitis B (anti-HBsAg and HBsAg) if no history of 3 documented doses of Hepatitis B immunization and/or no previous documented immunity to Hepatitis B (i.e. Anti-HbsAg \geq 10 IU/L).
- Screen annually for HBsAg in clients with ongoing risks for Hepatitis B (and are not vaccinated and/or don't have documented immunity) and/or present with symptoms of acute hepatitis (e.g. jaundice, abdominal pain, nausea, vomiting).

C. Transgender Males and Females (see section XV Caring for the Trans, Non-Binary and Two-Spirit Client)

IV. Laboratory Procedures (Specimen Collection)

A. Venous Blood Specimen

i) Purpose:

- To obtain venous blood for serology and other hematological/biochemical tests.

ii) Equipment:

- Vacutainer tube and holder, venoject needle (21-23 gauge) or butterfly needle (safety engineered)
- Alcohol swabs
- Tourniquet
- Gauze pads and tape/bandaid
- Gloves

iii) Procedure:

- Screw needle into vacutainer without removing rubber guard. Position tube loosely in holder without puncturing rubber stopper. Don gloves.
- Select venipuncture site – antecubital fossa for cephalic or basilic veins preferred.
- Apply tourniquet above elbow, have client form fist +/- tapping over vein.
- Cleanse puncture site with alcohol swab.
- Insert needle into vein with bevel up. When in place, advance vacutainer tube to puncture rubber stopper. When blood flowing, loosen tourniquet off and open fist.
- Pull back tube from the vacutainer to release the vacuum.
- Apply pressure to vein with gauze pad as needle is removed; apply pressure until bleeding stops.
- Remove tube from holder, discard needle in sharps container (never recap needle).
- Assess puncture site for clotting and apply tape over swab or place bandaid over site.
- Dispose of equipment in appropriate containers. DO NOT RESHEATH NEEDLE.

B. Urethral Specimen

1. Urethra of people with a penis for Gram Stain

i) Purpose

- To detect or rule out the presence of bacterial infection in the urethra by microscopic examination of the discharge.
- Collection of cultures are important in the STI Clinic as they provide insight into the emergence of drug resistant strains of gonorrhoea

ii) Equipment

- Small aluminum applicator with a synthetic (non-cotton) tipped sterile swab
- Clean glass slide
- Methyl alcohol

iii) Procedure

- Ideally, the client should not have voided for at least 2 hours as voiding reduces the amount of exudate and may decrease the ability to detect organisms. **Note:** gram stain should be done regardless of time of last void.
- Hold penis and retract foreskin as necessary (client or clinician).
- Insert swab slowly 3-4 cm into urethra, rotate slowly and withdraw gently and roll swab onto slide.
- Air dry, fix with methyl alcohol. The slide can now be stained. See *Page 35* for gram stain procedure.
- “Milking” the penis 3-4 times from the base to the glans enhances the ability to detect otherwise unapparent urethral discharge.

2. Urethra for culture of *Neisseria gonorrhoea* or herpes simplex virus PCR

i) Purpose

- To detect or rule out the presence of these pathogens in the urethra.
- Collection of cultures are important in the STI Clinic as they provide insight into the emergence of drug resistant strains of gonorrhoea

ii) Equipment

- Small aluminum applicator with a synthetic (non-cotton) tipped sterile swab
- Culture plate or charcoal medium (*Neisseria gonorrhoea*) or universal transport medium (herpes simplex virus)

iii) Procedure

External Reproductive Organs

- Ideally, the client should not have voided for at least 2 hours as voiding reduces the amount of exudate and may decrease the ability to detect organisms. **Note:** culture should be done regardless of time of last void.
- Hold penis and retract foreskin as necessary (client or clinician).
- Locate urinary meatus and insert swab slowly 3-4 cm into urethra and rotate slowly and withdraw gently.
- Inoculate culture plate, or place in charcoal medium or universal transport medium.

iv) Storage and Transport

***Neisseria gonorrhoea* Culture**

- *Culture Plate*: After inoculation store in CO₂ incubator between 5-7% CO₂ concentration (refer to equipment manual). Transport to lab at room temperature within 48 hours.
- *Charcoal Swab*: Store at room temperature or between 4-8°C

Herpes Simplex Virus PCR

- *Universal Transport Medium*: Store between 4-8°C following specimen collection and transport to the lab within 48 hours.

3. Urine for NAAT testing of *Neisseria gonorrhoea* and *Chlamydia trachomatis* (Aptima® Urine Specimen Collection Guide)

i) Purpose

- To detect or rule out the presence of these pathogens through urine collection.

ii) Equipment

- Urine Collection Cup (Preservative Free)
- *Aptima® Urine Specimen Collection Kit*: Disposable Pipette, Urine Specimen Transport Tube

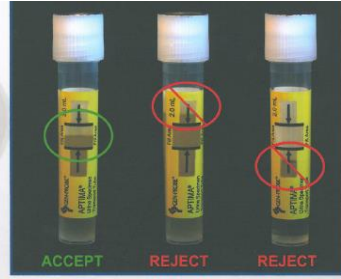
iii) Procedure

Client should not have urinated for at least 1 hour prior to specimen collection. If the client has voided recently this does not preclude testing.

1. Direct client they should not cleanse labial area prior to collection and to provide first-catch urine (approximately 20 to 30 mL of initial urine stream) into urine collection cup free of any preservatives. Collection of larger volumes of urine may result in specimen dilution that may reduce test sensitivity.
2. Remove cap from urine specimen transport tube and transfer 2 mL of urine into urine specimen transport tube using disposable pipette provided. The correct volume of urine has been added when fluid level is between black lines on urine specimen transport tube label.



Transfer urine into
Collection Tube
and fill between
the black lines only:



3. Re-cap urine specimen transport tube tightly.

iv) Storage and Transport

1. Transfer urine into APTIMA urine specimen transport tube within 24 hours of collection.
2. Store and ship to lab at room temperature.

C. Endocervix Specimen

1. Endocervix for culture of *Neisseria gonorrhoea* and herpes simplex virus PCR

i) Purpose

- To detect or rule out the presence of these pathogens in the endocervical canal.
- Collection of cultures are important in the STI Clinic as they provide insight into the emergence of drug resistant strains of gonorrhoea

ii) Equipment

- Speculum
- Synthetic (non-cotton) tipped sterile swabs
- Culture plate or charcoal medium (*Neisseria gonorrhoea*) or universal transport medium (herpes simplex virus)
- Proctological swab

iii) Procedure

- Clean ectocervix well with proctological swab. Mucus plug should be removed with synthetic (non-cotton) tipped swab.
- Insert swab 1-2cm into cervical canal, rotate 360° and retain for 10-30 seconds. Pathogenic organisms invading the endocervix survive in the columnar epithelium of the cervical canal.
- Inoculate culture plate or place swab in charcoal medium or universal transport medium.

iv) Storage and Transport

Neisseria Gonorrhoea:

- *Culture Plate:* After inoculation store in CO₂ incubator between 5-7% CO₂ concentration (Refer to equipment manual). Transport to lab at room temperature within 48 hours.
- *Charcoal Swab:* Store at room temperature or between 4-8° following specimen collection.

Herpes Simplex Virus:

- *Universal Transport Medium:* Store between 4-8°C following specimen collection and transport to the lab within 48 hours.

NOTE: Obtain specimens for *Neisseria gonorrhoea* culture first and *Chlamydia trachomatis* and *Neisseria gonorrhoea* NAAT testing second.

2. Endocervix for NAAT testing of *Neisseria gonorrhoea* and *Chlamydia trachomatis* (Aptima® Swab Specimen Collection Guide)

i) Purpose

- To detect or rule out the presence of these pathogens in the endocervical canal.

ii) Equipment

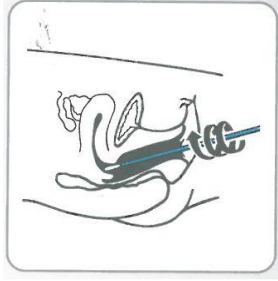
- Speculum
- Proctological swab
- *Aptima® Unisex Swab Specimen Collection Kit for Endocervical and penile Urethral Swab Specimens:* Aptima® Cleaning Swab (cervix) – not for specimen collection (white shaft swab), Aptima® Unisex Swab for Endocervical and penile Urethral Specimens (blue shaft swab), Aptima® Swab Specimen Transport Tube

iii) Procedure

1. Clean ectocervix well with Aptima® cleaning swab or proctological swab. Mucus plug should be removed with synthetic (non-cotton) tipped swab. Discard this swab.



2. Insert specimen collection swab 1-2cm into cervical canal, gently rotate swab clockwise for 10 to 30 seconds in endocervical canal to ensure adequate sampling.



3. Withdraw swab carefully; avoid any contact with vaginal mucosa.
4. Remove cap from swab specimen transport tube and immediately place specimen collection swab into specimen transport tube.
5. Carefully break swab shaft at scoreline; use care to avoid splashing contents.
6. Re-cap swab specimen transport tube tightly.

iv) Storage and Transport

1. Store and ship to lab at room temperature.

3. Endocervix for Cervical Cancer Screening (Papanicolaou) Test

Collect cervical specimens for STI testing (i.e., gonorrhea culture and chlamydia NAAT) prior to Cervical Cancer Screening test as the sensitivity of gonorrhea culture is dependent on specimen collection and transport.

Ideal Conditions for Cervical Cancer Screening Sample Collection:

- Avoidance of vaginal douching for 24 hours before the test.
- Avoidance of use of contraceptive creams or jellies for 24 hours before the test.
- Avoidance of intercourse for 24 hours before the test.
- Do NOT defer the Cervical Cancer Screening test due to menstruation or abnormal bleeding.
- Do NOT defer Cervical Cancer Screening test due to simultaneous cervical or vaginal infection.

BD SurePath™ Liquid Based Cervical Cancer Screening Test

i) Purpose

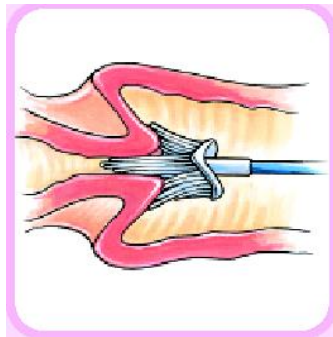
- To detect early atypia or dysplasia of the cervix.

ii) Equipment

- Long handled forceps
- Speculum
- Gauze/proctological swab
- Rovers Cervix Brush (Broom)
- SurePath™ Vial (Liquid Media)

iii) Procedure

- Visualize cervix (lithotomy position); lubricate speculum with warm water not gel.
- Clean ectocervix with gauze/proctological swab and remove mucus plug.
- Using Rovers Cervix Brush (Broom)
 - Position tip of longer bristles in cervical os. Begin rotating in clockwise direction (1/4 - 1/2 turn). Bristles will begin to stiffen.
 - Continue rotating in a clockwise direction and gently push towards the cervix until the shorter bristles begin to bend extending over the ectocervix.
 - Complete five - 360° rotations.



- Remove device, pop off 'broom' head into SurePath™ vial.



- Place cap on vial and tighten. Send BD SurePath™ vial to lab for processing.



Note:

- With a total hysterectomy due to cancer, Cervical Cancer Screening tests should be obtained from the vaginal vault (suture line) utilizing the Rovers Cervix Brush (Broom).

ThinPrep® Liquid Based Cervical Cancer Screening Test

i) Purpose

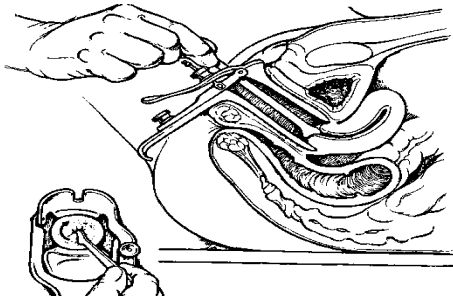
- To detect early atypia or dysplasia of the cervix.

ii) Equipment

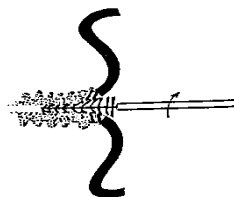
- Long handled forceps
- Speculum
- Gauze/proctological swab
- Plastic spatula
- Brush
- ThinPrep® Vial (Liquid Media)

iii) Procedure

- Visualize cervix (lithotomy position); lubricate speculum with warm water not gel.
- Clean ectocervix with gauze/proctological swab and remove mucus plug.
- With the spatula well applied rotate the spatula 360° ending in the horizontal position at the 3 and 9 o'clock position.



- Swish vigorously at least 10 times in the ThinPrep® Vial. Do not leave the spatula in the vial while you obtain the endocervical cells using the brush.
- Insert the brush gently all the way into the cervical os but no further than the end of the bristles and turn through 90° only.



- Swish brush vigorously with a “mashing” action against the inside wall of the vial. You cannot harm the cells from the samples so be vigorous.

- Tighten the cap so the black markings on the cap and vial are past each other.

Note: With a total hysterectomy due to cancer, collect the specimen from the vaginal vault (suture line) utilizing the broad end of the spatula.

D. Vaginal Swab

1. Vaginal swab for wet mount and/or gram stain

i) Purpose

- To collect vaginal secretions for wet mount and/or gram stain

ii) Equipment

- Synthetic (non-cotton) tipped sterile swab(s)
- Glass slides
- Cover slips
- Normal saline
- pH paper
- 10% KOH (Potassium Hydroxide)
- Speculum

iii) Procedure

- During speculum exam, collect sample from posterior fornix with swab, transfer to a drop of saline on a slide (wet mount) or to a dry slide (Gram stain). Cover wet mount with cover slip and examine immediately.
- As speculum is removed, touch the pH paper to the secretions at the tip of the speculum (blood or cervical mucous can alter pH), then add a drop of KOH and smell for the evolution of a fishy (amine) odour.
- The wet mount vaginal swab may also be used to test for PH.

2. Vaginal swab for culture

i) Purpose

- To detect or rule out the presence of *Trichomonas vaginalis*, *Candida albicans* or other vaginal pathogens. Vaginal specimens for culture of *Neisseria gonorrhoeae* are only appropriate with a hysterectomy or in pre-pubertal girls.
- Collection of cultures are important in the STI Clinic as they provide insight into the emergence of drug resistant strains of gonorrhoea

ii) Equipment

- Synthetic (non-cotton tipped) sterile swab
- Speculum
- Culture plate or charcoal medium (*Neisseria gonorrhoea*) or clear transport medium (*Trichomonas*, *Candida*, or other vaginal pathogens)

iii) Procedure

- Collect specimen from posterior vaginal fornix or from the hysterectomy suture line utilizing a synthetic tipped swab.
- Inoculate culture plate or place swab in transport medium.

iv) Storage and Transport

Neisseria gonorrhoea

- *Culture Plate*: After inoculation store in CO₂ incubator between 5-7% CO₂ concentration (Refer to equipment manual). Transport to lab at room temperature within 48 hours.
- *Charcoal Swab*: Store at room temperature or between 4-8°C.

Bacterial Vaginosis/Yeast/Trichomonas

Clear Transport Medium: Swabs should be stored at 4-8°C and can be transported at room temperature. If the swab is for yeast culture, (*C. albicans*) then storage at 4-8°C is recommended. Transport at room temperature.

3. Vaginal swab for NAAT testing of *Neisseria gonorrhoea* and *Chlamydia trachomatis* (Aptima® Multitest Swab Specimen Collection Guide)

i) Purpose

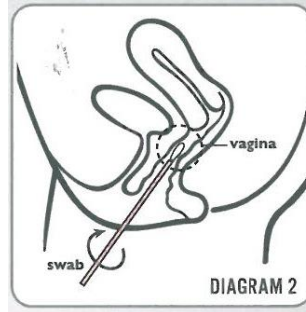
- To detect or rule out the presence of *Neisseria gonorrhoea* and *Chlamydia trachomatis*.

ii) Equipment

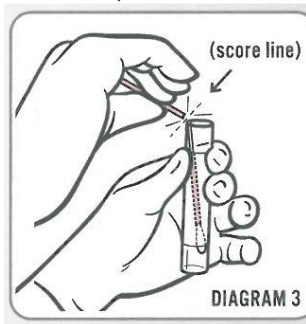
- Speculum
- *Aptima® Multitest Swab Specimen Collection Kit*: Aptima® Vaginal Swab (pink shaft swab and orange labelled tube), Aptima® Multitest Swab Transport Media

iii) Procedure

1. Insert swab into the inside opening of the vagina, about two inches past the introitus, and gently rotate swab for 10 to 30 seconds. Make sure swab touches the walls of the vagina so that moisture is absorbed by swab.



2. Withdraw swab without touching skin.
3. Remove cap from swab transport media and immediately place specimen collection swab into specimen transport media.
4. Carefully break swab shaft at scoreline; use care to avoid splashing contents.



5. Re-cap swab specimen transport tube tightly.

iv) Storage and Transport

1. Store and ship to lab at room temperature.

4. Rectum for culture/NAAT of *Neisseria gonorrhoea* and *Chlamydia trachomatis*

i) Purpose

- To detect or rule out the presence of pathogens within the rectum.
- Collection of cultures are important in the STI Clinic as they provide insight into the emergence of drug resistant strains of gonorrhoea

ii) Equipment

- Synthetic (non-cotton) tipped sterile swab
- Culture plate or charcoal medium (*Neisseria gonorrhoea*) or universal transport medium (*Chlamydia trachomatis*)
- *Aptima® Multitest Swab Specimen Collection Kit*

iii) Procedure

- Position client; persons with a vagina in lithotomy, persons with a penis in lateral, knee-chest or lithotomy.
- Instruct client to bear down as for a bowel movement. When rectal mucosa everts revealing anal crypts insert swab into anal canal 2-3 cm and rotate.
- Remove swab and inoculate culture plate or place in charcoal, universal transport medium, or Aptima® Multitest Swab Specimen Transport Tube.
- Contamination of the swab with small amount of fecal material does not necessitate obtaining a new specimen as selective culture medium suppresses the growth of normal bowel flora. If a large amount of fecal material is present the procedure should be repeated.

iv) Storage and Transport

Neisseria gonorrhoea

- *Culture Plate*: After inoculation store in CO₂ incubator between 5-7% CO₂ concentration (Refer to equipment manual). Transport to lab at room temperature within 48 hours.
- *Charcoal Swab*: Store at room temperature or between 4-8°C.
- *Aptima Swab Specimen Transport Tube*: Store and ship to lab at room temperature.

Chlamydia trachomatis

- *Universal Transport Medium*: Store between 4-8°C following specimen collection and transport to the lab within 48 hours.
- *Aptima Swab Specimen Transport Tube*: Store and ship to lab at room temperature.

E. Throat for culture/NAAT of *Neisseria gonorrhoea*

i) Purpose

- To detect or rule out the presence of pathogens in the oropharynx.
- Collection of cultures are important in the STI Clinic as they provide insight into the emergence of drug resistant strains of gonorrhoea

ii) Equipment

- Synthetic (non-cotton) tipped sterile swab
- Tongue depressor
- Culture plate or charcoal transport medium (*Neisseria gonorrhoea*) or universal transport medium (*Chlamydia trachomatis*)
- *Aptima® Multitest Swab Specimen Collection Kit*

iii) Procedure

- Place depressor on tongue and ask client to say "ah".

- Swab right and left tonsillar crypts and then posterior pharynx. Pathologic organisms invade epithelium of tonsillar crypts and pharynx. Gag reflex is stimulated upon contact of swab with posterior pharynx.
- Inoculate culture plate or place swab in charcoal, universal transport medium, or Aptima® Swab Specimen Transport Tube.

iv) Storage and Transport

Neisseria Gonorrhea:

- *Culture Plate:* After inoculation store in CO₂ incubator between 5-7% CO₂ concentration (Refer to equipment manual). Transport to lab at room temperature within 48 hours.
- *Charcoal Swab:* Store at room temperature or between 4-8°C.
- *Aptima Swab Specimen Transport Tube:* Store and ship to lab at room temperature.

Chlamydia trachomatis

- *Universal Transport Medium:* Store between 4-8°C following specimen collection and return to the lab within 48 hours.
- *Aptima Swab Specimen Transport Tube:* Store and ship to lab at room temperature.

F. Eyes for culture/NAAT of *Neisseria gonorrhea*, *Chlamydia trachomatis*, and herpes simplex virus

i) Purpose

- To detect or rule out the presence of pathogens in the eyes if symptoms/signs of infection.
- Collection of cultures are important in the STI Clinic as they provide insight into the emergence of drug resistant strains of gonorrhea

ii) Equipment

- Synthetic (non-cotton) sterile swab
- Culture plate or charcoal swab (*Neisseria gonorrhea*) universal transport medium (*Chlamydia trachomatis*, herpes simplex virus)
- Normal saline or sterile water
- *Aptima® Unisex Swab Specimen Collection Kit*

iii) Procedure

- Gently pull the lower lid, of the affected eye, away from the conjunctiva.
- If eyes are dry, wet swab with sterile water or normal saline.
- Collect specimen from the lower conjunctival sac, moving swab from inside corner of eye to outside corner.
- Collect specimens for culture plate first, Aptima® second and UTM last.
- Inoculate culture plate or place swab in charcoal, or Aptima® Swab Specimen Transport Tube or universal transport medium.

iv) Storage and Transport

Neisseria gonorrhoea

- *Culture Plate*: After inoculation store in CO₂ incubator between 5-7% CO₂ concentration (Refer to equipment manual). Transport to lab at room temperature within 48 hours.
- *Charcoal Swab*: Store at room temperature or between 4-8°C.
- *Aptima Swab Specimen Transport Tube*: Store and ship to lab at room temperature.

Chlamydia trachomatis/Herpes Simplex Virus

Universal Transport Medium: Store between 4-8°C following specimen collection and transport to the lab within 48 hours.

- *Aptima Swab Specimen Transport Tube*: Store and ship to lab at room temperature.

G. Lesions

1. Direct testing for Herpes Simplex virus and Syphilis PCR testing

i) Purpose

- To detect or rule out the presence of herpes simplex virus and/or syphilis.

ii) Equipment

- Synthetic sterile swab (non-cotton tipped)
- Sterile needle
- Normal saline/sterile water
- Universal transport medium
- Gauze

iii) Procedure

- *For vesicular lesions*: Don PPE per IPC guidelines and risk assessment.
<https://www.albertahealthservices.ca/assets/healthinfo/ipc/hi-ipc-resource-manual-main-document.pdf>
<https://www.albertahealthservices.ca/assets/healthinfo/ipc/hi-ipc-acute-care-pcra.pdf> which specifies that if “eyes or face or mucous membranes be splashed or sprayed with BBF” it is recommended to wear face protection.
- With sterile needle break vesicle(s).
- Collect fluid from vesicles by pressing swab against vesicle(s) to absorb fluid and then swab base of lesion.
- *For external ulcerative lesions*: Areas with eschar must be removed. Firmly rotate swab over ulcerated area in order to obtain material from base of lesions.
- Place swab in universal transport medium.
- Multiple swabs from external lesions can be placed in same vial of universal transport medium.

iv. Storage and Transport

Herpes Simplex Virus and Syphilis

Universal Transport Medium: Store between 4-8°C following specimen collection and transport to the lab within 48 hours.

2. *Haemophilus ducreyi* (Chancroid) PCR Testing

i) Purpose

- To detect or rule out the presence of *Haemophilus ducreyi* in suspicious lesions.

ii) Equipment

- Dacron or cotton swab.
- Universal transport medium.

iii) Procedure

- Dacron or cotton swab taken from the genital ulcer. This is best collected by flushing/cleansing the area with sterile physiological saline, and then collecting material from the base of the ulcer. Swab may be submitted dry, or placed into at least 1mL Universal Transport Medium.

iv) Storage and Transportation

- Hold specimen at 4-8°C prior to and during transport to ProvLab. Transport specimen to the lab within 48 hours.
- Specimen will be referred to the National Microbiology Laboratory, Winnipeg, Manitoba.

Note:

- Test for *H. Ducreyi* only after consultation with clinic physician. Suspect in cases with genital ulcer disease/large groin mass in traveller/individual from endemic area with sexual contact.

3. *Lymphogranuloma Venereum* (LGV) Specimen Collection for Laboratory Testing or Arranging confirmation of *Chlamydia trachomatis* L1-L3

i) Purpose

- To confirm infection with *Chlamydia trachomatis* LGV serovars L1, L2, L2b, or L3 from urine, cervix, urethra, throat, rectum, any lesion, or aspirate or tissue biopsy

ii) Procedure

- If patient is symptomatic, has lesions or severe lymphadenopathy, or is a sexual contact to LGV, please consult clinic physician for direction
- If LGV is suspected (ie. contact to LGV + positive chlamydia result) RN to call MVOC re: expedited LGV testing
- Provincial Laboratory offers NAAT for *Chlamydia trachomatis*
- Testing for Chlamydia trachomatis LGV serovars L1, L2, L2b or L3 is referred by Provincial Laboratory to the National Microbiology Laboratory (NML)
Note: Samples will not be referred to NML for LGV PCR unless the client/sample has been confirmed to be positive for *C. trachomatis*
- The positive CT NAAT specimen will be sent from ProvLab to NML for LGV testing
- Where possible, suspected cases of LGV with lesions should have a swab submitted for laboratory testing
- Swabs from lesions should be placed in universal transport media

H. Inoculation of Culture Media/Agar Plate for *Neisseria gonorrhoea*

Note: Specimens taken less than 48 hours after sexual contact may not be reliable and clients should be encouraged to have them repeated when at least 48 hours has elapsed since exposure.

i) Purpose

- To inoculate culture plate or transport medium with discharge / secretions from suspected infected site in such a manner as to facilitate growth, isolation and identification of pathogenic organisms
- Collection of cultures are important in the STI Clinic as they provide insight into the emergence of drug resistant strains of gonorrhoea

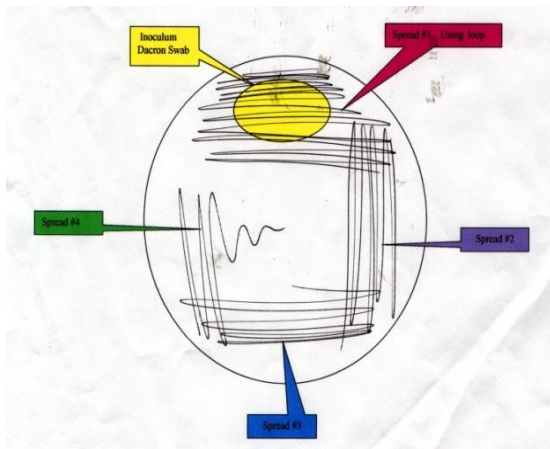
ii) Equipment

- Synthetic sterile swab (non-cotton tipped)
- Bacteriologic loop
- Culture plate with specific medium
- CO₂ incubator

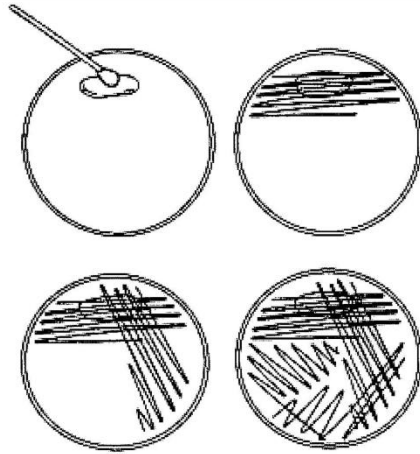
iii) Procedure

- Prior to inoculation ensure culture plate is properly labelled and collection site identified.
 - Culture plate should be at room temperature.
 - Culture plate should remain inverted and have cover in place at all times except when being inoculated. Maintain sterility by avoiding contamination of medium by droplets or dust.
-
- *Inoculation (Edmonton Procedure):*

- At point near circumference of medium, make a pool of secretions, approx. 3 cm. in diameter using firm circular, rolling motion of swab. Hold swab at an angle to the medium surface and do not puncture medium surface. Pooling removes bulk of discharge / secretion debris from surface of swab; puncturing of surface of medium ruins culture as organisms embedded in medium cannot be recovered or separated and identified in laboratory.
- "Streak" medium as follows: Without lifting loop from plate, continue inoculation in a zig-zag fashion through the secretion pool, covering the top $\frac{1}{4}$ of the plate. Then rotate the plate a $\frac{1}{4}$ turn and zig-zag near the circumference to cover the next $\frac{1}{4}$ of the plate. Continue this method 2 more times until all 4 quadrants have been streaked.

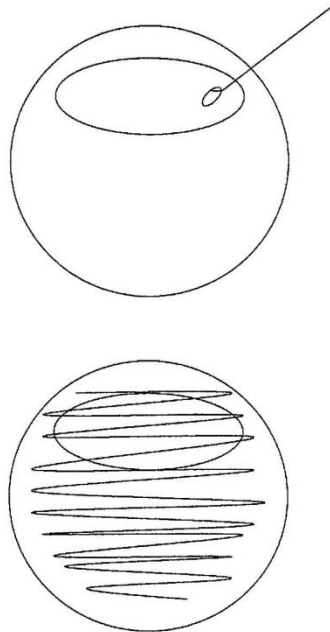


- Note: Only pass through the secretion pool on the initial zig-zag. Do not touch sides of plate. Inoculation of plate in this manner provides for even distribution of organisms and subsequent separation of colonies should growth occur.
- When inoculation complete, place cover on plate and invert. Dispose of swab / loop appropriately.
- *Inoculation (Calgary Procedure):*
 - *Thayer Martin Without Antibiotic Plates:*
 1. Inoculate onto plate by touching specimen to one quadrant of the plate (roll swab to inoculate from all sides).
 2. Using disposable loop streak with gentle pressure onto $\frac{1}{4}$ to $\frac{1}{3}$ of the culture plate using loop with a back and forth direction several times and without entering the area that was previously streaked. Note: avoid touching the sides of the Petri plate.
 3. Turn the plate $\frac{1}{4}$ turn. Pass the loop through the edge of the first quadrant approximately 4 times, while streaking into the second quadrant. Continue streaking in the second quadrant without going back to the first quadrant.
 4. Rotate the plate another quarter turn and repeat the above procedure until one or two additional quadrants are streaked.



○ *Thayer Martin Plates:*

1. Inoculate onto plate by rolling the swab firmly onto 1/3 of the plate.
2. Using disposable loop streak with gentle pressure using the sterile rod or loop with a back and forth direction several times from the top of the inoculum until the bottom of the plate. Note: Avoid touching the sides of the Petri plate.



iv) Storage and Transport

- *Culture Plate:* After inoculation store in CO₂ incubator between 5-7% CO₂ concentration (Refer to equipment manual). Transport to lab at room temperature within 48 hours.

I. Urinalysis and Urine Culture & Sensitivity

i) Purpose: Identify non-NGU causes of symptoms

ii) Equipment

- BD Vacutainer urine collection cup
- Benzalkonium chloride wipe
- Urine C&S tube (grey)
- Urinalysis tube (yellow top)



iii) Procedure (Note: complete specimen transfer to tubes within 20 min)

- Complete STI testing first
- Instruct patient to wipe area and obtain mid-stream urine sample
- Label specimens
- Peel back protective sticker to expose rubber covered cannula
- Push Urine C&S tube (collect first) onto transfer port until urine flow stops, invert 8-10 times
- Push Urinalysis tube onto transfer port until urine flow stops
- Discard urine specimen cup in sharps container

V. Microscopy

Purpose

To microscopically visualize and identify organisms and cellular structures in samples of discharge/secretions.

A. Kohler Illumination

Kohler is an illumination system that provides the best quality image and the highest resolution.

i) Procedure

- Turn on the light source, and adjust it to a low, comfortable light intensity.
- Place a stained slide right side up in the stage slide holder.
- Open the field diaphragm (base of the microscope) all the way.
- Open the condenser diaphragm all the way. If the condenser has an auxiliary lens, swing it in (into the light path).
- Raise the condenser to its highest position.
- Adjust the binoculars to your interpupillary distance.
- Adjust the settings on the oculars to correspond with the interpupillary distance setting.
- Focus on the material on the slide with the 10x dry objective, using the coarse and fine adjustment knobs.
- Close the field diaphragm (base of the microscope).
- Look through the oculars and lower the condenser until as sharp an image as possible of the field diaphragm is obtained. There will be a red to blue diffraction change at this point.
- If the diaphragm image is not centered, then center it by gently turning the centering screws located on the condenser.
- Check the focus and centering by slowly opening the field diaphragm until the bright spot fills most of the field. The dark edged ring should be evenly distributed along the edge of the field. If the dark edged ring is not evenly distributed along the edge of the field. Repeat the last two steps until the dark edged ring is evenly distributed along the edge of the field.
- Open the field diaphragm (base of the microscope) until the whole field is illuminated. Do not open any further.
- Remove one ocular and look down the tube from a distance at the back focal plane of the objective.
- Close and open the condenser diaphragm until $\frac{3}{4}$ open. Replace the ocular.
- Adjust the light intensity by means of the rheostat (transformer) and/or with a neutral density filter. DO NOT adjust brightness with the condenser diaphragm or by lowering the condenser.

B. Gram Stain

i) Equipment

- Fixed slide
- Gram staining chemicals (crystal violet, gram's iodine, decolorizer, safranin)
- Methyl alcohol

ii) Method

- Air dry prepared slides; fix smear by flooding slide with methyl alcohol for 1 minute.
- Flood with CRYSTAL VIOLET for 30 seconds.
- Wash with warm running tap water.
- Flood with GRAM'S IODINE for 30 seconds.
- Wash with warm running tap water.
- Flood with DECOLORIZER until solvent runs colourlessly from slide (1-5 seconds).
- Wash with warm water
- Flood with SAFRANIN (counter-stain) for 30 seconds.
- Wash with warm water and blot dry.
- View under oil immersion lens.

iii) Appearance

- Gram positive organisms (including *Candida albicans*) will stain blue to purple.
- Gram negative organisms will stain pink to red.

C. Use of Oil Immersion Lens

i.) Equipment

- Gram-stained slide
- Immersion oil

ii.) Method

- Position slide over aperture of the mounting platform of the light microscope. Stabilize the slide with clips.
- Use the 10-power non-oil objective first to adjust the gross focus to locate the material and then the fine adjustment to focus the cellular composition.
- Put a drop of immersion oil on prepared slides.
- Using 100-power oil objective search for specific organisms and structures.

D. Wet Mount Preparation (*Candida albicans*, Clue Cells and *Trichomonas vaginalis*)

i) Equipment

- Slide/cover slip
- Normal saline

ii) Method

- Place a drop of normal saline followed by a drop of discharge on slide
- Add cover slip and scan under low and high power and examine under phase contrast.

iii) Appearance

- *Clue cells* - very large vaginal epithelial cells with cocco-bacilli adhering to their surface. The cell has a granular appearance with bacteria blurring the cell margins.
- *Trichomonas* - actively motile organisms about the size of pus cells. The presence of the posterior flagellum (tail) is diagnostic but cannot always be seen.
- *Candida* - spherical clear organisms with well-defined borders. These organisms may be seen with buds or hyphae.

E. KOH Preparation and Whiff Test for Bacterial Vaginosis

i) Equipment

- Slide/cover slip
- 10% KOH (potassium hydroxide)

ii) Method

- Following wet mount microscopy, add a drop of KOH to slide.
- Immediately sniff slide to detect a fishy (amine) odour.
- Alternatively for whiff test only, KOH can be added to the speculum lip on removal

F. Darkfield Microscopy/Fluorescent Antibody (FA) for *T. pallidum*

i) Purpose

- To identify the presence of treponemes in serum obtained from suspicious lesions excluding those in the mouth.
- Spirochetes are normal inhabitants of the mouth and rectum
- Collect specimens for FA testing for non-genital sites i.e. oral/anal lesions where syphilis is suspected (results will be interpreted with caution in consideration of possible false positives especially if syphilis serology is negative.)

ii) Equipment

- Warm water/normal saline
- Gauze
- Bacteriologic loop
- Slide/cover slip
- Etched slide for FA

iii) Preparation of Lesion

- Place client in appropriate position to expose lesion.
- Cleanse lesions by soaking area with warm water
- Soaking gauze and applying to lesion to remove any necrotic debris or eschar.

iv) Obtaining Specimen

- Obtain serum by pressing bacteriologic loop very firmly into base of lesion or edges of ulcer. The base of the ulcer may also be scraped but care must be taken to avoid bleeding as this will interfere with interpretation of the slide.
- A drop of serum is picked up on loop and placed on a dry glass slide.
- A drop of normal saline is added and cover slip placed over serum solution.
- Examine immediately.

v) Microscopic Examination (Darkfield Microscope)

- Place drop of immersion oil on microscope diaphragm.
- Secure slide on stage.
- Elevate diaphragm until oil makes contact with under surface of slide.
- Using the 40-power non-oil objective first adjust the gross focus to locate material and then the fine adjustment to focus the cellular composition.
- Place drop of oil on prepared slide.
- Then using 100 power oil objective search the slide for motile, spiral treponemes.

vi) FA for *T. pallidum* (Edmonton/Fort McMurray Clinic Only)

- Used etched slide for FA
- Send slide to Provincial Lab for processing

VI. Genital Ulcer Disease - Approach to Assessment and Management

A. Differential Diagnosis

Clients presenting with ulcerations of the genital tract may be suffering from a variety of infectious or non-infectious conditions. The differential diagnosis includes:

- Genital herpes
- Primary syphilis
- Chancroid (*H. Ducreyi*)
- Lymphogranuloma venereum (LGV)
- Donovanosis
- Non-STI (e.g. L1 zoster)
- Non-infectious (friction, trauma, dermatological conditions)

B. Introduction

Although a provisional diagnosis can be based on clinical features, there is overlap in the historical and physical examination clues for each of these diseases, and clinical distinction is unreliable, even in the most experienced hands. Complete evaluation of a client with genital ulceration should therefore include diagnostic testing for the most likely diseases under consideration, that is, genital herpes and/or primary syphilis.

In Alberta the prevalence of chancroid and donovanosis is extremely low, and a client with a genital ulcer(s) is unlikely to have one of these diagnoses unless they have been sexually active in endemic areas or have had sex with someone from one of these areas. It is also important to remember that an individual client with one of these diseases may be co infected with other STIs (e.g. – estimated that 10% of clients with chancroid are co infected with HSV or *T. pallidum*).

Until recently LGV was also considered rare in the industrialized world but cases have been reported, beginning in the Netherlands in 2003 and include outbreak areas in Europe, and more recently in the US and Canada (B.C., Alberta, Ontario and Quebec). These outbreaks have been primarily amongst men who have sex with men (MSM) and have been associated with co-infections with other STIs including HIV and Hep C, sex parties and high-risk behaviours such as fisting (Public Health Agency of Canada, 2005).

On occasion, shingles (recurrent varicella zoster virus) can reactivate in the L1 dermatome and resemble genital HSV. Non-infectious causes of genital ulceration include trauma, friction, and a variety of dermatological conditions.

C. Clinical Assessment

In addition to the general STI assessment, a client with a genital ulcer(s) should have the following information collected:

1. History

- Length of time lesion(s) present
- Appearance of lesion(s) at onset (vesicle, papule, pustule, ulcer)
- Presence or absence of pain in the lesion
- Associated lymphadenopathy
- Travel history
- Sexual contacts in period prior to onset, with consideration for endemic areas
- Associated symptoms (fever, rash, myalgia, etc).

D. Examination

The physical examination in the client with genital ulceration includes assessment of the ulcer itself, the presence of regional lymphadenopathy, and examination for non-genital clinical signs, which may be associated with the underlying disease. The data collected for each client would include:

1. Ulcer

- Number and location
- Presence of induration
- Surrounding erythema
- Friability, tenderness, other relevant observations

2. Lymph nodes

- Unilateral, bilateral, or absent
- Size of nodes and degree of tenderness
- Suppuration or drainage

3. Other clinical findings

- Rash - description and location
- Alopecia
- Oral/pharyngeal lesions - type and location
- Evidence of secondary bacterial infection

E. Testing

The majority of Albertan clients with genital ulcer disease will have genital herpes. All clients with genital ulcers should be tested for both syphilis and herpes including syphilis serology (i.e., syphilis EIA, see attached, "Provincial Lab Guide to Interpretation of Syphilis Tests in Alberta".) and NAAT testing (PCR) for both herpes and syphilis.

F. Diagnosis of Genital Ulcer Disease (see genital ulcer algorithm)

1. Syphilis

The diagnosis of syphilis is made based on a combination of history including risk factors, clinical findings, direct examination of lesion material (i.e. darkfield microscopy and/or positive FA for *T. pallidum* and Syphilis PCR testing) and/or serologic diagnosis. The ProvLab syphilis testing algorithm is available here: <https://www.albertahealthservices.ca/assets/wf/plab/wf-provlab-syphilis-testing-algorithm.pdf>

Serologic Tests for Syphilis (STS)

Treponemal Tests (Syphilis EIA, TPPA, INNO-LIA)

- These tests detect antibody to the treponemal group of spirochaetes and will give positive results in syphilis but also in yaws, pinta and bejel. These tests will generally stay positive for life, unless treatment is given very early in the disease course (15 – 25% will serorevert if the client is treated during the primary stage) and are not useful for following the effectiveness of therapy.
- Syphilis EIA is a treponema-specific enzyme immunoassay. The syphilis EIA detects IgM and IgG antibodies against *Treponema Pallidum*. These antibodies arise during the primary stage and persist in most cases for the life of the client. Any syphilis EIA positive clients' sera will be tested for RPR as it is useful in determining stage of infection, monitoring response to therapy and detecting reinfection.
- *Treponema pallidum* Particle Agglutination (TPPA) Test uses purified *T. pallidum* antigens to sensitize gelatin particles. This is a confirmatory serological test looking for treponemal specific antibodies. It is highly sensitive and extremely specific. Previously confirmed cases are not retested by TPPA.
- INNO-LIA assay is a supplementary test which measures antibodies to three recombinant *Treponema pallidum* antigens and one synthetic peptide antigen. The Inno-Lia was replaced by the TPPA as the confirmatory treponemal test in December 2016.
- Other treponemal tests include microhemagglutination *T. Pallidum* (MHA-TP) and fluorescent treponemal antibody absorbed (FTA-ABS). Note these tests are no longer used since the introduction of the syphilis EIA and INNO-LIA in September 2007.

Non-Treponemal (RPR, VDRL)

- These are non-specific, non-treponemal tests for reagin.
- The quantitative RPR is of value in assessing response to therapy. The titre falls slowly over a period of months following effective therapy of 1° or 2° syphilis. Treatment of late or latent syphilis may have little effect on the titre. Over years, even in untreated disease, the RPR will usually revert to a low dilution.
- These tests may give positive results not only in treponemal infection, but also in other disease conditions.

Note:

- Anyone suspected of having syphilis should also be tested for HIV.
- Biological False Positives can occur in pregnancy, chronic infections, autoimmune states, and malignancy, or without association with any other obvious condition.

Syphilis NAAT (PCR) Testing

- Current testing for syphilis does not allow for molecular identification of the organism nor typing. Detection of syphilis DNA in specimens has several functions including: 1) Use as a diagnostic test for syphilis; 2) Molecular typing which will enhance determination of outbreak characteristics; and 3) Testing for azithromycin resistance.
- Specimens may be collected from swabs from ulcers or skin lesions in primary or secondary syphilis and submitted to the Provincial Laboratory for processing. In consultation with the clinic physician and approval from the Virologist on call (VOC) at the Provincial Laboratory, specimens may also be collected from whole blood of clients with secondary syphilis or other specimen types such as cerebrospinal fluid.

Interpretation of Syphilis Serology

Syphilis EIA	RPR	TPPA	Interpretation	Recommended action
Non-reactive/ Negative	Not done	Not done	Not a case. Early incubating syphilis cases may be negative when tested prior to development of an antibody response. No additional testing done by lab if syphilis EIA negative.	Repeat serology <i>if at risk for syphilis</i>
Reactive/ Positive	Non-reactive	pending	Case or biological false positive (BFP).	Await TPPA result. If TPPA is non-reactive (negative), repeat serology <i>if at risk for syphilis</i> to rule out early seroconversion.
Reactive/ Positive	Non-reactive	Non-reactive/ Negative	Early seroconversion or BFP	Repeat serology <i>if at risk for syphilis</i>
Reactive/ Positive	Non-reactive	Indeterminate	Case or BFP.	Repeat serology If repeat serology unchanged, may be a BFP; discuss with STI Services, Tel: 780-735-1466 or 1-888-535-1466
Reactive/ Positive	Non-reactive	Reactive/ Positive	Case	Case investigation including repeat serology. Contact STI Services, Tel: 780-735-1466 or 1-888-535-1466
Reactive/ Positive	Reactive	pending	Highly likely to be a case.	Await TPPA result. Depending on clinical situation, patient may require treatment; please contact STI Services, Tel: 780-735-1466
Reactive/ Positive	Reactive	Non-reactive/ Negative	BFP or early disease	Repeat serology
Reactive/ Positive	Reactive	Indeterminate	Highly likely to be a case. If repeat serology unchanged = BFP	Repeat serology Depending on clinical situation, patient may require treatment; please contact STI Services, Tel: 780-780-735-1466
Reactive/ Positive	Reactive	Reactive/ Positive	Case	Case investigation . Contact STI Services, Tel: 780-735-1466 or 1-888-535-1466

EIA = Enzyme Immunoassay, RPR = Rapid Plasma Reagin, TPPA = *Treponema pallidum* Particle Agglutination

Note: For STI Clinics, minimum 3 weeks spacing between serology preferred to rule-out BFP

2. Herpes Simplex Virus (HSV)

The diagnosis of genital herpes is made based on history, clinical findings, and results of tests for HSV.

HSV Testing

Swab for HSV PCR (Type I or Type II)

- This is the “gold standard” test and involves taking a swab from a herpes blister or ulcer and sending it to the lab to grow the virus and will tell us whether it is Herpes simplex Type I or Type II or neither.
- *Advantages of this test:*
 - If positive, the diagnosis is confirmed, and no further testing is needed.
- *Disadvantages of this test:*
 - It is not sensitive (we can get false negatives), so a negative swab test doesn't rule out herpes.
 - It requires a blister or ulcer to test, so cannot be done between outbreaks, or for people with no visible sores.

HSV Serology

- *HSV IgG Serology:* This antibody, called HSV IgG, appears within a few weeks after infection and stays positive for life.
 - *Advantages of this test:* If negative, the person doesn't have herpes.
 - *Disadvantages of this test:* Can't tell us if a positive result is due to Herpes Type I or Herpes Type II; Only tells us if you have had a Herpes infection, but not whether any particular symptom you have is due to Herpes; It takes about 6-8 weeks after infection for this test to be accurate; A negative test before 8 weeks could be a false-negative test, and should be repeated in 2-3 months to be sure.
- *Type Specific HSV Serology:* It tells us if you have antibodies to (i.e., have been infected with) Herpes Type II. The lab will do this test if the IgG test came back positive.
 - *Advantages of this test:* Can tell us if you have been infected with Herpes Type II.
 - *Disadvantages of this test:* Can't tell us the location of the herpes infection; If you have a positive test for Type II, this is likely to be a genital infection; If the test suggests you have Type I, this could still be either a cold sore (on the mouth) or genital herpes; Up to 50% of people with new genital herpes have the Type I virus; Only tells us if you have had a herpes infection, but not whether any particular symptom you have is due to herpes; If you have Herpes type II, this testing can't tell us if you also have Herpes type I.

Alberta Provincial Laboratory for Public Health Approved indications for HSV serology testing:

1. Pregnant woman with an apparent first outbreak of genital herpes
2. Clinically discordant couple, where the woman is of childbearing age.
3. Woman of childbearing potential with clinically suspicious genital herpes in whom culture or DFA has been unsuccessful on multiple attempts.

4. Individual cases not falling in above categories need to be reviewed by VOC/MOC for approval.

Note:

- Individual clinics will perform HSV Serology as per above ProvLab criteria and in conjunction with clinic physician and individual clinic protocols.
- For clients who present with lesions and test negative for syphilis and herpes advise repeat syphilis serology in 4 weeks.

3. Chancroid (*Haemophilus ducreyi*)

The diagnosis of chancroid is made based on history, clinical findings, and culture results.

4. Lymphogranuloma venereum (LGV)

The diagnosis of LGV is made based on history, clinical findings, and *Chlamydia trachomatis* PCR results. Interpretation of *Chlamydia trachomatis* PCR results are as follows:

Result	Interpretation
Specimen positive for non-LGV Chlamydia	Positive for CT but not LGV
Specimen positive for Chlamydia trachomatis of indeterminate serovar	Positive for CT but unable to tell if non-LGV or LGV.
Specimen positive for LGV Chlamydia: L1, L2, L2b, L3	Positive for LGV with serovar identified
Specimen positive for LGV Chlamydia of indeterminate serovar	Positive for LGV but unable to identify specific serovar

Definitive Diagnosis

- Positive *Chlamydia trachomatis* PCR for LGV

Presumptive/Probable¹ Diagnosis

- Isolation of *C. trachomatis* and one of the following:
 - Proctitis, or
 - Inguinal/femoral lymphadenopathy, or
 - Epidemiological link to a confirmed or probable case of LGV

1. Dependent on CT PCR result if available: If CT PCR (LGV) result is negative then not considered a probable case. If CT PCR (LGV) result is indeterminate, then remains a probable case.

Note: Clinic physician should be consulted in all circumstances where interpretation of results is not clear.

G. Treatment of Genital Ulcer Disease

1. Syphilis

Non-Pregnant Adults

Syphilis cases and contacts may be treated without consultation with clinic physician as follows:

All clients must undergo testing and/or retesting for syphilis (direct and serologic tests depending on symptoms) prior to treatment.

Administer a single dose (2.4 mu) of benzathine penicillin G (Bicillin-LA™) for presumed infectious syphilis in the following:

- Client with symptoms compatible with a diagnosis of primary (genital or oral ulcer) or secondary syphilis (rash).
- Sexual contact of known infectious (primary, secondary, early latent) case within the last 12 months.
- Patients reporting sexual contact with a partner treated for syphilis in the past 7 days.
- Secondary sexual contacts of known infectious cases in the last 12 months who have multiple barriers to accessing care and/or are at risk for being lost to follow-up can be offered treatment
- New positive syphilis EIA and RPR reactive at ≥ 8 dilutions.
- New STS EIA and RPR < 8 dilutions with a negative syphilis serology in the last 12 months.
- Clients with a history of treated syphilis and a 4-fold RPR increase since last RPR test

Notes:

- All clients must undergo HIV testing prior to treatment.
- Confirm pregnancy status.
- Repeat serology at time of treatment is unnecessary if previous serology is in past 7 days, except when client is pregnant.
- If pregnant, repeat serology should be collected at time of treatment.
- Use of alternate treatment regimen requires consult with clinic physician.
- Clients receiving treatment for confirmed or suspected syphilis should have neurological/cardiovascular assessment completed in addition to the routine STI clinic assessment. This assessment should include:
 - Ocular symptoms (eg. blurred vision, flashing lights, floaters)
 - Otic symptoms (eg. tinnitus, hearing loss)
 - Headaches (headaches alone not typical of neurosyphilis)
 - Ataxia (eg. unsteady gait, difficulty with fine motor movements, nystagmus)
 - Dementia personality changes
 - Stroke, cardiac events/changes
 - Other neurological/cardiovascular concerns
- Pregnant client's and cases with neurological and/or cardiovascular symptoms require consultation with clinic physician.

- Instruct client to abstain from sexual contact for 7 days following treatment or until after treatment with doxycycline.
- Retreatment of non-pregnant, asymptomatic syphilis cases treated with at least a 2.4mu of Bicillin is not required if the re-exposure to an untreated partner has occurred within 21 days of initial treatment date. If pregnant consult physician.
 - For patients returning from multiple re-exposures in 21 days consult physician.
- May await results (defer treatment) for named contacts whose contact was with index >6 months ago if deemed likely to return for follow up.

Syphilis: Primary, Secondary, Early Latent (< 1 year duration):

Recommended Regimen:

Benzathine penicillin 2.4 mu IM as a single dose

Alternate:

(Penicillin anaphylactic clients)

Doxycycline 100 mg PO BID for 14 days

Late Latent (> 1 year or unknown duration or cardiovascular):

*Clients with neurological and/or cardiovascular symptoms require consult with clinic physician.

Recommended Regimen:

Benzathine penicillin 2.4 mu IM weekly for 3 consecutive weeks

Alternate:

(Penicillin anaphylactic clients)

Doxycycline 100 mg PO BID for 28 days

Note: 10% of patients report a penicillin allergy however <1% are truly allergic. Moreover, 80% of penicillin allergic patients lose sensitivity to penicillin after 10 years.

Pregnant Adults

Pregnant clients < 20 weeks gestation with infectious syphilis may be treated without consultation with clinic physician (see exception below). Client should be referred for obstetric ultrasound, which should not delay initiation of treatment.

ALL pregnant clients < 20 weeks gestation and at high risk of being lost to follow up, >20 weeks gestation, or gestational age uncertain must be managed in consultation with the clinic physician. The clinic physician may arrange for a detailed fetal ultrasound and manage the client together with a materno-fetal specialist. Routine obstetric ultrasound may be necessary prior to detailed ultrasound.

Treatment of infectious syphilis in pregnancy may precipitate a Jarisch-Herxheimer reaction which may cause fetal distress or premature labour. Clients >20 weeks gestation may require fetal monitoring (arranged by the clinic physician) for 12-24 hours after administration of benzathine penicillin.

In situations where fetal monitoring is unavailable and/or not deemed necessary by clinic physician, the client will be advised that if they experience any changes (cramping, bleeding, change in fetal movement) and/or labour following the injections, to proceed immediately to the hospital.

There is no satisfactory alternative to penicillin in pregnancy, those with allergies should be considered for desensitization followed by treatment with benzathine penicillin. **Doxycycline is not recommended for use during pregnancy.**

Primary, Secondary, Early Latent (<1 year duration):

Recommended Regimen:

Benzathine penicillin 2.4 mu IM weekly for 2 consecutive weeks

Late Latent (>1 year duration or unknown duration or cardiovascular):

Recommended Regimen:

Benzathine penicillin 2.4 mu IM weekly for 3 consecutive weeks

All Adults

Neurosyphilis (treatment not provided by STI Clinics)

Recommended Regimen:

Crystalline penicillin G 4 mu IV q4h for 10-14 days

Considerations:

CSF examinations for cell count and differential, protein, glucose and VDRL is recommended to establish a diagnosis of neurosyphilis and is indicated in all clients with neurologic or eye/ear symptoms or signs, and clients meeting other criteria.

2. Genital Herpes

Primary Episode:

Recommended Regimen:

Valacyclovir 1g PO BID for 10 days

Alternate:

Acyclovir 400 mg PO TID for 7-10 days
OR
Famciclovir 250 mg PO TID for 5 days

Note: Duration of therapy depends on severity of outbreak.

Recurrent Lesions:

Episodic Therapy:

Recommended Regimen:

Valacyclovir 500mg PO BID for 3 days
OR
Valacyclovir 1gm PO QD for 3 days

Alternate:

Acyclovir 800 mg po TID for 2 days
OR
Famciclovir 125 mg PO BID for 5 days

Suppressive Therapy: Non Pregnant:

Recommended Regimen:

Valacyclovir 500 mg PO QD (for clients with ≤ 9 recurrences per year)

OR

Valacyclovir 500 mg PO BID or 1 g PO QD (for clients with >9 recurrences per year)

Alternate:

Acyclovir 400 mg PO BID

OR

Famciclovir 250 mg PO BID

Suppressive Therapy: Pregnant:

Recommended Regimen:

Valacyclovir 500 mg PO BID at 36 weeks with termination at parturition

Alternate:

Acyclovir 400 mg PO TID at 36 weeks with termination at parturition

Note: Individual clinics will provide episodic and suppressive therapy as per their own protocols. Consult clinic physician on all pregnant clients presenting with apparent first episode.

3. Chancroid

Recommended Regimen:

Azithromycin 1 g PO single dose

Alternate:

Ceftriaxone 250 mg IM single dose

OR

Ciprofloxacin 500 mg PO bid x 3 days

4. Lymphogranuloma Venereum (LGV)

Consult clinic physician prior to treatment.

Recommended Regimen:

Doxycycline 100 mg PO bid for 21 days

Alternate:

Azithromycin 1 g PO once weekly for 3 weeks

Note: Advise client to abstain from sexual contact for duration of treatment regimen.

H. Client Follow –Up

1. Syphilis

Primary, Secondary, Early Latent Syphilis

- Recall at 1, 3, 6, and 12 months for follow-up syphilis serology; this can be terminated if client seroreverts (i.e. – RPR non-reactive)
- If treated with oral therapy contact in two weeks to determine adherence to regimen.
- Test for HIV at 1 and 3 months

Late Latent Syphilis

- Repeat syphilis serology will be based on physician recommendation. If not specified should be done at 12 and 24 months unless RPR non-reactive.
- If treated with oral therapy, contact in 4 weeks to determine adherence to regimen
- If drugs lost or did not adhere to treatment, additional or alternate therapies may be provided in consultation with clinic physician

Presumptive (with non-reactive serology)

- If treated with benzathine penicillin, no follow-up needed

HIV clients (any stage)

- Follow-up syphilis serology at 1, 3, 6, 12 and 24 months and yearly thereafter

Neurosyphilis

- Follow-up as per clinic physician

Adequate Serologic Response

- **Primary:** 4 fold drop at 6 months, 8-fold drop at 12 months, 16-fold drop at 24 months
- **Secondary:** 8-fold drop at 6 months and 16-fold drop at 12 months
- **Early Latent:** 4-fold drop at 12 months

Note: A four-fold drop = 2-tube drop (e.g., change from 1:32 dilutions to 1:8 dilutions)

2. HSV

- Clinic physician should be consulted on immuno-compromised clients with HSV and pregnant clients with apparent first episode.
- Recall for speculum exam and additional STI testing if this was not possible at initial visit.
- Clients should be counselled that they are potentially infectious and that condoms do not provide 100% protection
- Clients should be counselled about asymptomatic viral shedding between outbreaks

- Advise clients that antiviral therapy for recurrent episodes may shorten the duration of lesions and suppressive antiviral therapy can ameliorate or prevent recurrent outbreaks and reduce transmission to partners by 50%.

3. Chancroid

- Recall in 1 week for reassessment and re-interviewing. Ensure that lesion(s) and lymphadenopathy have resolved.

4. LGV

- Recall for TOC 3 weeks following completion of treatment for all sites.
- **Note:** TOC Test Type Recommendations:
 - NAAT: all sites
- For non-genital sites, test of cure is done from site of positive infection (rectal, pharyngeal, eye).
- Re-screening of all individuals diagnosed with chlamydia is recommended after 6 months.
- If vomiting occurs > 1 hour post administration of azithromycin, a repeat dose is not required.
- If client does not return to clinic for TOC, efforts should be made to contact client to arrange for TOC to ensure adequate follow up.

I. Contact Management

1. Syphilis

Primary, Secondary, and Early Latent Syphilis

- Interview for contacts for 12 months prior to onset of symptoms or date of specimen collection if asymptomatic
- Contacts should be tested and treated presumptively
- If contact refuses treatment, repeat STS monthly until 3 months have elapsed following last contact with infected person.

Late Latent Syphilis

- STS performed on sexual partners of long duration and on children of infected persons with a vagina.

Presumptive

- Clients treated presumptively or as contacts to confirmed infectious syphilis (Primary, Secondary, or Early latent) should be interviewed for contacts and follow up of contacts would only be initiated on confirmation of infectious syphilis.

2. HSV

- Client is counselled around informing sexual partners of their risk and encouraging them to seek counselling, assessment and treatment as needed.
- Client must be counselled that condoms may not be 100% protective and that asymptomatic viral shedding can occur between outbreaks.

3. Chancroid

- Contacts of clients with chancroid should be examined and treated for chancroid regardless of presence or absence of symptoms, if their contact was within 10 days of onset of symptoms in the infected person

4. LGV

Definitive Diagnosis

- All contacts in last 2 months, regardless of symptoms or signs, must be located, examined, tested and treated. It may be necessary to extend this time period until a sexual contact is identified.

Presumptive Diagnosis

- Obtain contact information as above and follow up with the contact only if laboratory test confirms infection.

Recommended Regimen:

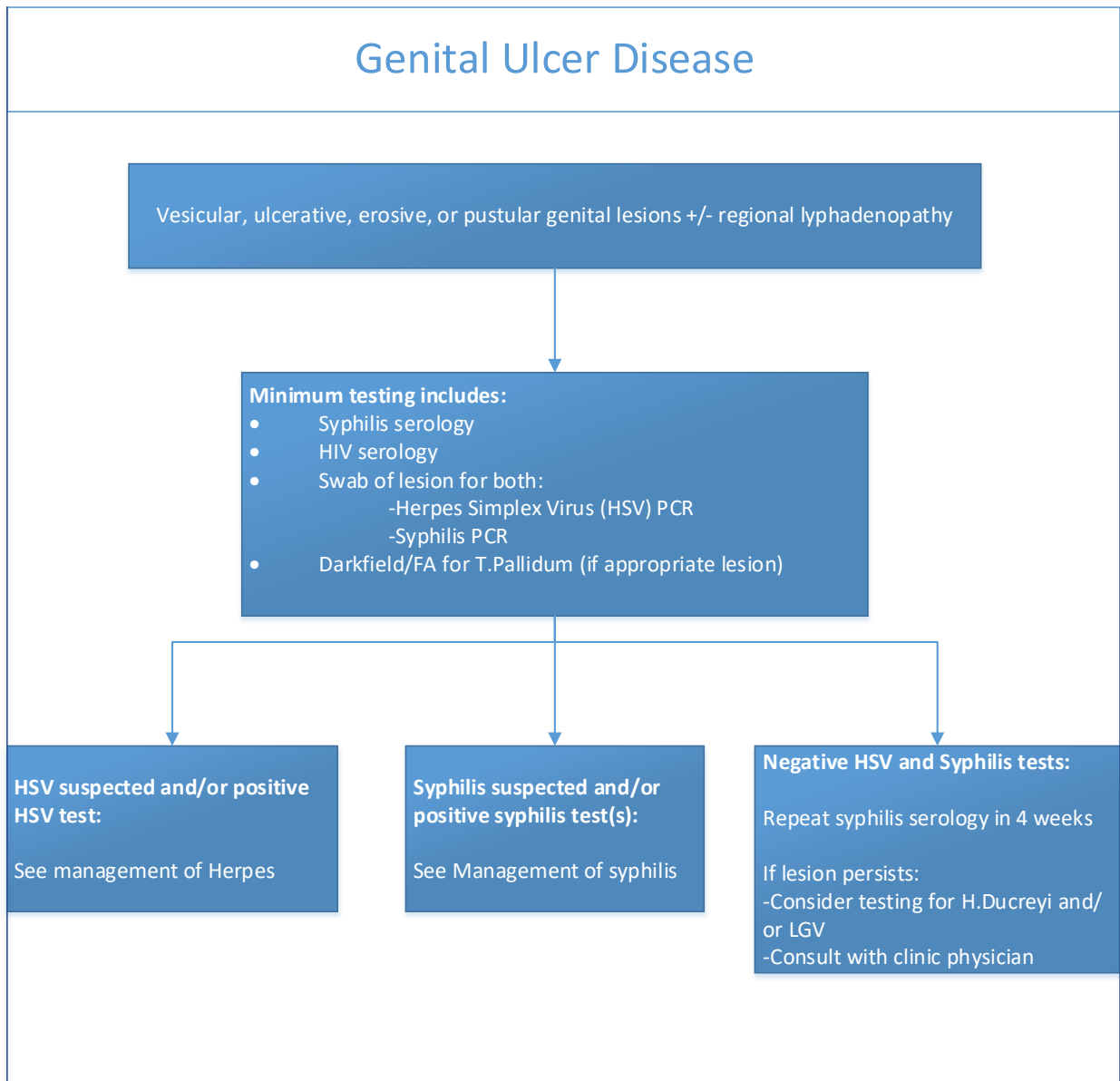
Doxycycline 100 mg PO bid for 7 days

OR

Azithromycin 1 g PO in a single dose

Note: Should test results confirm an LGV infection, treat as recommended for confirmed cases.

J. Genital Ulcer Disease – Algorithm



VII. Urethritis

A. Introduction

Urethritis consists of the clinical symptoms and signs associated with an inflammatory process in the urethra, including urethral discharge and/or dysuria. Urethritis must be distinguished clinically from cystitis (bladder infection), which is most often associated with urinary frequency and a sense of urgency to urinate. Conversely, a client may have urethral infection and have no associated symptoms, emphasizing the importance of screening for urethral infection in at-risk clients. Clients with untreated urethritis are at risk for the development of epididymo-orchitis.

The microbiologic etiology of urethritis includes:

- *Chlamydia trachomatis*
- *Neisseria gonorrhoea*
- *genital mycoplasmas, Ureaplasma urealyticum*
- *Trichomonas vaginalis*
- herpes simplex virus

B. Clinical Assessment

In addition to the general STI assessment, clients with symptoms or suspicion for urethritis should have the following information collected:

- Presence and quality of urethral discharge
- Presence of regional (inguinal) lymphadenopathy
- Travel history
- Sexual contacts in period prior to onset of symptoms
- Associated features – rash, joint symptoms, conjunctivitis

The clinical examination in a client with urethral symptoms, or who is suspected of having urethritis should include:

- Examination of the urethral meatus for evidence of inflammation or discharge.
- Examination of the shaft of the penis for lumps
- Examination of the inguinal area for lymph nodes
- Scrotal examination to exclude epididymal or testicular swelling and tenderness, suggestive of epididymo-orchitis or the presence of scrotal masses.

C. Testing (see Urethritis algorithm)

Testing of clients with suspicion of urethritis should include:

- Urethral smear
- Urethral swab for gonorrhea culture
- Urine sample for chlamydia and gonorrhea NAAT

D. Diagnosis

1. Non-Gonococcal Urethritis

Definitive Diagnosis

- Urethral discharge +/- dysuria plus urethral smear with >5 polymorphonuclear leukocytes (PMN)/high power fields (HPF) in 5 or more fields, but no gram-negative intracellular diplococci seen

2. Chlamydia Urethritis

Definitive Diagnosis

- Positive urine NAAT or urethral culture for chlamydia

Presumptive Diagnosis

- Contacts of persons with positive chlamydia laboratory test
- Contacts of persons with mucopurulent cervicitis, PID, and/or NGU

Note: To screen for reinfection it is recommended that all clients with a diagnosis of chlamydia are recommended to be retested for chlamydia in 6 months.

3. Gonorrhea Urethritis

Definitive Diagnosis

- Gram negative intracellular diplococci on urethral smear
- Positive urethral culture or urine NAAT for gonorrhea

Presumptive Diagnosis

- Sexual contact to client with laboratory confirmed gonorrhoea
- Sexual contact to persons with PID
- Sexual contact to MPC or NGU (where no gonorrhea result is available on index case)

Note: To screen for reinfection it is recommended that all clients with a diagnosis of gonorrhea are recommended to be retested for gonorrhea in 6 months.

E. Treatment

1. Non-gonococcal Urethritis

***Always perform swab(s) for GC culture prior to treatment**

MSM:

Recommended Regimen:

Azithromycin 1 gm PO as a single dose
PLUS
Ceftriaxone 250 mg IM as a single dose

Alternate:

Azithromycin 1 gm PO as a single dose
PLUS
Cefixime 800 mg PO as a single dose

OR (not recommended in pregnancy)

Azithromycin 2 gm PO as a single dose
PLUS
*Gentamicin 240mg IM in 2 separate 3ml injections

OR (not recommended in pregnancy)

Azithromycin 2 gm PO as a single dose
PLUS
Gemifloxacin 320 mg PO in a single dose (not yet available in Canada)

Heterosexual:

Recommended Regimen:

Azithromycin 1 gm PO as a single dose
PLUS
Cefixime 800 mg PO as a single dose

Alternate:

Azithromycin 1 gm PO as a single dose
PLUS
Ceftriaxone 250 mg IM as a single dose

OR

Azithromycin 2 gm PO as a single dose
PLUS
*Gentamicin 240mg IM in 2 separate 3ml injections

OR

Azithromycin 2 gm PO as a single dose
PLUS
Gemifloxacin 320 mg PO in a single dose (not yet available in Canada)

Considerations:

- Advise client no sexual contact for 1 week following treatment is recommended. At a minimum, no unprotected sexual contact for 1 week following treatment is advised.
- Use of alternate medication regimens should be in consultation with clinic physician.
- *Due to concerns with renal and ototoxicity, physician should be consulted prior to all gentamicin treatments.

- **Managing Penicillin-Allergic Clients:**

Note: 10% of patients report a penicillin allergy however <1% are truly allergic. Moreover, 80% of penicillin allergic patients lose sensitivity to penicillin after 10 years. The side chains on penicillin and cefixime/ceftriaxone are very different resulting in extremely low risk of cross-reactivity (< 1%).

- Penicillin-allergic clients receiving treatment with cephalosporins must be counseled regarding the <1% chance of cross-reactivity.
- History of unknown reaction: treat with recommended regimen
- Non-anaphylactic reaction greater than 10 years ago (e.g., childhood) give recommended regimen and observe in clinic 15 min.
- *History of anaphylaxis (including urticarial rash/hives, facial, tongue or laryngeal edema, shortness of breath or hypotension): treat with Azithromycin 1gm PO.
 - If client may be difficult to locate or has multiple partners: consult clinic physician for treatment with alternate.
 - Attempt to follow-up with alternate or test of cure (TOC) as necessary once gonorrhea results known.
- Consult with clinic physician if other concerns regarding drug allergies or medication choice.
- **Azithromycin adverse effects:**
 - azithromycin 2 gm single dose oral regimens are associated with a significant incidence of nausea and vomiting.
 - Administration of prophylactic anti-emetics such as dimenhydrinate (Gravol) may be useful in the prevention of nausea and vomiting in clients who are given azithromycin.

2. Chlamydia

Uncomplicated infection (urogenital/ pharyngeal/ conjunctival sites):

Recommended Regimen:

Azithromycin 1 gm PO as a single dose

Alternate:

Doxycycline 100 mg PO BID for 7 days

Chlamydia infection of the rectum:

Recommended Regimen:

Doxycycline 100 mg PO BID for 7 days

Alternate:

Azithromycin 1 gm PO as a single dose

Consideration:

- All clients with chlamydia should be concurrently treated for gonorrhea unless negative test for gonorrhea.
- Use of alternate medication regimens should be in consultation with clinic physician.
- Advise client no sexual contact for 1 week following treatment is recommended. At a minimum, no unprotected sexual contact for 1 week following treatment is advised.
- If treatment with Doxycycline, advise no sexual contact for duration of treatment.

3. Gonorrhoea

***Always perform swab(s) for GC culture prior to treatment.**

MSM (any site) and All Pharyngeal infections:

Recommended Regimen:

Ceftriaxone 250 mg IM as a single dose
PLUS
Azithromycin 1 gm PO as a single dose

Alternate:

Cefixime 800 mg PO as a single dose
PLUS
Azithromycin 1 gm PO as a single dose

OR (not recommended in pregnancy)

*Azithromycin 2 gm PO as a single dose
PLUS
*Gentamicin 240mg IM in 2 separate 3ml injections

OR (not recommended in pregnancy)

*Azithromycin 2 gm PO as a single dose
PLUS
Gemifloxacin 320 mg PO in a single dose (not yet available in Canada)

Heterosexual (urine, urethral, rectal):

Recommended Regimen:

Cefixime 800 mg PO as a single dose
PLUS
Azithromycin 1 gm PO as a single dose

Alternate:

Ceftriaxone 250 mg IM as a single dose
PLUS
Azithromycin 1 gm PO as a single dose

OR

*Azithromycin 2 gm PO as a single dose
PLUS
*Gentamicin 240mg IM in 2 separate 3ml injections

OR

*Azithromycin 2 gm PO as a single dose
PLUS
Gemifloxacin 320 mg PO in a single dose (not yet available in Canada)

Co-infection with rectal chlamydia:

Recommended Regimen:

Ceftriaxone 250mg IM as a single dose (MSM and All pharyngeal)
OR
Cefixime 800 mg PO as a single dose (Heterosexual any site but pharyngeal)
PLUS
Doxycycline 100 mg PO bid for 7 days

Alternate:

Ceftriaxone 250 mg IM as a single dose (MSM and All pharyngeal)
OR
Cefixime 800 mg PO as a single dose (Heterosexual urine urethral, rectal)
PLUS
Azithromycin 1 gm PO as a single dose

OR: (**When compliance with doxycycline is a concern)

Ceftriaxone 250mg IM as a single dose (MSM and All pharyngeal)
OR
Cefixime 800 mg PO as a single dose (Heterosexual urine, urethral, rectal)
PLUS
Doxycycline 100 mg PO bid for 7 days
PLUS
Azithromycin 1 gm PO as a single dose

Considerations:

- Advise no sexual contact for 1 week following treatment is recommended. At a minimum, no unprotected sexual contact for 1 week following treatment is advised.
- Use of any alternate treatment regimens should be in consultation with clinic physician.
- If treatment with Doxycycline, advise no sexual contact for duration of treatment.
- Consult Clinic Physician:
 - *Due to concerns with renal and ototoxicity, prior to all treatments with gentamicin
 - Gonorrhea infection of the eye
 - Positive genital specimens for *Neisseria meningitidis*
- **For clients with whom compliance of doxycycline regimen is a concern, the addition of azithromycin to client's treatment regimen can be provided at the nurse's discretion.

- **Managing Penicillin-Allergic Clients:**

Note: 10% of patients report a penicillin allergy however <1% are truly allergic. Moreover, 80% of penicillin allergic patients lose sensitivity to penicillin after 10 years. The side chains on penicillin and cefixime/ceftriaxone are very different resulting in extremely low risk of cross-reactivity (< 1%).

- Penicillin-allergic clients receiving treatment with cephalosporins must be counseled regarding the <1% chance of cross-reactivity.
- History of unknown reaction: treat with recommended regimen.
- Non-anaphylactic reaction greater than 10 years ago (e.g., childhood) give recommended regimen and observe in clinic 15 min.
- *History of anaphylaxis (including urticarial rash/hives, facial, tongue or laryngeal edema, shortness of breath or hypotension): consult with physician to treat with alternate.
- Consult with clinic physician if other concerns regarding drug allergies or medication choice.
- *Azithromycin Adverse Effects:*
 - *Azithromycin 2 gm single dose oral regimens are associated with a significant incidence of nausea and vomiting.
 - Administration of prophylactic anti-emetics such as dimenhydrinate (Gravol) may be useful in the prevention of nausea and vomiting in clients who are given azithromycin.
- *Quinolone Resistance:*
 - Due to the rapid increase in quinolone resistant *Neisseria gonorrhoeae*, quinolones such as ciprofloxacin are no longer recommended for the treatment of gonorrhea infections. However, in some circumstances, such as an anaphylactic allergy to penicillin or known sensitivity to a third-generation cephalosporin, a single dose of ciprofloxacin 500 mg may be considered as an alternative treatment option (unless contraindicated) ONLY IF:
 - Antimicrobial susceptibility testing is available and quinolone susceptibility is demonstrated.
 - TOC can be performed.

F. Non-gonococcal Urethritis (NGU) Treatment Failure

*See algorithm for NGU Treatment failure/relapse

Clients treated for NGU who have no response (symptoms persist) four weeks after completion of treatment and have had no unprotected sexual contact should be treated with:

Recommended Regimen:

Doxycycline 100 mg PO BID x 7 days

Clients treated for recurrent NGU who have no response (symptoms persist) four weeks after completion of second treatment and have had no unprotected sexual contact – consult clinic physician and test client for:

- Urethral swab for HSV
- Urethral swab for *Trichomonas vaginalis* by culture (Edmonton only)
- Mid-stream urine for urinalysis and culture (Edmonton only)

G. Chlamydia Treatment Failure (urogenital, pharyngeal, rectum)

*See algorithm for CT Treatment failure/relapse

Clients treated for urogenital or pharyngeal CT who test positive at least 3 weeks after completion of treatment and report no sexual contact should be treated with:

Recommended Regimen:

Doxycycline 100 mg PO BID x 7 days
Recommend TOC in 4 weeks following completion of treatment

Clients with rectal chlamydia who test positive at least 3 weeks after completion of preferred treatment and report no sexual contact since treatment contact clinic physician for treatment orders

Note: Treat as re-exposure i.e., re-treat with same medication (preferred treatment) if client reports any sexual contact between TOC and treatment (regardless of condom use or not).

Chlamydia Treatment Failure Definition

Treatment failure is defined as absence of reported sexual contact during the post-treatment period AND the following:

- Positive NAAT of specimens taken at least 3 weeks after completion of treatment.

H. Gonorrhea Treatment Failure (urogenital, pharyngeal, rectum)

*See algorithm for GC Treatment failure/relapse

Clients treated for GC who test positive at least 3 weeks after completion of treatment and report no sexual contact:

Consult clinic physician
Recommend TOC in 3-4 weeks following completion of treatment

NOTE: Treat as re-exposure i.e., re-treat with same medication (preferred treatment) if client reports any sexual contact between TOC and treatment (regardless of use of protection or not).

Gonorrhea Treatment Failure Definition

(Adapted from the Canadian Guidelines on STI: Gonococcal Infections)

Treatment failure is defined as absence of reported sexual contact during the post-treatment period AND one of the following:

- The presence of intracellular Gram-negative diplococci on microscopy in specimens taken at least 72 hours after completion of treatment,

OR

- Positive *N. gonorrhoeae* on culture of specimens taken at least 72 hours after completion of treatment

OR

- Positive NAAT of specimens taken at least 2–3 weeks after completion of treatment.

AND

- When available, matching sequence types pre- and post-treatment

I. Client Follow-Up

1. Non-Gonococcal Urethritis (NGU)

Advise client to return in 4 weeks after completion of treatment if:

- Symptoms persist (see approach to treatment failure/relapse)

2. Chlamydia Urethritis

Test of cure (TOC) is not routinely indicated if preferred treatment agent taken and symptoms and signs disappear and there is no re-exposure to an untreated partner unless:

- All non-genital (pharyngeal, rectal, eye) infections
- Persistent symptoms or signs post- therapy
- Cases treated with a regimen other than the preferred treatment
- Compliance is sub-optimal or uncertain
- Clients <16 years of age

NOTE: At Calgary STI Clinic, TOC is advised for all clients with positive chlamydia infection.

Considerations:

- Test of cure should be done 4 weeks after completion of treatment when a nucleic acid amplification test (NAAT) is performed. **Note:** NAAT may be done as early as 3 weeks.
 - TOC Test Type Recommendations:
 - NAAT: all sites (urine, urethra, pharynx, rectum, eye)
- For non-genital sites, test of cure is done from site of positive infection (rectal, pharyngeal, eye).
- Re-screening of all individuals diagnosed with chlamydia is recommended after 6 months.
- If vomiting occurs > 1 hour post administration of azithromycin, a repeat dose is not required.
- If client does not return to clinic for TOC, efforts should be made to contact client to arrange for TOC to ensure adequate follow up.

3. Gonorrhea Urethritis

Test of cure (TOC) for gonorrhea is routinely indicated regardless of anatomical site or treatment agent taken. High priority for TOC should be given to the following:

- All non-genital (pharyngeal, rectal, eye) infections
- Persistent symptoms or signs post- therapy
- Cases treated with a regimen other than the preferred treatment
- Compliance is sub-optimal or uncertain
- Clients <16 years of age
- Documented antimicrobial resistance
- Case who is linked to a drug resistant/treatment failure case and was treated with that same antibiotic
- Treatment failure for gonorrhea has occurred previously in the patient or there is re-exposure to an untreated partner.

Considerations:

- TOC should be done 4 weeks after completion of treatment when a nucleic acid amplification test (NAAT) is performed and 7 days after completion of treatment when a culture test is used. When using culture, submit both Thayer Martin and Thayer Martin without antibiotic plates for TOC. **Note:** NAAT may be done as early as 2 weeks and culture as early as 3 days.
 - TOC Test Type Recommendations:
 - NAAT: rectum, pharynx, urethra, urine, eye
 - Perform culture for GC at time of re-treatment if positive on TOC using NAAT.
 - If returns <2 weeks with persistent symptoms or signs post-therapy use culture for TOC from any site.
- TOC is done from all sites of positive infection(s) (urine, rectal, pharyngeal, eye).
- Re-screening of all individuals diagnosed with gonorrhea is recommended after 6 months.
- TOC may be advised for all clients with positive gonorrhea infection.

- Consultation with clinic physician for all clients with positive genital specimens for *Neisseria meningitidis*.
- Treatment failure or re-exposure:
 - Check sensitivities
 - Repeat smear and/or cultures
 - Re-interview for contacts
 - Re-treat according to guidelines
 - Advise client to return for test of cure
- If client does not return to clinic for TOC, efforts should be made to contact high priority cases to arrange for TOC and ensure adequate follow up.

J. Contact Management

1. Non-Gonococcal Urethritis (NGU)

Definitive Diagnosis

- All contacts in last 2 months, regardless of symptoms, must be located, examined, tested and treated. It may be necessary to extend this time period until a sexual contact is identified.

Presumptive Diagnosis

- Obtain contact information as above and follow up with the contact only if laboratory test confirms infection.

2. Chlamydia

Definitive Diagnosis

- All contacts in last 2 months, regardless of symptoms, must be located, examined, tested and treated. It may be necessary to extend this time period until a sexual contact is identified.

Presumptive Diagnosis

- Obtain contact information as above and follow up with the contact only if laboratory test confirms infection.

3. Gonorrhea

Definitive Diagnosis

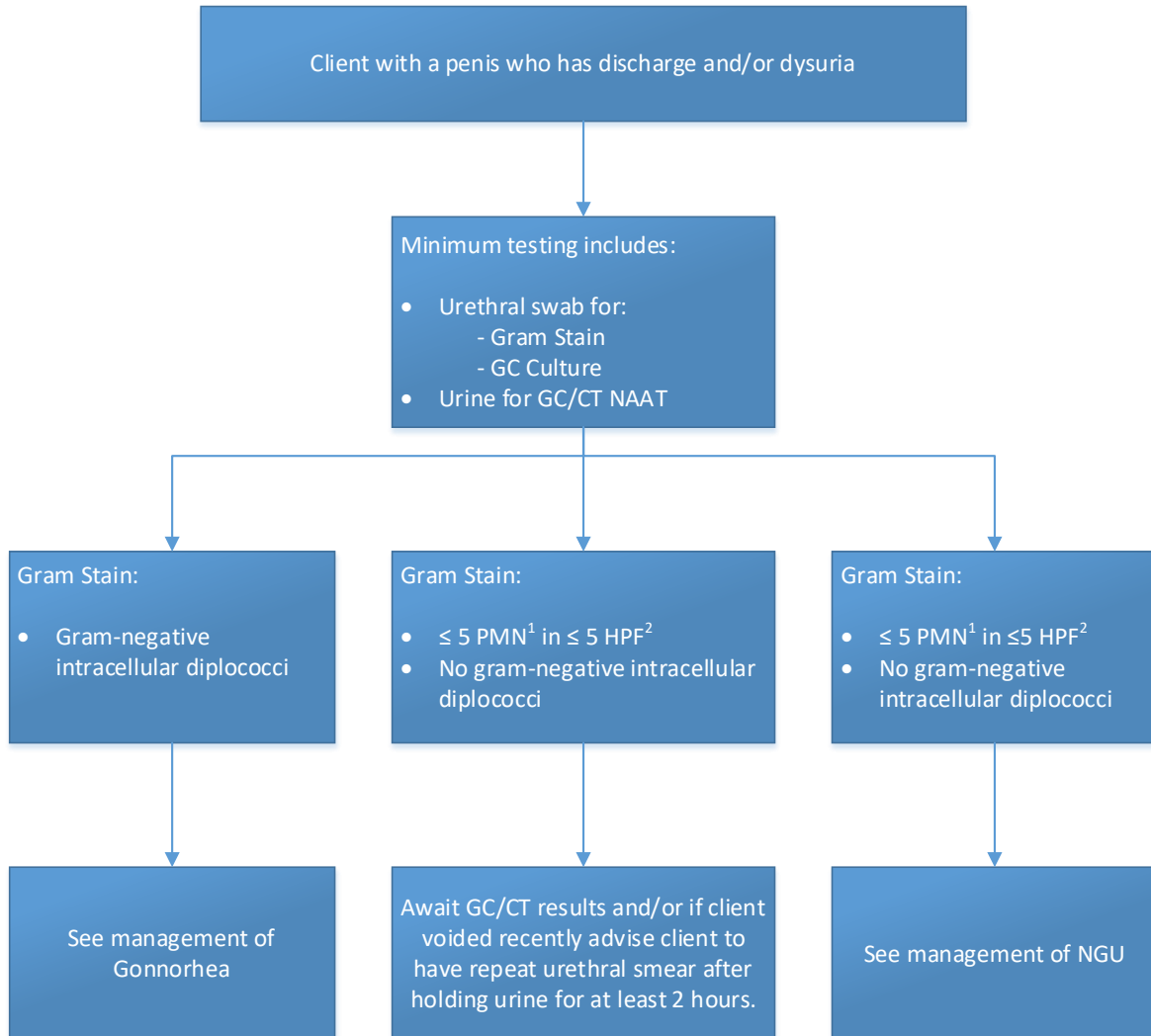
- All contacts in last 2 months, regardless of symptoms, must be located, examined, tested and treated. It may be necessary to extend this time period until a sexual contact is identified.

Presumptive Diagnosis

- Obtain contact information as above and follow up with the contact only if laboratory test confirms infection.

K. Urethritis – Algorithm

Urethritis



Note:

1. Polymorphonuclear leukocytes

2. High power fields

VIII. Epididymo-orchitis

A. Introduction

Epididymo-orchitis is a condition characterized by infection, inflammation and painful swelling of the epididymis and/or testicle. The pathogenesis involves ascending infection from the urethra, and clients therefore will often describe urethral discharge or dysuria prior to, or concurrent with their scrotal symptoms.

Differential diagnosis includes varicocele, spermatocele, hydrocele and benign and malignant testicular lesions, which are usually painless. Acute torsion of the testicle is usually painful and is a medical emergency which requires urgent referral for surgical assessment.

B. Clinical Assessment

- In addition to standard STI assessment, the client should be examined for scrotal swelling and tenderness.
- The scrotum should be examined for signs of erythema and swelling.
- The testicles should be gently palpated for assessment of size and for the presence of tenderness or testicular masses.
- With the testicle held in one examining hand, the epididymis is palpated with the other hand along its course for signs of swelling, tenderness or masses.
- In a client with acute onset of scrotal pain and exquisite testicular tenderness, the diagnosis of testicular torsion should be considered, and the client referred to the Emergency Department for urgent surgical assessment.

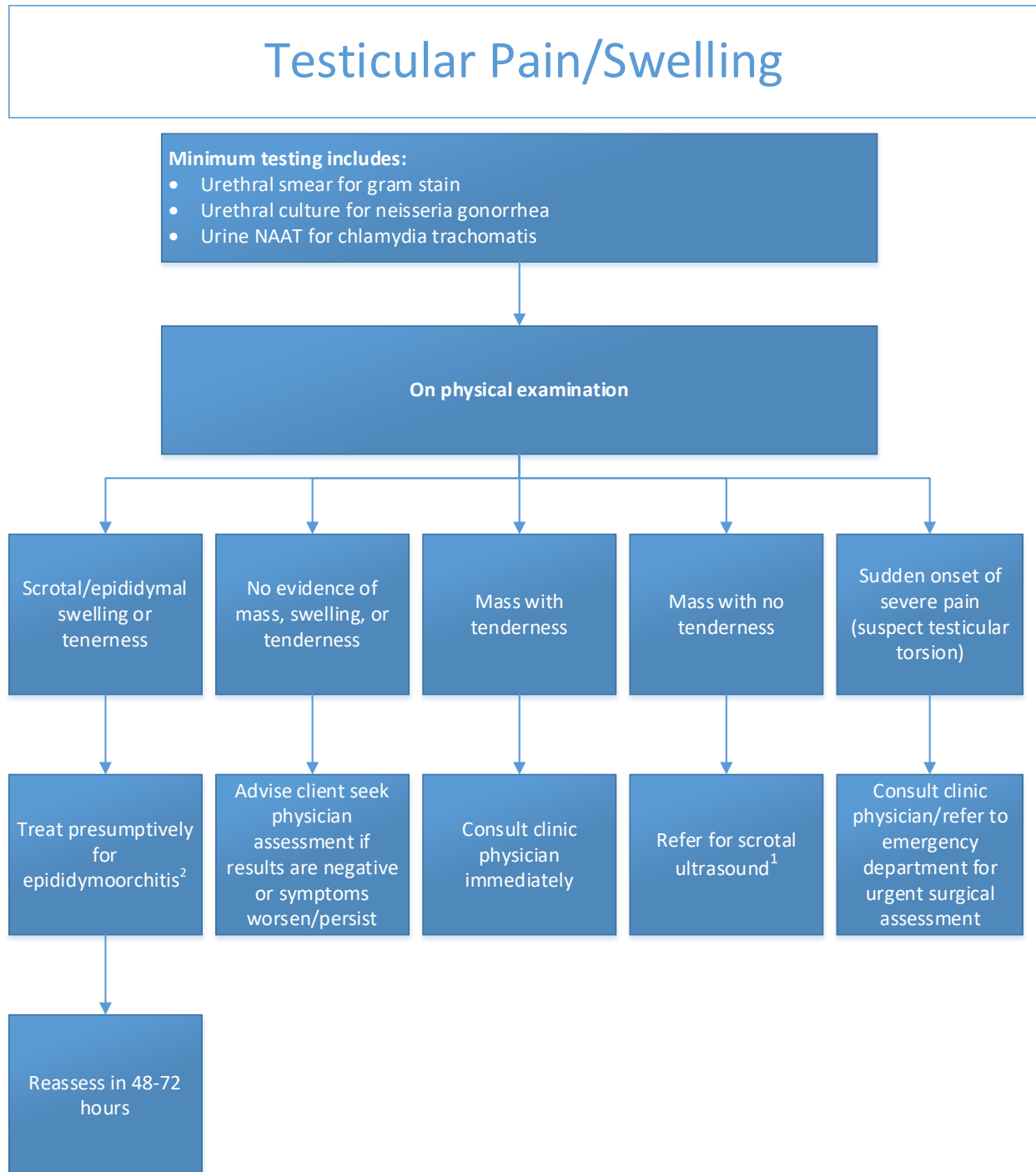
C. Testing

- Testing should include urethral swabs for gram stain and gonorrhoea, and a test for chlamydia.

D. Diagnosis

- The diagnosis of epididymitis is a clinical diagnosis and is made on the basis of the presence of painful scrotal swelling, with objective evidence of epididymal swelling and tenderness and/or testicular tenderness.
- If testicular torsion is suspected (severe pain, acute onset) call the clinic physician immediately.
- If testicular torsion is considered unlikely, the client should be treated for epididymitis before results of laboratory tests are available.

E. Testicular Pain/Swelling – Algorithm



Note:

1. The ultrasound result will be reviewed by the MD and then follow-up will be advised
2. If urethral smear negative – send client for urinalysis and culture and sensitivity (Edmonton clinic only)

F. Treatment

Treat all epididymo-orchitis as if caused by an STI.

If not improving:

- Consult with clinic physician
- Send for urinalysis and urine for culture and sensitivity (Edmonton Clinic only) – if not done at baseline.

Epididymo-orchitis

****Always perform swab(s) for GC culture prior to treatment***

Recommended:

Ceftriaxone 250 mg IM as a single dose

PLUS

Doxycycline 100 mg PO bid for 14 days

Alternate:

Levofloxacin 500 mg PO OD for 14 days

Considerations

- Levofloxacin may continue to be used as an alternate treatment agent ONLY if:
 - Gonorrhea result is available and negative, OR
 - If positive and antimicrobial susceptibility testing for gonorrhea is available and quinolone susceptibility is demonstrated.
- Use of alternate treatment regimen requires consultation with clinic physician.
- Advise client abstain from sexual contact for duration of treatment.
- Additional treatment is not required if gonorrhea positive.
- Bed rest, scrotal elevation and support and analgesics are also recommended
- ***Managing Penicillin-Allergic Clients:***

Note: 10% of patients report a penicillin allergy however <1% are truly allergic. Moreover, 80% of penicillin allergic patients lose sensitivity to penicillin after 10 years. The side chains on penicillin and cefixime/ceftriaxone are very different resulting in extremely low risk of cross-reactivity.

- Penicillin-allergic clients receiving treatment with cephalosporins must be counseled regarding the <1% chance of cross-reactivity.
- History of unknown reaction: treat with recommended regimen
- Non-anaphylactic reaction greater than 10 years ago (e.g. childhood) give recommended regimen and observe in clinic 15 min.
- *History of anaphylaxis (including urticarial rash/hives, facial, tongue or laryngeal edema, shortness of breath or hypotension): consult with physician to treat with alternate.

- Consult with clinic physician if other concerns regarding drug allergies or medication choice.

G. Client Follow-Up

All clients who fail to improve after 48-72 hours should undergo re-evaluation and reassessment for alternate diagnoses.

H. Contact Management

Clinical Diagnosis

- All contacts of clients with sexually transmitted epididymo-orchitis in last 2 months, regardless of symptoms or signs, should be located, examined, tested and treated for uncomplicated gonorrhea and chlamydia infections. It may be necessary to extend this time period until a sexual contact is identified. Active pursuit of contacts would only occur if case positive for gonorrhea and/or chlamydia.

Presumptive Diagnosis

- Obtain contact information as above and follow up with the contact only if laboratory test confirms chlamydia and/or gonorrhea infection.

IX. Vaginal Discharge – Cervicitis and Vaginitis

I. Cervicitis

A. Introduction

- Assessment of the client with vaginal discharge includes assessment for the presence of endocervicitis.
- The pathogens causing endocervical infection are quite different from those causing vaginitis; cervical infection is primarily caused by *Neisseria gonorrhoeae* and *Chlamydia trachomatis*.
- A client with suspicion of endocervicitis must be considered for the possibility of Pelvic Inflammatory Disease (PID), as the treatment and follow-up for PID is distinct.

B. Clinical Assessment

The client should be asked about specific symptoms including presence, colour and odor of vaginal discharge, including if current symptoms are a change from normal volume and character of discharge. Note that in pregnancy there can be increased vaginal discharge. The colour of the discharge and associated odour are not specific to any vaginal infection. In addition, associated symptoms such as localized pruritus, dysuria, presence of lesions, e.g. ulcerations should be determined. The client should be asked about recent use of antibiotics and/or presence of symptoms in partner(s).

In addition to examination of the external genital skin for lesions a speculum and bimanual examinations should be performed.

C. Testing

The client with vaginal discharge or in whom cervicitis is suspected based on presence of endocervical discharge and/or cervical friability should have:

- Endocervical and rectal cultures for gonorrhea. Throat cultures for gonorrhea if practicing oral sex on persons with a penis.
- Endocervical swab, vaginal swab or urine for chlamydia NAAT.
- Rectal swab for chlamydia with available test (culture and/or NAAT)
- Swab for chlamydia, gonorrhea, HSV and syphilis, from symptomatic eyes (redness, discharge) with available test (culture and/or NAAT and PCR)
- Vaginal swabs for wet mount and gram stain. The discharge should be checked for pH, and a “Whiff” test performed
- All clients with suspected PID should have a pregnancy test performed.

D. Diagnosis (See Cervicitis algorithm)

1. Mucopurulent Cervicitis (MPC)

Definitive diagnosis

- Inflammation of the cervix with a mucopurulent or purulent cervical discharge and/or sustained endocervical bleeding easily induced by gentle passage of a swab through the cervical os AND negative tests from genitourinary specimens for chlamydia and gonorrhea.

Presumptive Diagnosis

- Contact to chlamydia, gonorrhea, NGU and/or epididymo-orchitis

Considerations

- A client has cervicitis if has either of the mucopurulent/purulent discharge or sustained cervical bleeding is easily induced by gentle passage of a swab through the cervical os and should be managed as MPC pending tests for gonorrhea and chlamydia.
- Diagnosis of MPC should not be made in pregnancy due to poor positive predictive value of any criteria for defining MPC in pregnancy.

2. Chlamydia

Definitive diagnosis

- Positive chlamydia culture or NAAT test from any site including eye, endocervix, vagina, rectum, pharynx, urine or urethra

Presumptive diagnosis:

- Contact to positive Chlamydia test
- Contact to NGU, epididymo-orchitis

3. Gonorrhea

Definitive diagnosis

- Positive gonorrhea culture or NAAT from any site including eye, endocervix, vagina, rectum, pharynx, urine or urethra

Presumptive diagnosis

- Contact to partner with laboratory-confirmed gonorrhea.
- Contact to partner with urethral smear showing gram negative intracellular diplococci.
- Contact to NGU, epididymo-orchitis, pending gonorrhea result.

4. Pelvic Inflammatory Disease (PID)

A diagnosis of PID is a clinical diagnosis and requires:

- cervical motion tenderness (CMT) with or without adnexal tenderness

Considerations:

- A pregnancy test (urine HCG) must be done prior to treatment. Consult with clinic physician if pregnant.
- If adnexal tenderness alone with discharge and/or otherwise in doubt consult clinic physician.
- The diagnosis of PID does not require positive tests for gonorrhea or Chlamydia.
- The client with PID may also have:
 - Lower quadrant abdominal pain
 - Deep dyspareunia
 - Abnormal vaginal bleeding or discharge
 - Fever/chills

E. Treatment

1. Mucopurulent Cervicitis (MPC)

****Always perform swab(s) for GC culture prior to treatment***

Recommended Regimen:

Azithromycin 1 gm PO as a single dose
PLUS
Cefixime 800 mg PO as a single dose

Alternate:

Azithromycin 1 gm PO as a single dose
PLUS
Ceftriaxone 250 mg IM as a single dose

OR (*not recommended in pregnancy or breastfeeding)

Azithromycin 2 gm PO as a single dose
PLUS
**Gentamicin 240mg IM in 2 separate 3ml injections

OR (*not recommended in pregnancy or breastfeeding)

Azithromycin 2 gm PO as a single dose
PLUS
Gemifloxacin 320 mg PO in a single dose (not yet available in Canada)

Considerations:

- Advise client no sexual contact for 1 week following treatment is recommended. At a minimum, no unprotected sexual contact for 1 week following treatment is advised.
- Use of alternate treatment regimens requires consultation with clinic physician.
- *Diagnosis of MPC should not be made in pregnancy due to poor positive predictive value of any criteria for defining MPC in pregnancy.
- **Due to concerns with renal and ototoxicity, physician should be consulted prior to all gentamicin treatments.
- ***Managing Penicillin-Allergic Clients:***

Note: 10% of patients report a penicillin allergy however <1% are truly allergic. Moreover, 80% of penicillin allergic patients lose sensitivity to penicillin after 10 years. The side chains on penicillins and cefixime/ceftriaxone are very different resulting in extremely low risk of cross-reactivity.

- Penicillin-allergic clients receiving treatment with cephalosporins must be counseled regarding the <1% chance of cross-reactivity.
- History of unknown reaction: treat with recommended regimen

- Non-anaphylactic reaction greater than 10 years ago (e.g. childhood) give recommended regimen and observe in clinic 15 min.
- *History of anaphylaxis (including urticarial rash/hives, facial, tongue or laryngeal edema, shortness of breath or hypotension): treat with Azithromycin 1gm PO.
 - If client may be difficult to locate or has multiple partners: consult clinic physician for treatment with alternate.
 - Attempt to follow-up with alternate or test of cure (TOC) as necessary once gonorrhea results known.
- Consult with clinic physician if other concerns regarding drug allergies or medication choice.

Azithromycin adverse effects:

- Azithromycin 2 gm single dose oral regimens are associated with a significant incidence of nausea and vomiting.
- Administration of prophylactic anti-emetics such as dimenhydrinate (Gravol) may be useful in the prevention of nausea and vomiting in clients who are given azithromycin.

2. Chlamydia

Uncomplicated infection (urogenital/pharyngeal/conjunctival sites):

Recommended Regimen:

Azithromycin 1 gm PO as a single dose

Alternate: (not recommended in pregnancy or breastfeeding)

Doxycycline 100 mg PO BID for 7 days

Chlamydia infection of the rectum:

Recommended Regimen: (not recommended in pregnancy or breastfeeding)

Doxycycline 100 mg PO BID for 7 days

Pregnancy/lactation (all sites):

Recommended Regimen:

Azithromycin 1 gm PO as a single dose

OR

Amoxicillin 500 mg PO TID for 7 days

Considerations

- All clients with chlamydia should be concurrently treated for gonorrhea unless negative test for gonorrhea.
- Use of alternate treatment regimen requires consultation with clinic physician.
- Advise client no sexual contact for 1 week following treatment is recommended. At a minimum, no unprotected sexual contact for 1 week following treatment is advised.
- If treatment with Doxycycline, advise no sexual contact for duration of treatment.

3. Gonorrhoea

***Always perform swab(s) for GC culture prior to treatment.**

Pharyngeal infections:

Recommended Regimen:

Ceftriaxone 250 mg IM as a single dose
PLUS
Azithromycin 1 gm PO as a single dose

Alternate:

Cefixime 800 mg PO as a single dose
PLUS
Azithromycin 1 gm PO as a single dose

OR (not recommended in pregnancy or breastfeeding)

*Azithromycin 2 gm PO as a single dose
PLUS
*Gentamicin 240mg IM in 2 separate 3ml injections

OR (not recommended in pregnancy or breastfeeding)

*Azithromycin 2 gm PO as a single dose
PLUS
Gemifloxacin 320 mg PO in a single dose (not yet available in Canada)

Cervical, urine, rectal infections:

Recommended Regimen:

Cefixime 800 mg PO as a single dose
PLUS
Azithromycin 1 gm PO as a single dose

Alternate:

Ceftriaxone 250 mg IM as a single dose
PLUS
Azithromycin 1 gm PO as a single dose

OR (not recommended in pregnancy or breastfeeding)

*Azithromycin 2 gm PO as a single dose
PLUS
*Gentamicin 240mg IM in 2 separate 3ml injections

OR (not recommended in pregnancy or breastfeeding)

*Azithromycin 2 gm PO as a single dose
PLUS
Gemifloxacin 320 mg PO in a single dose (not yet available in Canada)

Co-infection with rectal chlamydia:

Recommended Regimen: (not recommended in pregnancy or breastfeeding)

Ceftriaxone 250mg IM as a single dose (Pharyngeal)
OR
Cefixime 800 mg PO as a single dose (Cervical, urine, rectal)
PLUS
Doxycycline 100 mg PO bid for 7 days

Alternate:

Ceftriaxone 250 mg IM as a single dose (Pharyngeal)
OR
Cefixime 800 mg PO as a single dose (Cervical, urine, rectal)
PLUS
Azithromycin 1 gm PO as a single dose

OR: (**When compliance with doxycycline is a concern, not recommended in pregnancy or breastfeeding)

Ceftriaxone 250mg IM as a single dose (Pharyngeal)
OR
Cefixime 800 mg PO as a single dose (Cervical, urine, rectal)
PLUS
Doxycycline 100 mg PO bid for 7 days
PLUS
Azithromycin 1 gm PO as a single dose

Considerations:

- Advise no sexual contact for 1 week following treatment is recommended. At a minimum, no unprotected sexual contact for 1 week following treatment is advised.
- Use of alternate treatment regimens requires consultation with clinic physician.
- If treatment with Doxycycline, advise no sexual contact for duration of treatment.
- Consult Clinic Physician:
 - *Due to concerns with renal and ototoxicity, prior to all treatments with gentamicin
 - Gonorrhea infection of the eye
 - Positive genital specimens for *Neisseria meningitidis*
- **For clients with whom compliance of doxycycline regimen is a concern, the addition of azithromycin to client's treatment regimen can be provided at the nurse's discretion.

- **Managing Penicillin-Allergic Clients:**

Note: 10% of patients report a penicillin allergy however <1% are truly allergic. Moreover, 80% of penicillin allergic patients lose sensitivity to penicillin after 10 years. The side chains on penicillins and cefixime/ceftriaxone are very different resulting in extremely low risk of cross-reactivity.

- Penicillin-allergic clients receiving treatment with cephalosporins must be counseled regarding the <1% chance of cross-reactivity.
- History of unknown reaction: treat with recommended regimen.
- Non-anaphylactic reaction greater than 10 years ago (e.g. childhood) give recommended regimen and observe in clinic 15 min.
- *History of anaphylaxis (including urticarial rash/hives, facial, tongue or laryngeal edema, shortness of breath or hypotension): consult with physician to treat with alternate.
- Consult with clinic physician if other concerns regarding drug allergies or medication choice.
- *Azithromycin adverse effects:*
 - Azithromycin 2 gm single dose oral regimens are associated with a significant incidence of nausea and vomiting.
 - Administration of prophylactic anti-emetics such as dimenhydrinate (Gravol) may be useful in the prevention of nausea and vomiting in clients who are given azithromycin.
- *Quinolone Resistance:*
 - Due to the rapid increase in quinolone resistant *Neisseria gonorrhoeae*, quinolones such as ciprofloxacin and levofloxacin are no longer recommended for the treatment of gonorrhea infections. However, in some circumstances, such as an anaphylactic allergy to penicillin or known sensitivity to a third generation cephalosporin, a single dose of ciprofloxacin 500 mg OR a single dose of Levofloxacin 500 mg may be considered as an alternative treatment option (unless contraindicated) ONLY IF:
 - Antimicrobial susceptibility testing is available and quinolone susceptibility is demonstrated
 - Local quinolone resistance is under 5% AND a test of cure can be performed.

4. Pelvic Inflammatory Disease

****Always perform swab(s) for GC culture prior to treatment***

Recommended Regimen: (not recommended in pregnancy or breastfeeding)

Ceftriaxone 250 mg IM as a single dose

PLUS

Doxycycline 100 mg PO BID for 14 days

WITH or WITHOUT

Metronidazole 500 mg PO BID for 14 days

Alternate:

Levofloxacin 500 mg PO OD for 14 days

WITH or WITHOUT

Metronidazole 500 mg PO BID for 14 days

Considerations:

- Levofloxacin may continue to be used as an alternate treatment agent ONLY if:
 - Gonorrhea results is available and negative.
 - Or if positive and antimicrobial susceptibility testing for gonorrhea is available and quinolone susceptibility is demonstrated.
- Use of alternate treatment regimen requires consultation with clinic physician.
- Addition of metronidazole is recommended when concurrent anaerobic infection is a concern (e.g., bacterial vaginosis, tubo-ovarian abscess and/or HIV co-infection).
- Additional treatment is not required if gonorrhea positive.
- Advise client abstain from sexual contact for duration of treatment.
- Contact clinic physician immediately re: hospitalization if:
 - Severely ill
 - Pregnant
 - Unable to tolerate or adhere to out-client management
 - Is suspected of having a tubo-ovarian abscess, or is not improving when followed at 48-72 hours
- **Managing Penicillin-Allergic Clients:**

Note: 10% of patients report a penicillin allergy however <1% are truly allergic. Moreover, 80% of penicillin allergic patients lose sensitivity to penicillin after 10 years. The side chains on penicillin and cefixime/ceftriaxone are very different resulting in extremely low risk of cross-reactivity.

- Penicillin-allergic clients receiving treatment with cephalosporins must be counseled regarding the <1% chance of cross-reactivity.

- History of unknown reaction: treat with recommended regimen.
- Non-anaphylactic reaction greater than 10 years ago (e.g. childhood) give recommended regimen and observe in clinic 15 min.
- *History of anaphylaxis (including urticarial rash/hives, facial, tongue or laryngeal edema, shortness of breath or hypotension): consult with physician to treat with alternate.
- Consult with clinic physician if other concerns regarding drug allergies or medication choice.

F. Chlamydia Treatment Failure (Urogenital, pharyngeal, rectum)

*See algorithm for CT Treatment failure/relapse

Clients treated for urogenital or pharyngeal CT who test positive at least 3 weeks after completion of treatment and report no sexual contact should be re-treated with:

Doxycycline 100 mg PO BID x 7 days (not recommended in pregnancy)
 Recommend TOC in 3-4 weeks following completion of treatment

Clients with rectal chlamydia who test positive at least 3 weeks after completion of preferred treatment and report no sexual contact since treatment, contact clinic physician for treatment orders

Note: Treat as re-exposure i.e. re-treat with same medication (preferred treatment) if client reports any sexual contact between TOC and treatment (regardless of use of protection or not).

Chlamydia Treatment Failure Definition

Treatment failure is defined as absence of reported sexual contact during the post-treatment period AND the following:

- Positive NAAT of specimens taken at least 3 weeks after completion of treatment.

G. Gonorrhoea Treatment Failure (Urogenital, pharyngeal, rectum)

*See algorithm for GC Treatment failure/relapse

Clients treated for GC who test positive at least 3 weeks after completion of treatment and report no sexual contact:

Consult clinic physician Recommend TOC in 3-4 weeks following completion of treatment
--

Note: Treat as re-exposure i.e. re-treat with same medication (preferred treatment) if client reports any sexual contact between TOC and treatment (regardless of use of protection or not).

Gonorrhoea Treatment Failure Definition

(Adapted from the Canadian Guidelines on STI: Gonococcal Infections)

Treatment failure is defined as absence of reported sexual contact during the post-treatment period AND one of the following:

- The presence of intracellular Gram-negative diplococci on microscopy in specimens taken at least 72 hours after completion of treatment,

OR

- Positive *N. gonorrhoeae* on culture of specimens taken at least 72 hours after completion of treatment

OR

- Positive NAAT of specimens taken at least 2–3 weeks after completion of treatment.

AND

- When available, matching sequence types pre- and post-treatment

H. Client Follow-Up

1. Mucopurulent cervicitis (MPC)

Client to return after one month for test of cure if:

- Less than 14 years of age
- Pregnant
- An alternate regimen was used

Clients who remain persistently symptomatic 3-4 weeks after treatment for gonorrhea and chlamydia and in whom a diagnosis of MPC has been made AND persistent or re-infection with gonorrhea and/or chlamydia has been ruled out should be treated with doxycycline 100 mg PO bid x 7 days.

2. Chlamydia Cervicitis

Test of cure (TOC) not routinely indicated if preferred treatment agent taken and symptoms and signs disappear and there is no re-exposure to an untreated partner unless:

- All non-genital (pharyngeal, rectal, eye) infections
- Persistent symptoms or signs post- therapy
- Cases treated with a regimen other than the preferred treatment
- Compliance is sub-optimal or uncertain
- Clients <16 years of age
- Pregnancy

NOTE: At Calgary STI Clinic, TOC is advised for all clients with positive chlamydia infection.

Considerations

- Test of cure should be done 4 weeks after completion of treatment when a nucleic acid amplification test (NAAT) is performed. **Note:** NAAT may be done as early as 3 weeks.
 - TOC Test Type Recommendations:
 - NAAT: all sites (urine, cervix, pharynx, rectum, eye)
- For non-genital sites, test of cure is done from site of positive infection (rectal, pharyngeal, eye).
- Infants born to untreated mothers must be tested for *C. trachomatis*. Newborns must be treated if test results are positive. They should also be closely monitored for signs of chlamydia infection (e.g., conjunctivitis, pneumonitis). Oral antibiotic prophylaxis is not routinely recommended unless follow up cannot be guaranteed, e.g., if samples obtained for Chlamydia testing but compliance with follow up uncertain.
- Re-screening of all individuals diagnosed with Chlamydia is recommended after 6 months.
- If vomiting occurs < 1 hour post administration of azithromycin, a repeat dose is required.

- If client does not return to clinic for TOC, efforts should be made to contact client to arrange for TOC to ensure adequate follow up.

3. Gonorrhea Cervicitis

Test of cure (TOC) for gonorrhea is routinely indicated regardless of anatomical site or treatment agent taken. High priority for TOC should be given to the following:

- All non-genital (pharyngeal, rectal, eye) infections
- Persistent symptoms or signs post-therapy
- Cases treated with a regimen other than the preferred treatment
- Compliance is sub-optimal or uncertain
- Clients <16 years of age
- Documented antimicrobial resistance
- Case who is linked to a drug resistant/treatment failure case and was treated with that same antibiotic
- Treatment failure for gonorrhea has occurred previously in the patient or there is re-exposure to an untreated partner.
- Pelvic inflammatory disease (PID) or disseminated gonococcal infection
- Pregnancy

Considerations

- TOC should be done 4 weeks after completion of treatment when a nucleic acid amplification test (NAAT) is performed and 7 days after completion of treatment when a culture test is used. When using culture, submit both Thayer Martin and Thayer Martin without antibiotic plates for TOC. **Note:** NAAT may be done as early as 2 weeks and culture as early as 3 days.
 - TOC Test Type Recommendations:
 - NAAT: all sites
 - Perform culture for GC at time of re-treatment if positive on TOC using NAAT.
 - If returns <2 weeks with persistent symptoms or signs post-therapy use culture for TOC from any site.
- For non-genital sites, TOC is done from site of positive infection (rectal, pharyngeal, eye).
- Infants born to untreated infected mothers must be tested and treated.
- Re-screening of all individuals diagnosed with gonorrhea is recommended after 6 months.
- Treatment failure or re-exposure:
 - Check sensitivities
 - Repeat smear and/or cultures
 - Re-interview for contacts
 - Re-treat according to guidelines
 - Advise client to return for test of cure
- Consultation with clinic physician for all clients with positive genital specimens for *Neisseria meningitidis*.

- If client does not return to clinic for TOC, efforts should be made to contact high priority cases to arrange for TOC and ensure adequate follow up.

4. Pelvic Inflammatory Disease (PID)

- All clients treated for a diagnosis of PID should return to clinic for reassessment in 48-72 hours to ensure response to treatment. Recall any clients that fail to keep this appointment. If not clearly improving, contact clinic physician.
- Removal of an IUD in a client with PID is not routinely recommended (See SOGC Statement). Consult with STI Medical Director if client is severely ill (nausea, vomiting, severe pain) at the initial visit and/or there is no clinical improvement at 48-72 hours.
- *SOGC Committee Opinion (March 2014) on Best Practices to Minimize Risk of Infection with Intrauterine Device Insertion*
(<http://sogc.org/wpcontent/uploads/2014/03/gui305CPG1303E.pdf>):
“In treating mild to moderate pelvic inflammatory disease, it is not necessary to remove the intrauterine device during the treatment unless the patient requests removal or there is no clinical improvement after 72 hours of appropriate antibiotic treatment. In cases of severe pelvic inflammatory disease, consideration can be given to removing the intrauterine device after an appropriate antibiotic regimen has been started”

I. Contact Management

1. Mucopurulent Cervicitis (MPC)

Definitive Diagnosis

- All contacts in last 2 months, regardless of symptoms or signs, must be located, examined, tested and treated. It may be necessary to extend this time period until a sexual contact is identified.

Presumptive diagnosis

- Obtain contact information as above and advise client you will wait for positive culture/NAAT confirmation (gonorrhoea or chlamydia) before initiating a contact investigation.

2. Gonorrhoea Cervicitis

Definitive diagnosis

- All contacts in last 2 months, regardless of symptoms or signs, must be located, examined, tested and treated. It may be necessary to extend this time period until a sexual contact is identified.

Presumptive diagnosis

- Obtain contact information as above and advise that you will await positive culture/NAAT (gonorrhoea or chlamydia) confirmation before initiating a contact investigation.

3. Chlamydia Cervicitis

Definitive diagnosis

- All contacts in last 2 months, regardless of symptoms or signs, must be located, examined, tested and treated. It may be necessary to extend this time period until a sexual contact is identified.

Presumptive diagnosis

- Obtain contact information as above and advise client you will wait for culture/NAAT confirmation before initiating a contact investigation.

4. Pelvic Inflammatory Disease (PID)

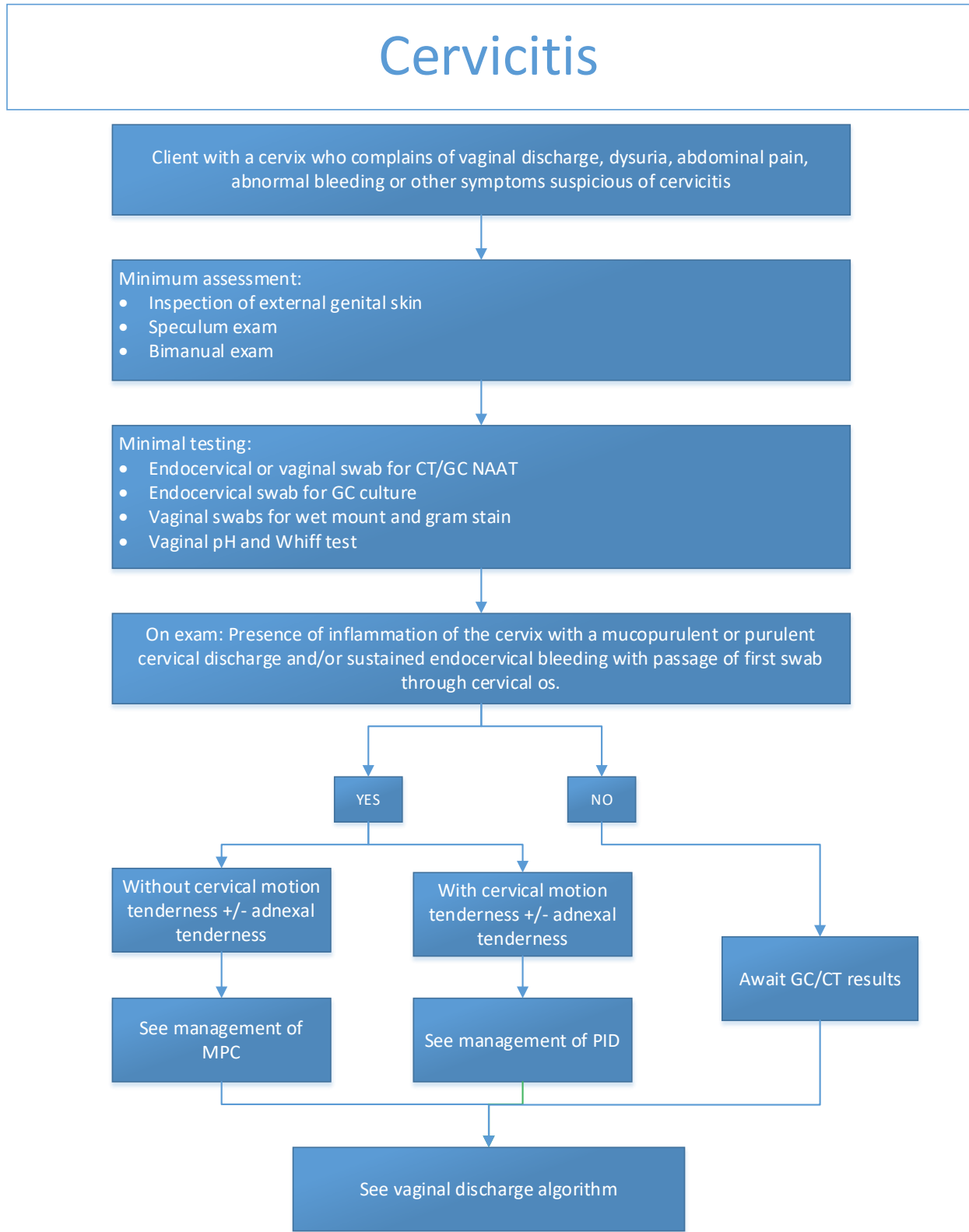
Clinical diagnosis

- All contacts in last 2 months, regardless of symptoms or signs, should be examined, tested and treated for uncomplicated gonorrhea and chlamydia infections. It may be necessary to extend this time period until a sexual contact is identified. Active pursuit of contacts would only occur if case positive for gonorrhea and chlamydia.

Presumptive diagnosis

- Obtain contact information as above and advise that you will await positive culture/NAAT (gonorrhea or chlamydia) confirmation before initiating a contact investigation.

J. Cervicitis Algorithm



II. Vaginitis

A. Introduction

- The client with vaginal symptoms, particularly vaginal discharge, should also be assessed for the presence of cervicitis or PID
- The differential diagnosis of a client with vaginal discharge includes yeast, Trichomoniasis, bacterial vaginosis, other rare infective vaginitis, as well as atrophic vaginitis and other non-infective vaginitis syndromes

B. Clinical Assessment

The client should be asked about specific symptoms including presence, colour and odor of vaginal discharge, including if current symptoms are a change from normal volume and character of discharge. Note that in pregnancy there can be increased vaginal discharge. The colour of the discharge and associated odour should be noted. In addition, associated symptoms such as localized pruritus, dysuria, presence of lesions, (e.g. ulcerations) should be determined as well as the presence of foreign bodies. The client should also be asked about recent (within the previous month) use of antibiotics, presence of symptoms in partner(s). In addition to examination of the external genital skin for lesions a speculum and bimanual examinations should be performed.

C. Testing

The client with vaginal discharge or in whom cervicitis is suspected should have:

- Endocervical (and rectal/throat swabs as indicated) for gonorrhoea culture
- Endocervical or vaginal swab or urine (and rectal swabs as indicated) for chlamydia NAAT
- Vaginal swabs for wet mount and gram stain. The discharge should be checked for pH, and a “Whiff” test performed

D. Diagnosis (see Vaginal Discharge algorithm)

1. Yeast Vaginitis

- Pruritus (itchiness) is the hallmark symptom of yeast vaginitis (Candidiasis)
- Erythema and edema of vagina and vulva may be present
- The typical vaginal discharge of candidiasis is white and “curdy” and is rarely malodorous. The vaginal pH is <4.5.
- Budding yeast or yeast forms which have germinated with the production of pseudohyphae on wet mount or gram stain make the diagnosis of candidiasis in the correct clinical context.

2. Trichomoniasis

- Profuse watery, frothy, greenish vaginal discharge is the hallmark of vaginitis due to Trichomoniasis. The vaginal pH is typically ≥ 5.0 .
- Erythema of vulva and cervix (“strawberry cervix”) may be present.
- Motile trichomonads seen on wet mount make the diagnosis of vaginal trichomoniasis

3. Bacterial Vaginosis

- Bacterial vaginosis is not so much an infection as an ecological disturbance with disappearance of the normal vaginal flora and their replacement with mixed anaerobes.
- The discharge is typically thin, greyish and malodorous.
- The diagnosis of BV requires 3 of:
 - pH ≥ 5.0
 - Positive “Whiff” test
 - Replacement of lactobacilli with pleomorphic curved Gram-negative rods
 - “clue cells” on wet mount or Gram stain

E. Treatment

1. Yeast Vaginitis

There are a plethora of topical creams and intravaginal preparations for yeast treatment, many of which are available over the counter.

Non-Pregnant/Lactating Adults:

Recommended Regimen (Oral):

fluconazole 150 mg PO single dose.

Pregnancy:

Recommended Regimen:

Topical azole for 7 days.

Considerations

- Treatment is unnecessary for asymptomatic infection
- Many topical/intravaginal agents are oil based and might weaken latex condoms and diaphragms.

- Some effective topical azole agents are: butoconazole, clotrimazole, miconazole and terconazole and nystatin.
- Oral fluconazole is contraindicated in pregnancy but considered safe in breastfeeding.

2. Trichomoniasis

Non-Pregnant/Non-Lactating Adults:

Recommended Regimen:

*Metronidazole 500 mg PO bid x 7 days

Alternate:

*Metronidazole 2 gm PO single dose

Pregnancy/Lactation:

Recommended Regimen:

Metronidazole 2 gm PO single dose

Considerations

- Patients on metronidazole should be advised not to consume alcohol for the duration of treatment and for 24 hours before and after because of possible disulfiram-like (Antabuse) reaction.
 - Clients should be warned of the likelihood of flushing and nausea/vomiting if alcohol is consumed while taking metronidazole.
- Based on multiple studies, data support the safety and lack of teratogenicity of systemic metronidazole use in pregnancy. Metronidazole can be given at any stage of pregnancy.
- The effect of oral metronidazole on the nursing infant is unknown but no adverse effects have been reported in numerous studies; infant should be observed for diarrhea.
- Pregnancy: treatment is recommended only if symptomatic.
- Intravaginal metronidazole gel is not effective.
- **Calgary Clinic only: Given the lack of evidence suggesting one regimen is superior over the other, Clinic RNs to use clinical judgement when selecting recommended vs. alternate regimen for their individual patients.*

3. Bacterial Vaginosis

Non-Pregnant/Lactating Adults:

Recommended Regimen:

Metronidazole 500 mg PO BID x 7 days
OR
Metronidazole gel (Nidagel®) 0.75%, one applicator (5 gm) intravaginally QD for 5 days
OR
Clindamycin cream 2%, one applicator (5 gm) intravaginally QD for 7 days

Alternate:

Metronidazole 2 gm PO as a single dose (**higher rate of relapse with this treatment**)
OR
Clindamycin 300 mg PO BID x 7 days

Pregnancy:

Recommended Regimen:

Metronidazole 500 mg PO BID x 7 days

Alternate:

Clindamycin 300 mg PO BID x 7 days

Recurrent Bacterial Vaginosis:

For 1st recurrence within 1-3 months of initial treatment treat with:

Metronidazole 500 mg PO BID for 14 days

For 1st recurrence or greater and more than 3 months since initial treatment treat with:

Metronidazole 500 mg PO BID for 7 days

For 2nd recurrence or greater within 1-3 months of initial treatment:

Consult with clinic MD (may consider gel)

Considerations

- Use of alternate treatment regimens requires consultation with clinic physician.
- For therapy with metronidazole, a 7 day oral course and a 5 day course of gel are equally efficacious (cure rate 75–85%). A single oral dose also has a cure rate of 85% but a higher relapse rate at 1 month (35–50% vs. 20–33%).
- Treatment of sexual partners with a penis is not indicated and does not prevent recurrence.
- Clients on metronidazole should be advised not to take alcohol for the duration of treatment and for 24 hours after because of possible disulfiram-like (Antabuse) reaction.
- Nidagel® NOT Metrogel® or Flagystatin®
- Clindamycin cream is oil-oil based and may weaken condoms.
- *Lactation:*

- The effect of oral metronidazole on the nursing infant is unknown but no adverse effects have been reported in numerous studies; infant should be observed for diarrhea.
- Asymptomatic: Treatment is unnecessary except in cases of:
 - pregnancy with history of high-risk pregnancy (previous preterm delivery)
 - prior to IUD insertion,
 - prior to gynecologic surgery or upper genitourinary tract instrumentation or prior to therapeutic abortion.
- Pregnancy:
 - Low risk, asymptomatic persons do not need to be screened and/or treated for BV.
 - Treatment with an oral agent in asymptomatic persons with a history of pre-term delivery may reduce the risk of preterm rupture of membranes and stillbirth.
 - Intravaginal agents are not recommended in pregnancy as they have not been shown to decrease the risk of adverse pregnancy outcomes.
 - Based on multiple studies, data supports the safety and lack of teratogenicity of systemic metronidazole in pregnancy. Metronidazole is not contraindicated during pregnancy.

F. Client Follow-Up

1. Yeast Vaginitis

- No specific follow-up or contact management is necessary for isolated yeast vaginitis
- Clients with persistent (4 or more episodes in a 12 month period) yeast vaginitis should be referred to clinic physician

2. Trichomoniasis

- Trichomoniasis is a non-reportable STI. No specific follow-up is needed unless the client has persistence or recurrence of symptoms

3. Bacterial Vaginosis

- No specific follow-up is necessary for most clients with BV
- Clients should be advised to return for re-treatment if symptoms recur (see recurrent BV treatment guidelines).
- Pregnant clients should be advised to return in 1 month for evaluation of therapy

Considerations:

- If client returns to clinic with symptoms less than 1 month after initial treatment – advise client to return at one month or after for reassessment.
- If >1 diagnosis (i.e. yeast and BV or MPC and BV) – client should be treated for both concurrently.

G. Contact Management

1. Yeast Vaginitis

- No testing, treatment or notification of partners is needed.
- Treatment of sexual partners is not routinely recommended unless a partner with a penis has candida balanitis; use a topical azole cream twice a day for 7 days. Fluconazole 150 mg single oral dose is also acceptable.

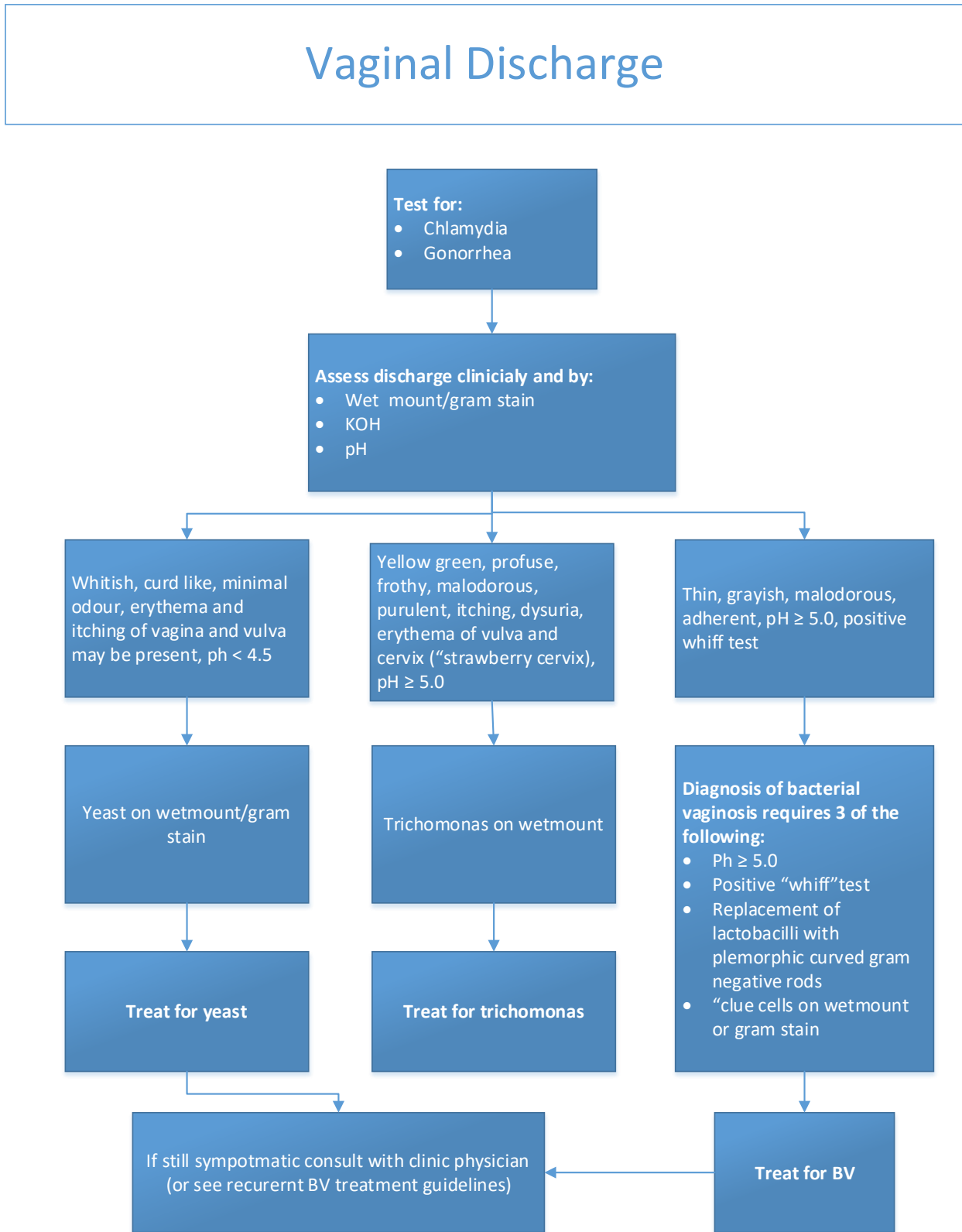
2. Trichomoniasis

- Partners of clients with trichomoniasis should be treated regardless of symptoms and no testing is required, and sex should be avoided until both partners are asymptomatic.

3. Bacterial Vaginosis

- No data supports a benefit to treatment of partners, therefore no specific partner notification is required.
-

H. Vaginal Discharge - Algorithm



X. Lumps and Bumps

A. Differential Diagnosis

Clients presenting with lumps and bumps of the genital tract may be suffering from a variety of infectious or non-infectious conditions. The differential diagnosis includes:

- Lesions caused by human papilloma virus (e.g., external genital warts (EGW) or related precancerous/cancerous lesions)
- Molluscum contagiosum
- A variety of benign and malignant conditions, including normal variants e.g., pearly penile papules.

B. Introduction

Most persons infected with human papilloma virus (HPV) are asymptomatic. A minority will develop visible genital warts. Those with internal reproductive organs are at risk of developing cervical or vaginal neoplasia while anyone participating in receptive anal intercourse are at risk of developing anal carcinomas.

Molluscum contagiosum is a benign papular skin condition caused by a pox virus. It is often transmitted sexually in adults. The lesions can be severe in HIV infected clients.

C. Clinical Assessment

- Ask about associated symptoms – although most are asymptomatic some may be itchy or tender.
- Examination of the external genital skin including perianal skin with or without use of hand lens
- In screening for HPV related lesions in women, also examine cervix and vaginal walls and in men look for visible intrameatal lesions

D. Testing

- There is no routinely available diagnostic test for HPV related lesions or molluscum contagiosum
- Please refer to guidelines for Cervical Cancer Screening.

E. Diagnosis

- Clinical diagnosis; no specific test available
- EGW may present as multiple growths on the anogenital skin, which occasionally cause bleeding, pruritus and local discharge. They most commonly present as cauliflower-like

or papular in appearance but can also present as flat, macular lesions or keratinized, slightly elevated lesions.

- Lesions of molluscum contagiosum are typically flesh coloured, smooth, firm, dome shaped with a central umbilicus.

F. Treatment

Treatment of visible external genital warts and molluscum contagiosum may be either provider administered or client applied; the choice of therapy depends on client convenience and ability to pay for client applied therapies. The primary goal of treatment of both conditions is to eliminate the visible lesions.

Clients presenting with visible intravaginal, intraurethral or intra-anal warts should be referred to clinic physician or dermatology. Those with oral warts may be advised to consult their dentist for intra-oral warts and to consult dermatology for facial warts. Clients presenting with visible warts on the cervix may be referred directly for colposcopy.

Pregnant and diabetic clients may be treated in clinic by RN.

1. Visible EGW only (excluding vagina, cervix, intraurethral, or oral warts)

Provider administered:

- Liquid nitrogen
 - To be administered by trained staff
 - Topical EMLA (local anesthetic) may be applied up to 1 hour prior to treatment
 - EMLA may be used if pregnant/lactating only if clearly indicated, ie cannot tolerate alternate treatments or cryotherapy without EMLA. If used, advise that very little is absorbed into the bloodstream but that the effects on fetus/neonate are unknown (as no long term trials have been conducted in pregnancy/lactating) but likely to be very low/negligible.

Client applied:

- Imiquimod
 - Provide client with prescription and teaching as per individual clinic protocol
 - Not recommended in pregnancy
- Podofilox 0.5%
 - Clients with lesions on penis or vulva only
 - Provide client with prescription and package insert
 - Not recommended in pregnancy

2. Molluscum contagiosum

Provider administered:

- Liquid nitrogen
 - To be administered by trained staff
 - Topical EMLA (local anesthetic) may be applied 1 hour prior to treatment

G. Counselling

1. EGW/HPV

- >30 types of HPV that infect the ano-genital tract
- Low risk HPV, types 6 and 11 cause 90% of genital warts (Baseman, 2005).
- Genital warts are spread by sexual contact with an infected partner. Intimate sexual contact, but not necessarily penetration, is enough for the transmission to occur.
- While genital warts often don't cause any discomfort, they may cause bleeding, itching, swelling, and very rarely discharge.
- High-risk (oncogenic) strains of HPV are rarely found in warts,
- Although, treatment of warts is primarily for cosmetic reasons, theoretically, treatment may decrease infectivity as a result of debulking wart. Warts may resolve without treatment.
- Individuals/Couples in long-term relationships should be counselled on the following topics and the decision to abstain or engage in safer sex is a personal choice.
- > 90% of infections with LR HPV will clear spontaneously within 2 years (Veldhuijzen, 2010). If immunocompetent client does not have a recurrence of EGW within 6-9 months (after confirmation on examination), the virus is likely gone, but no way to know for sure.
- High risk HPV types are more likely to persist than low risk types (Burchell, 2006). Therefore a small percentage of HPV infections are "persistent" but the majority will clear spontaneously within 2-3 years. There are no standardized definitions for "persistence" but many clinical trials have defined "persistent" as detectable virus on at least 2 occasions 4-6 months apart (Baseman, 2005). If individuals develops warts years after initial infection it is not possible to say definitively whether old or recent acquisition of infection, i.e. unclear if can reactivate latent virus (similar to HSV) or new warts due to re-infection (Baseman, 2005)
- It is not known if HPV is infectious for the entire duration of infection as infectiousness does vary with HPV viral load (Burchell, 2006).
- Seroconversion occurs at most in ~50% women, and men are much less likely than women to develop antibodies (Veldhuijzen, 2010). Antibodies developed during natural infection do not provide reliable protection because of low or waning titres. Thus, individuals can be re-infected with the same strain. Theoretically partners can continue to re-infect each other with the virus, if one clears the virus before the other.
- Condom use reduces but does not eliminate the risk of HPV transmission due to skin to skin contact outside of the area of the condom (Manhart, 2002). Regular use of condoms can alter the natural history of some HPV lesions in men (Simon, 2010). In partners infected with the same HPV type, condom use results in regression of flat penile lesions (Bleeker, 2005).

- Genital-oral and oral-genital transmission definitely occurs but risk of transmission appears to be minimal (Burchell, 2006).
- There is no reliable blood test for HPV.
- Shaving/waxing may theoretically spread the virus locally by “nicking” the wart but not really know if this is the case or not (Handsfield, 2007).
- ASCUS Cervical Cancer Screening result may not be HPV related but in at least 25% of cases is due to LR HPV. Discuss the link between HPV infection and abnormal Cervical Cancer Screening tests with results showing abnormalities with ASCUS or higher (e.g. LSIL, HSIL, etc).
- Encourage follow up with cervical screening as per the Alberta Cervical Cancer Screening Guidelines. Diagnosis of EGW or family history of cervical cancer is not an indication for more frequent Cervical Cancer Screening.
- Two appropriate websites for further information: www.hpvinfos.ca and <https://www.sexandu.ca/> (The Society of Obstetricians and Gynaecologists of Canada)
- It is beneficial to receive HPV vaccine, even if you have genital warts or abnormal Cervical Cancer Screening test. The vaccines are prophylactic, not therapeutic, i.e. giving Gardasil to someone with warts will not make them disappear.
- There are two types of HPV vaccines approved for use in Canada, Gardasil® and Cervarix®.
- Beginning in 2008 in Alberta, all girls entering Grade 5 were made eligible for Gardasil® vaccine. In 2014, all students entering Grade 5 in Alberta became eligible to receive Gardasil® 9. In February 2018, MSM aged 17-26 became eligible for publicly funded Gardasil® 9 vaccine.
- The Gardasil® vaccine was approved in Canada in July 2006, providing protection against 4 HPV types (6, 11, 16 and 18). In February 2015, the Gardasil®9 vaccine was approved providing protection against 5 additional HPV types (31, 33, 45, 52 and 58). These 9 types are credited for: 90 percent of cervical cancers, 75-85 percent of cervical precancers, 75 percent of HPV-related vulvar, vaginal and anal cancers and 90 percent of anogenital warts.
 - Gardasil®9 is a vaccine indicated in females 9 through 45 for the prevention of:
 1. Cervical, vulvar, and vaginal cancer caused by HPV types 16, 18, 31, 33, 45, 52 and 58
 2. Genital warts caused by HPV types 6 and 11
 3. Cervical adenocarcinoma in situ (AIS)
 4. Cervical intraepithelial neoplasia (CIN) grade 2 and grade 3
 5. Vulvar intraepithelial neoplasia (VIN) grade 2 and grade 3
 6. Vaginal intraepithelial neoplasia (VaIN) grade 2 and grade 3
 7. Cervical intraepithelial neoplasia (CIN) grade 1
 - Gardasil®9 is indicated in females 9 through 26 years of age for the prevention of:
 1. Anal cancer caused by HPV types 16, 18, 31, 33, 45, 52 and 58
 2. Anal intraepithelial neoplasia (AIN) grades 1, 2, and 3 caused by HPV types 6, 11, 16, 18, 31, 33, 45, 52 and 58
 - Gardasil®9 is indicated in males through 9 to 26 years of age for the prevention of:
 1. Anal cancer caused by types 16, 18, 31, 33, 45, 52 and 58
 2. Genital warts caused by HPV types 6 and 11
 3. Anal intraepithelial (AIN) grades 1, 2, and 3 caused by HPV types 6, 11, 16, 18, 31, 33, 45, 52 and 58

- The Cervarix® vaccine was approved for use in Canada in February 2010 for girls aged 10 to 25. Cervarix® provides protection against the two HPV types that cause approximately 70 per cent of all cervical cancers (HPV-16 and HPV-18).
 - Cervarix ® is indicated in females 10 through 25 years of age for the prevention of:
 1. Cervical cancer caused by HPV types 16 and 18
 2. Cervical intraepithelial neoplasia (CIN) grade 2 and grade 3
 3. Cervical adenocarcinoma in situ (AIS)
 4. Cervical intraepithelial neoplasia (CIN) grade 1

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2. Molluscum contagiosum

- Very common viral infection which is not necessarily sexually transmitted
- Usually self-limited
- Treatment does not eradicate the virus and therefore, recurrences are common
- No serious sequelae

H. Client Follow-up

1. EGW/HPV

Referral to Physician clinic

- Clients with EGW and/or perianal lesions who have persistent lesions after consistent Liquid N2 treatment over 12-week period (with no more than 1 month in between treatments) with no significant change/improvement in lesions.
 - Consult with the Clinical Instructor on a case-by-case basis for consideration of earlier referral if the Clinic RN has concerns related to the size of the lesions or response to treatment prior to the 12 weeks.
 - HIV positive MSM with EGW/perianal lesions follow above referral criteria but clinic RN should advise client of need to follow up with primary HIV physician for annual digital rectal exam/anal pap.
 - Diabetic and pregnant clients will follow above criteria for referral.
- Consult/refer to clinic physician for clients with evidence of intra anal HPV (anal margins), intravaginal, and intraurethral warts.
- Clients with intraoral warts should be referred to their dentist and those with facial warts should be referred to dermatology.
- Clients with visible lesions on cervix should be referred directly for colposcopy.

NOTE: Fort McMurray STI Clinic RN's will consult by phone with the Medical Director for direction regarding continued treatment and/or referral for the following:

- Clients with EGW and/or perianal lesions who have persistent lesions after consistent Liquid N2 treatment over 12-week period (with no more than 1 month in between treatments) with no significant change/improvement in lesions.
- Clients with evidence of intra anal HPV (anal margins), intravaginal, and intraurethral warts.
- All other HPV follow-up will be as outlined above

2. Molluscum contagiosum

- Client should return for follow up if lesions recur

I. Contact Management

1. EGW/HPV

- Client is counselled around informing sexual partners of their risk and encouraging them to seek assessment and treatment as needed.
- Encourage routine Cervical Cancer Screening as per Cervical Cancer Screening Guidelines.

2. Molluscum contagiosum

- Advise contacts with symptoms to seek treatment otherwise no specific follow up is required

XI. Hepatitis

A. Introduction

- Persons at risk for STI may also be at risk for acquiring hepatitis A, B or C.
- Acute infection with hepatitis A, B or C is often asymptomatic or non-specific in presentation.
- Hepatitis A does not cause chronic infection, while hepatitis B and C may.
- Most cases of hepatitis A are transmitted by feco-oral route (e.g. household) and food, but can also be transmitted sexually, especially MSM.
- Hepatitis A may cause severe illness or death if the person is co-infected with HCV.
- Hepatitis B is the most common STI causing hepatitis; sexual transmission accounts for approximately 45% of cases; other modes of transmission are: parenteral, perinatal, person- to-person among family contacts through contact with blood/secretions.
- Parts of the world with high endemicity for Hepatitis B include: Asia, sub-saharan Africa, Amazon basin, Eastern Europe and the Middle East.
- Parts of the world with high endemicity for Hepatitis C include: China, Pakistan, India, Egypt and Russia (Mongolia and Egypt especially high at 7% of populations).
- Highest rate of hepatitis C transmission is in injection drug users who share drug paraphernalia (e.g. needles, spoons, bills, straws etc.) and those incarcerated; sexual transmission being increasingly recognized but less efficient than hepatitis B (less than 5%); perinatal transmission occurs less efficiently than HBV.

B. Clinical Assessment

- Most *persons* infected with hepatitis A, B or C are asymptomatic and will report no symptoms or have any clinical findings. In the acute stage of infection, a minority will have jaundice, fever/chills, abdominal pain, nausea or vomiting.

C. Testing

1. Screening for Hepatitis A (anti-HAV IgG antibody)

- Perform pre-immunization serology as outlined in the *Alberta Health Services Immunization Program Standards Manual Population and Public Health*
- Pre-immunization serology is recommended for the following individuals:
 - Individuals born prior to 1945
 - Individuals from a hepatitis A endemic country (all countries other than those listed below are considered endemic for hepatitis A):

For purposes of pre-immunization serology the following countries are **NOT** endemic:

Aland Islands	Andorra	Australia	Austria	Belgium
Canada	Denmark	Faroe Islands	Finland	France
Germany	Greece	Greenland	Iceland	Ireland
Italy	Japan	Liechtenstein	Luxembourg	Monaco
Netherlands	New Zealand	Norway	Portugal	San Marino
Spain	Sweden	Switzerland	United Kingdom	USA

- Individuals diagnosed with hepatitis B and/or hepatitis C infection
- NOTE: Perform pre-immunization serology for clients who report a history of having Hepatitis A infection to confirm immunity.

2. Screening for Hepatitis B (HBsAb, HBsAg, Anti-HBc)

- Perform pre-immunization serology for Hepatitis B (anti-HBsAg, HBsAg and Anti-HBc) if no history of 3 documented doses of Hepatitis B immunization and/or no previous documented immunity to Hepatitis B (i.e. Anti-HbsAg \geq 10 IU/L).
- Re-screen clients annually with ongoing risks for Hepatitis B (HbsAg testing only) (who are not vaccinated and/or do not have documented immunity) and/or who present with symptoms of acute Hepatitis (i.e. jaundice, abdominal pain, nausea, vomiting).

3. Screening for HCV (anti-HCV antibody)

All STI Clinic clients should be offered baseline Anti-HCV testing. Further testing can be based on nursing assessment and/or reported risk factors.

Risk Factors (Shah, 2018):

- History of current or past (even once) injection drug use.
- History of or current incarceration.
- Received health care or personal services where there is lack of infection prevention and control practices (sharing of tattoo/piercing needles or equipment without sterilization between clients)
- Persons who received blood transfusion, blood products or organ transplant prior to May 1992 in Canada.
- Born or resided in a region where hepatitis C prevalence is $>3\%$, such as:
 - Central, East and South Asia
 - Australia and Oceania
 - Eastern Europe
 - Sub-Saharan Africa
 - North Africa or Middle East
- Born to a mother who is HCV-infected.
- History of sexual contact or sharing of personal care items with someone who is HCV-infected
- HIV positive, particularly men who have sex with men
- Received chronic hemodialysis treatment
- Elevate alanine aminotransferase
- Born between the years 1945 and 1975 (baby boomers)

References:

1. Shah H, Bilodeau M, Burak KW, Cooper C, Klein M, Ramji A, et al. The management of chronic hepatitis C: 2018 guideline update from the Canadian Association for the Study of the Liver. CMAJ. 2018;190:E677-E687

D. Client Follow-up

1. Hepatitis A (anti-HAV IgG antibody)

- This test is used to determine immunity and is extremely limited in its value in diagnosing acute infection.
- If positive, this indicates immunity related to past infection or previous immunization and no vaccine is required

- Offer vaccination and follow vaccination procedure as per the *Alberta Health Services Immunization Program Standards Manual Population and Public Health*

2. Hepatitis B (HBsAG, HBsAb, Anti-HBc)

HBsAg

- A positive test may indicate an acute or chronic infection. Further testing is required to differentiate.
- If positive, refer to own physician for further follow up
- Window Period: Up to 90 days (3 months).

HBsAb

- If positive, this indicates immunity related to past infection or previous immunization and no vaccine is required.
- Review and record immunization history (3 documented doses of Hepatitis B immunization) and/or previous history of illness due to Hepatitis B.
- Levels of 10 units per litre (U/L) or greater are considered protective.
- Offer vaccination and follow vaccination procedure as per the *Alberta Health Services Immunization Program Standards Manual Population and Public Health*.

AntiHBc

- If positive, this indicates past infection, client is immune due to natural infection.
- If negative, this indicates client has never been infected with Hep B virus.

SEROLOGY INTERPRETATION	
Serology Result	Interpretation
<ul style="list-style-type: none"> • anti-HBs <u>positive</u>** • HBsAg negative • anti-HBc negative 	Considered immune. Refer to Serology Recommendations and Follow-Up Table for those requiring documented doses of hepatitis B vaccine regardless of positive anti-HBs serology.
<ul style="list-style-type: none"> • anti-HBs <u>positive</u>** • HBsAg negative • anti-HBc <u>positive</u> 	Considered immune. No vaccine indicated.
<ul style="list-style-type: none"> • anti-HBs negative • HBsAg negative • anti-HBc negative 	Susceptible. Proceed with immunization as per eligibility criteria.
<ul style="list-style-type: none"> • anti-HBs negative • HBsAg <u>positive</u> • anti-HBc negative 	Refer to: Alberta Public Health Hepatitis B Notifiable Disease Guidelines for interpretation and follow-up.
<ul style="list-style-type: none"> • anti-HBs negative • HBsAg negative • anti-HBc <u>positive</u> 	Refer to: Alberta Public Health Hepatitis B Notifiable Disease Guidelines (Table 4B) for interpretation and follow-up.
**Anti-HBs positive is greater than or equal to 10 IU/L; negative is less than 10 IU/L	

Further serology recommendations and interpretation available in the *Alberta Health Services Immunization Program Standards Manual Population and Public Health*.

3. Hepatitis C (Anti-HCV antibody and HCV RNA)

Anti-HCV

- If positive, this test indicates acute or previously cleared infection.
- If positive, offer vaccine if not immune to Hepatitis A and B
- Window period: Up to 90 days (3 months).

HCV RNA

- If Anti-HCV positive, reflex HCV RNA testing will be performed by lab to confirm acute infection.
- If client has history of previous positive with lab, lab cancels Anti-HCV. Previously positive patients should be screened via HCV RNA.
- For indeterminate Anti-HCV results, supplementary testing via HCV RNA should be performed.
- If positive, refer to hepatitis C treatment provider as per individual clinic policy

E. Counselling

- Counselling on modes of transmission, prevention of transmission of infection and partner notification and need for follow up if applicable is essential.
- Counselling on safer drug use and harm reduction services, as applicable.
- Counselling on availability of easily tolerated treatments for Hepatitis C, for individuals who test positive and for individuals at increased risk for infection.
- Review window period (3 months) for HCV antibody testing as per client history.

F. Contact Management

- Followed by Communicable Disease Control

XII. Human Immunodeficiency (HIV)

A. Introduction

- All clients at risk for an STI are also at risk for HIV and should therefore be offered testing once verbal consent is obtained and the testing is accompanied by appropriate pre and post-test counselling.

B. Clinical Assessment

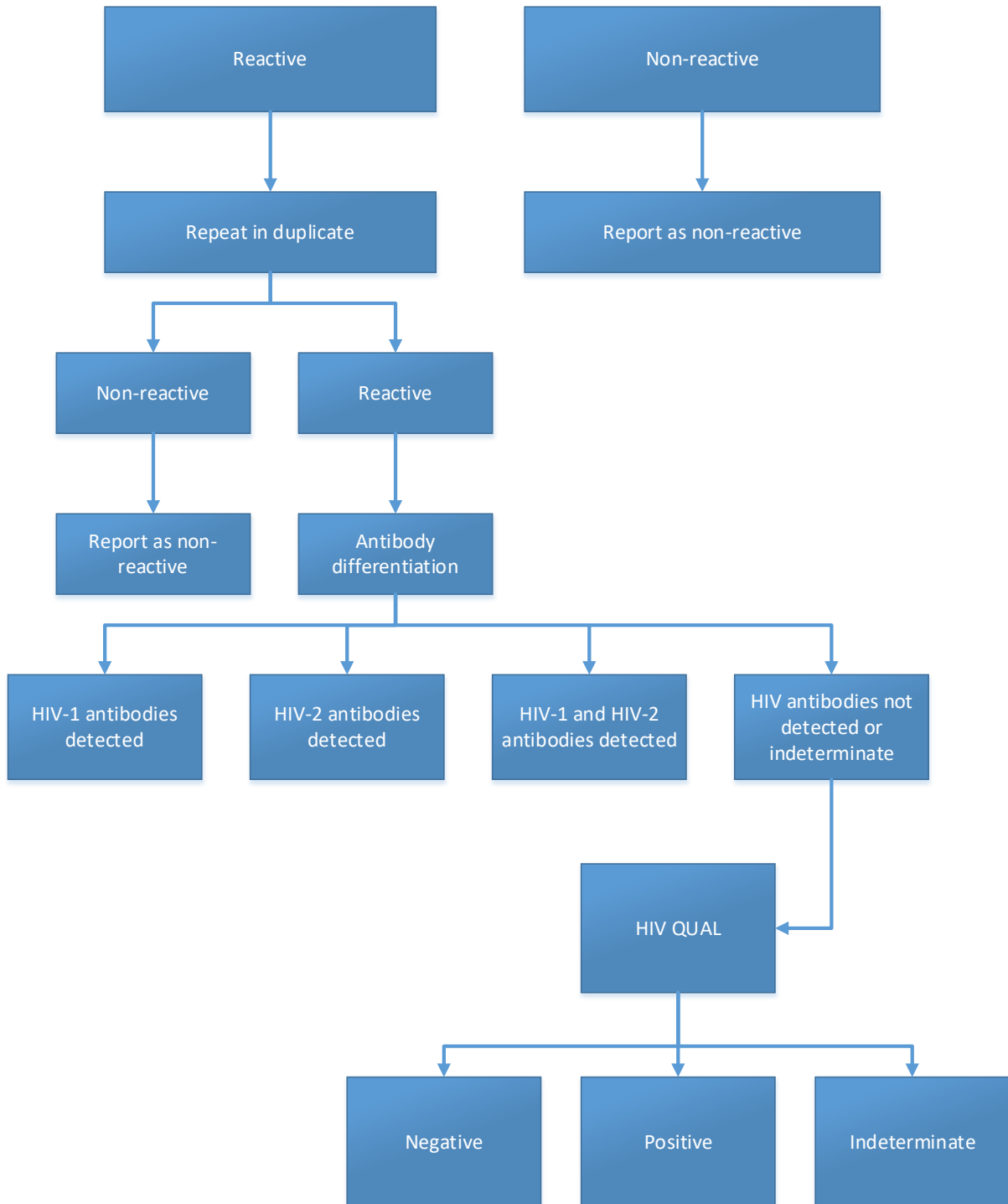
- Persons who are confirmed HIV antibody positive should be referred to an HIV specialist for further management.
- Persons suspected to be newly infected or sero-converting to HIV positive should be asked about fever/chills, swollen glands, rash, sore mouth/throat, weight loss and a brief examination including assessment of positive symptoms should be made.

C. Diagnosis/Further Management

- A confirmed case is a person who is HIV antibody positive, confirmed by Antibody Differentiation.
- Additional testing by HIVQUAL may be performed in persons potentially seroconverting to HIV positive, as instructed by Provlab.
- Additional testing in persons who are HIV seropositive is performed upon referral to a HIV specialist.

D. HIV diagnostic algorithm

4th Generation HIV Antibody Screen



E. Counselling

Serologic testing for HIV without counselling has a psychological, medical and social impact on clients. Therefore, current recommendations are that HIV testing be preceded and followed by appropriate counselling.

1. Pre-test Counselling:

Discuss:

- The confidentiality of HIV testing, that it is a notifiable disease, and the process around reporting (including partner notification) in the case of a positive result.
- That the test is for both an HIV antigen (p24 antigen), and also the HIV antibody. It is not a direct test for the HIV virus or for AIDS.
- That an initial positive screening test is automatically followed by a confirmatory test, Antibody Differentiation (same blood sample), which only detects the antibody and NOT the p24 antigen, to rule out a false-positive test.
- That the majority of persons produce detectable antibodies within 1 month.
- That a negative test may mean that the person is not infected, or that it is too soon to detect antibodies. Review the window period for HIV as per client's history.
- That a positive test means the person is infected with HIV and is infectious to others through unprotected sexual contact, blood, breast milk or tissue/organ donation.
- That HIV is not casually transmitted through sweat, saliva, urine, feces or tears (unless there is visible blood in any of these).
- Review client's risk behaviours and that transmission risks are as follows:
 - Unprotected sexual contact: anal sex (high risk), vaginal sex (high risk), oral sex (low risk).
 - Direct blood-to-blood contact.
 - Sharing needles or syringes (including IDU, tattooing, piercing with shared/unclean equipment).
 - Transmission from mother to child during pregnancy, at birth or via breast milk.
 - Receiving blood or blood products in Canada before November 1985 (elsewhere risk will vary depending on testing of donated blood).
- Discuss risk reduction behaviours:
 - Practice sexual abstinence (will eliminate sexual transmission risk).
 - Ensure consistent use of latex or polyurethane condoms.
 - Avoid casual/anonymous/unprotected sex.
 - Avoid sharing needles, syringes or other IDU equipment.
 - Consideration of HIV PrEP as per the [2018 Alberta HIV Pre-Exposure Prophylaxis \(PrEP\) Guidelines](#)

2. Post-test Counselling:

If the test result is negative, interpret as:

- No detectable antibodies at present. Re-testing may be required at 1 and 3 months after last potential exposure.
- Occupational exposure, cases of sexual assault, and contacts to HIV require baseline testing followed by additional testing at 1 and 3 months.
- Reinforce condom use with all sexual contact, and avoidance of needle/syringe sharing.

If the test result is positive:

- Gather resources prior to seeing the client
- Test result should be provided in a direct and clear manner e.g. 'your HIV test result is positive'.
- Interpret test as infection with HIV, which is not diagnostic of AIDS. A confirmatory test was done to rule out a false-positive result. Allow for enough time to absorb results.
- Discussion should include:
 - What is important to the infected person. Answer questions honestly and with compassion.
 - Focus on positive messages by highlighting advances in HIV care, treatment, and support. Individuals who test positive should be made aware that HIV is now considered a chronic illness, and with the right treatment and support, people living with HIV can live long, active, and healthy lives.
 - Early initiation of antiretroviral therapy (ART) improves overall health and prevents the sexual transmission of HIV to partners. HIV positive clients who have an undetectable viral load cannot pass HIV on to their sexual partners. Undetectable = Untransmittable [U = U for health professionals \(PHAC 2020\)](#)
 - The cost of HIV medication is free to Albertans with AB Health Care coverage.
 - Exploration of available support systems i.e. family, friends, HIV service organizations, family physician, clergy.
 - Guidance on avoiding transmission by protecting others from blood and body fluids including sexual secretions as well as U=U.
 - Importance of the partner notification process and describe how this is done within public health.
 - Make clients aware of the public health benefits of disclosing their HIV status to current and future partners in the event of a positive test result. Care providers should never provide legal advice; provide clients with appropriate referrals for additional information such as the [Canadian HIV/AIDS Legal Network](#).
- *Disclosure under Public Health Act:* Advise persons living with HIV infection of the medico-legal requirement to disclose their HIV status to all potential sexual or drug-injecting partners in advance of the activity. Specifically, they are to be advised of the following, and this discussion is to be documented:
 - Newly diagnosed HIV+ clients, or those who are HIV+ but not currently on treatment (ART) are advised they must use condoms, and disclose their HIV+ status to all vaginal, anal, and oral sexual contacts.
 - Encourage disclosure of HIV status prior to engaging in any sexual activities/relationships once they achieve/maintain an undetectable viral load. Client advised of the existence of potential personal and/or legal consequences of non-disclosure and disclosure.

- Discuss the effectiveness of condoms reducing the acquisition/transmission of STIs, including HIV, regardless of viral load.
- Client advised of obligation not to share any drug use equipment (needles, crack pipes, etc.), razors and toothbrushes, and disclose status to drug use partners. Discuss the medical risks associated with sharing needles or other drug paraphernalia to all individuals involved.
- Advise that they cannot donate blood, organs or body fluids including sperm or breast milk.
- Persons living with HIV should advise their family physician and other health care providers (e.g., dentist).
- If client is employed in health care, they are advised to check with their professional association, regardless of viral load.
- *Continuing Care and Treatment:*
 - Persons newly diagnosed with HIV infection require ongoing medical monitoring of their CD4 counts, viral load measurement and screening for other blood-borne pathogens.
 - Refer to infectious disease specialist

F. Reporting

- All confirmed cases of HIV are reported through CDOM. Where CDOM is not available, confirmed cases should be reported nominally to the MOH by completion of HIV/AIDS case report form with copy sent to Alberta Health and Wellness.

G. Partner Notification

- It is the responsibility of the STI Clinic Nurse or HIV Liaison Nurse to interview the newly diagnosed HIV positive clients for contact information.
- It is the responsibility of the HIV Partner Notification Nurse or HIV Liaison Nurse to do follow up interviews with the newly diagnosed HIV positive client to continue to gather and follow up with partner information.
- Trace back period:
 - Ideally, this should be based on the estimated date of seroconversion. If date of seroconversion is known, then all partners/contacts in the six months prior to this should be traced. If date of seroconversion or duration of infection is unknown then trace back period should be at least one year prior to the positive test or as far back as practical.
- Pregnant contacts should be given priority for follow up and offered testing in consultation with HIV Partner Notification Nurse or HIV Liaison Nurse.

XIII. Infestations

A. Introduction

- The two infestations most commonly associated with sexual contact are pubic lice (*Pediculosis pubis*) and the scabies mite (*Sarcoptes scabei*).
- Individuals diagnosed with either of these infestations should be offered a full STI screen, but there is little evidence to suggest what the risk of a second STI diagnosis is in an individual with lice or scabies.

B. Clinical Assessment

- In a client with concerns or with genital pruritis the genital area and especially the pubic hair should be examined by eye or with a magnifier for the lice organisms or for the egg cases (nits) attached to the hair.
- A client suspected of scabies should be examined for the presence of burrows in the genital area, in the interdigital regions and around the wrists and ankles. The intense pruritis of scabies is due to a hypersensitivity to the mite which may take weeks to develop.
- Crusted (“Norwegian”) scabies manifests as dramatic skin crusting and pruritis, and is seen in immunocompromised clients (e.g.-HIV/AIDS). The crusts are teeming with mites and are quite contagious.

C. Testing

- A clinical diagnosis can be made in the case of both lice and scabies.
- In cases of uncertainty, low power microscopic examination of pubic hair (for lice) or skin scrapings from suspected burrows (for scabies) can be done.

D. Diagnosis

- A diagnosis of pubic lice is based on direct observation of the adult louse or the nits attached to pubic hair.
- Scabies is diagnosed based on direct observation of the burrows or of skin scrapings showing the mite itself.

E. Treatment

1. Pubic Lice

Recommended Regimen:

Permethrin 1% cream

OR

0.33% pyrethrin-piperonyl butoxide shampoo

OR

Lindane 1% shampoo or lotion

Wash the affected area and apply pediculocide formulation (cream, lotion or shampoo) according to package instructions.

2. Scabies

Recommended Regimen:

Permethrin 5% cream

Apply to the body from the neck down, leave for 8 to 14 hours; shower and wear clean clothes

OR

Lindane 1% cream or lotion

Apply to the body from the neck down; leave for 8 hours; shower and wear clean clothes

Considerations

- Clothes, bedding: washing in hot water (50°C) or dry cleaning kills all stages of organism. Alternatively, place in plastic bags for 1 week.
- Vacuum mattresses
- In pregnancy, permethrin is the only agent that should be used.
- Lindane can cause neurotoxicity. Instructions for use must be carefully followed to minimize risk of toxicity. Contraindicated in children <2 years of age, in pregnancy, breastfeeding or in clients with extensive dermatitis.
- In clients with excoriated or damaged skin, consider dose modification to compensate for increased absorption of topical agent.

F. Client Follow-up

- Clients should self-examine or be re-examined in 7-10 days to assess need for re-treatment. Permethrin resistance is well described although still uncommon. Ensure that the treatment was applied properly.
- For those with scabies it is important to inform them that the itching is related to hypersensitivity and may persist long after the mites are dead. Scabies can be re-treated 2 weeks after initial treatment, but beyond this only if live mites are demonstrated. Pruritis may be controlled with antihistamines and mild topical corticosteroids.
- Clients should be given handouts on their infestation to reinforce partner/household management.

G. Contact Management

1. Pubic Lice

- Sexual partner(s) within the last month should be treated

2. Scabies

- All household contacts and recent sexual partner(s) in the last month should be treated.

XIV. Sexual Assault/Abuse

A. Introduction

- The most important first step in approaching the management of sexual assault/abuse is to determine the age of client.
- If in the course of a client assessment, the RN becomes aware or concerned about sexual abuse, the following guidelines may help in proceeding with the investigation. Adults must report “if there are reasonable and probable grounds to believe that the survival, security or development of the child is endangered because (e) the guardian of the child is unable or unwilling to protect the child from physical injury or sexual abuse” (*Alberta Child, Youth and Family Enhancement Act*, p. 10). Each situation must be assessed on a case-by-case basis, with a healthy degree of nursing judgment.
- Under the *Child, Youth and Family Enhancement Act*, a child “means a person under the age of 18 years” (p.8) while under the *Criminal Code of Canada*, the legal age of consent for sex is 16 years.
 - The age of consent refers to the age at which a person is able to make his/her own decisions about sexual activity. All sexual activity without consent, regardless of age, is a criminal offense. The age of consent to sexual activity is 16 years. It was raised from 14 years on May 1, 2008. Important points to remember about Age of consent include:
 - A child under the age of 18 cannot consent to any sexual activity with someone in a position of power, trust or authority.
 - 16- & 17-year-olds are still protected against sexual exploitation, i.e., sexual activity is illegal if there is a relationship of trust, authority or dependency, or exploitation. Also, 16- & 17-year-olds cannot consent to sexual activity that involves prostitution or pornography.
 - Children under 12 years cannot consent to sexual activity.
 - The Criminal Code provides “close in age” or “peer group” exceptions:
 - 14- & 15-year-olds can consent to sexual activity with a partner who is less than 5 years older and with whom there is no relationship of trust, authority, dependency, or exploitation.
 - 12- & 13-year-olds can consent with another person who is less than two years older and with whom there is no relationship of trust, authority, dependency, or exploitation.
- For clients who are less than 18 years old, follow procedure as per Management of Sexual assault/abuse in Children (<18 years).

B. Initial Management

1. Management of Sexual Assault/Abuse in Children (< 18 years)

- For clients aged 12 to less than 18 years, if there is doubt regarding the consensual nature of sexual act(s) or if the client is in need of protection, report to Child Protection for follow up.
- **Prior to reporting to Child Protection the RN should notify and discuss the situation with their Manager.**
- In addition, when any of the ‘close in age’ exceptions are not met, Child Protection is to be advised.

- **What the child needs to know:**
 - Once the RN has determined that there is a requirement to report potential abuse to the Child Abuse Hotline, the child must be advised prior to notifying Child Protection.
 - It is important to stress that the intent of making the call is to protect the child from harm, and that they will not “get in trouble” with either Child Protection or law enforcement. The child may need to be reassured that they have done nothing wrong – the perpetrator is the one at fault.
 - Child Protection worker will assess each case individually and determine what follow-up is required.
- **Documentation considerations:**
 - It is important that investigations are complete, legible and accurate, as these will become part of a permanent record. If charges are laid against a perpetrator, it is possible that the court could subpoena the file. It is also possible that the STI Clinic Medical Director (in the case of Calgary and Edmonton zones) or the provincial STI Medical Consultant may be called to testify.
- **Contact Information:**
 - **For initial reporting:**
 - Child Abuse Hotline: 1-800-387-KIDS (5437)
 - **Additional Services:**
 - Child Protective Services (Child & Family Services Authorities):

Northeast Alberta (Fort McMurray):

- 780-743-7416

Edmonton & Area:

Northern Alberta Child Intervention Services (NACIS)

- During the day 780-422-2001 & 780-427-3390 after hours.
- Ask to speak to an outreach crisis worker (updated November 01 2017)

Calgary & Area:

- 403-297-6100

2. Management of Sexual Assault/Abuse in Adults

- Offer the client the option of being seen by the Sexual Assault Response Team if they meet the following criteria:
 - Sexual assault occurred within the past 7 days.
 - Client consents to SART/CSART services and refer as per local protocol (these protocols differ between the three Provincial STI clinics).
- Clients who are undecided about reporting to the police have the option of having forensic evidence collected by the Sexual Assault Response Team and then stored for one year.

- If client declines, this should be documented in the chart (CSART/SART services were appropriate but declined). Follow procedure as outlined below in *Further Management of Sexual Assault/Abuse*. Review with client that STI specimens cannot be used for forensic purposes.
- Any clients presenting beyond >72 hours post assault will be offered routine STI screening and follow up as necessary. Routine STI prophylaxis will not be provided to clients presenting beyond >72 hours post assault.
- Consult Medical Director on any client presenting beyond 72 hours that may require STI prophylaxis based on your assessment (e.g. client unlikely to follow up for results).
- **Note:** HBIG may be provided up to 14 days post assault.

C. Further Management of Sexual Assault/Abuse

1. History

- Obtain and document full history relevant to STI testing. It is not the role of the clinic nurse to obtain or record a statement describing the alleged assault.

2. Physical Examination

- Perform genital examination and document any findings. Inquire about other injuries and examine same. Documentation should include any obvious signs of trauma elsewhere on the body, e.g. bruises or other injuries. Extreme care must be taken to document objectively and accurately. Refer to appropriate health care provider as necessary.

3. Laboratory Tests

- perform gonorrhea and chlamydia tests from all penetrated orifices (including pharyngeal for both infections)
 - Culture and NAAT for gonorrhea
 - NAAT for chlamydia
- microscopy (gram stain, wet mount)
- syphilis serology (EIA)
- hepatitis B surface antigen (HBsAg) and antibody (Anti-HBsAg)
 - Note: if recipient is known to be immune to HBV (anti-HBs \geq 10 IU/L) or HBsAg positive, source and recipient testing is unnecessary
- HIV serology
- hepatitis C antibody

NOTE: If testing is performed < 48 hrs after assault, cultures may be unreliable and NAAT testing for Gonorrhea and Chlamydia should be performed.

4. Treatment/Post-Exposure Prophylaxis (Non-Pregnant Adults)

Gonorrhea

Recommended Regimen:

Cefixime 800 mg PO as a single dose **OR** ceftriaxone 250 mg IM as a single dose
PLUS
 Azithromycin 1 gm PO as a single dose

Chlamydia

Recommended Regimen:

Azithromycin 1 gm PO as a single dose

Trichomonas

Recommended Regimen:

Metronidazole 2 gm PO as a single dose (if wetmount is positive for trichomonas)

Hepatitis B

Recommended Regimen:

Hepatitis B Immunoglobulin (HBIG) within 14 days + Hepatitis vaccine, if Hepatitis B Surface Antibody negative or < 10 u/L (see Alberta Health, Alberta Post-Exposure Management and Prophylaxis (PEP) Guidelines – HBV Post-exposure Prophylaxis)

<https://www.albertahealthservices.ca/assets/info/hp/cdc/if-hp-cdc-hep-b-immne-globn-07-233.pdf>

<https://open.alberta.ca/dataset/f1e62045-b801-49a8-8549-ddc6b283ae67/resource/bf50d5ab-fe5d-41d0-91ae-c43c2167fea0/download/pep-guidelines-2019-03.pdf>

HIV

Recommended Regimen:

If assailant know to be HIV positive or high risk for HIV – consult designated physician immediately. For details refer to the Alberta PEP Guidelines

<https://open.alberta.ca/dataset/f1e62045-b801-49a8-8549-ddc6b283ae67/resource/bf50d5ab-fe5d-41d0-91ae-c43c2167fea0/download/pep-guidelines-2019-03.pdf>

Considerations:

- If there is suspected pharyngeal infection or oral penetration or if the source has elevated risk factors for antibiotic resistance (e.g., MSM) ceftriaxone is the treatment of choice.

5. Other Management

- Emergency Contraceptive Pill (as per clinic protocol)
- provide client with options for follow up with local support organizations, groups, or counselling services/psychologist as necessary

D. Follow-up

- 4 weeks:
 - STS-EIA and HIV serology
- 3 months:
 - STS-EIA, HIV serology, Hep C antibody. +/- Hep B testing (HBsAg) if no HBIG/HBV vaccine.
- Reassess need for support/counselling.

E. Contact Tracing

- If positive test(s) for STI, arrange follow up of contacts as per Partner Notification Guidelines, see Section XVI.

XV. Caring For the Transgender, Non-Binary and Two-Spirit Client

A. Introduction

Transgender is an umbrella term intended to include all people whose gender identity does not align with the cultural expectation of sex assigned at birth. This includes transgender, non-binary and Two-Spirit people. However, it is important to note that not all non-binary or Two-Spirit people identify as transgender.

Research suggests transgender (trans) clients may be over-represented in rates of STIs, particularly HIV. Those who identify as a sexual or gender minority may be less likely to access necessary healthcare and health screening due to fear of discrimination, whether real or perceived, fear of providers who have inadequate training and/or personal discomfort. STI Clinic RNs can play a key role in providing trauma-informed, safe, affirming and competent care of sexual and gender diverse clients.

Creating a safer environment for care includes ensuring privacy and confidentiality, honoring client-centered care including allowing support people in exams, ensuring informed consent and having awareness of community support agencies.

1. Inclusive Language and Communication

Inclusive language and communication are paramount when caring for the trans client. The RNs language should be fair and accurate so that all people feel safe and respected. When confirming identity the RN should ensure the name on the chart is the name the client goes by. For example, “I see the name on your chart is Benjamin, is that the name you would like me to call you?” The RN can also share their pronouns: “My name is Jill, I am your nurse today, my pronouns are she/her.” The RN should never assume someone’s pronouns by the way they look or by the sound of their voice. When in doubt ask, “Can I ask you a question about your pronouns” and if they say yes, then ask, “What pronouns do you use?”. Most commonly used pronouns are She/Her, He/Him and They/Their. The RN should remember to ask questions in a space that maintains privacy and ask if they can communicate that information to others. If a client shares details such as a different name than what is on the chart, ask “Is it ok if I put that on your chart for other staff to know next time you come in?”.

The RN can ask what terms the client uses to describe their anatomy and use the same. The RN should avoid using gendered terms when referring to anatomy including the terms “male” and “female” and unless otherwise directed use “internal or external reproductive organs or genitals” to refer to body parts.

Using Inclusive Language Body Parts and Terms

Instead of...	Try...
Penis	External Genitals/ genitals/ erectile tissue
Clitoris	Erectile tissue
Vulva	External genital area
Introitus/opening of the vagina	Opening of the genitals
Vagina	Internal genitals/ genitals
Female reproductive organs	Internal reproductive organs
Male reproductive organs	External reproductive organs
Biological male/female	Assigned male/female at birth
Pelvic exam	Internal exam
Period/Menses	Monthly bleeding
Looks normal	Looks healthy

When an RN makes a mistake in the use of their language, they should correct themselves, apologize, and carry on. Suggestions for words and phrases to use are; “I’m sorry, I just called you by the wrong name” or “I apologize, I just used the wrong pronoun”.

Best practice when caring for the trans client is to be thoughtful and patient. The RN can let the client know why and how a question is relevant to their care when taking a history and should not ask questions they do not need to know. The RN should be honest when they do not know or understand something but should avoid asking the patient to educate them on sexual and gender diversity. While some clients may appreciate being a source of information for a medical provider, this is not the client’s role and can make some feel like the focus of the visit has shifted.

AHS Diversity and Inclusion Best Practice Guidelines for Inclusive Language and Pronouns, available on Insite:

Best Practice Guide: Inclusive Language & Communications

Best Practice Guide: People’s Pronouns

Change the Conversation: My Name

2. Definitions

Sex	A category a person is assigned at birth based on the genitals they are born with
Gender	Social and cultural expectations of roles and presentation
Transgender (trans)	A term used to describe individuals whose gender identity does not align with the sex assigned to them at birth
Intersex	The reproductive, sexual or genetic biology of a person is unclear, not exclusively male or female or otherwise does not fit within traditional definitions of male or female
Two-Spirit	A cultural term used by some Indigenous people to mean a person who has both a male and female spirit which may include concepts of spirituality, sexual orientation and gender identity

Non-binary	A term used to describe a person whose gender identity is neither exclusively male or female
Cisgender	Gender identity matches cultural expectations of assigned sex
Gender expression	How a person publicly expresses their gender
Gender identity	A person's internal sense of their gender; not visible to others
Gender dysphoria	The distress that may occur in people whose gender identity differs from their sex assigned at birth
Neopenis	A surgically constructed penis
Neovagina	A surgically constructed vagina

B. Clinical Assessment

STI Clinic RNs should assess and test for STIs based on the client's current anatomy, sexual behaviours and presenting concern. A person's transition can be social, medical and/or surgical and may include some, all or none of these. Therefore, it is important to avoid making assumptions about their anatomy or the anatomy of their partner(s), sexual orientation or practices. Ongoing assessment for changes to a client's anatomy and behaviours that may affect STI risk is important for testing and must be documented. However, the RN should avoid asking the details of a client's transition if it does not pertain to the care they are providing.

The client will always be the most knowledgeable person about their anatomy, surgery(s), current and past care. The RN should consider taking an organ inventory to inform decisions regarding STI screening as well as guide counseling regarding pregnancy, birth control and cancer screening. Phrases that may help the RN get started are:

- "What parts of your anatomy do you use for sex?"
- "What words do you use for your genitals?"
- "It is helpful for me to know about some of your anatomy so I can provide you with the best care possible; would it be ok to talk about that?"
- "Have you had any gender-affirming surgeries on body parts you use for sex?"

C. Gender-affirming Surgeries

There is a wide range of gender-affirming surgeries available to trans individuals. These include both genital and non-genital procedures. Decisions to include surgical intervention in one's transition is highly individualized, and the RN should not assume a trans client has taken such steps.

Creating a vagina

A surgically constructed vagina is referred to as a neovagina.

Vaginoplasty - The most common surgery is penile inversion. In brief this surgery involves the skin of the penis being used to create a vaginal canal and a small portion of the glans creates a new clitoris. The urethra is also shortened and repositioned. Labia are often created with scrotal or abdominal skin.

Vulvoplasty – similar to the vaginoplasty, this surgery uses the same techniques for creating the external parts of the vagina but excludes the creation of the vaginal canal.

For many trans women, a vaginoplasty or vulvoplasty is preceded by or includes an orchiectomy (removal of the testicles).

Creating a penis

A surgically constructed penis is referred to as a neopenis.

Metoidioplasty – involves the separation of the clitoris from the ligaments and labia minora so the clitoris hangs fully forward and may involve skin grafts. Hormones will enlarge the neopenis, erectile abilities and sensation are preserved, and penetration can be achieved. This procedure may also include urethroplasty, so urination through the clitoris is possible.

Phalloplasty – creation of a penis from a graft usually from the client's forearm or thigh. Lengthening of the urethra is often done to allow urination while standing.

Both of these surgeries may include the creation of a scrotum from the labia with prosthetic testes and/or the removal of the vaginal canal lining and closure of the vagina.

Additionally, trans men and non-binary people may have their ovaries and uterus removed.

D. Examination and Testing

Trans clients with the anatomy they were born with can be offered the same testing as cisgender clients with several considerations.

One must be cautious and take their time as physical examinations can be both physically and emotionally painful for trans clients. It is imperative that STI Clinic RNs be aware of the distress that a client may experience related to gender dysphoria. Special considerations should be given to providing options and obtaining consent for testing. Trans clients may prefer to self-collect vaginal and rectal swabs. When examination is warranted, the RN may need to allow extra time for discussion or mental preparation for the client, as well as for removal of affirming gear.

It may be helpful to let the client take the lead in their plan of care. Phrases that may be helpful for the RN are:

- “We have some options for testing today that include.... Do you have a preference?”
- “Is there a method of testing that you know you are most comfortable with?”
- “What do you think may make this a better experience for you?”
- “Do you have a support person you would like to have with you during the exam?”

1. Men and non-binary persons with vaginas

Men and non-binary people with vaginas often avoid pelvic exams and are less likely to be adequately screened for cervical cancer. Some clients will feel significant trauma from an internal exam and some may be excluded from screening reminders that are based on gender markers rather than body parts. If a vaginal exam is needed the RN should use the smallest speculum possible to complete the exam. Testosterone therapy can cause vaginal atrophy and dryness; lubrication may be required for speculum insertion. Testosterone use may cause cervical changes and mimic dysplasia, clients requiring Cervical Cancer Screening should be warned of inadequate or abnormal results. Masculinizing hormones may affect fertility however are not adequate birth control. Pregnancy testing and birth control counselling should be considered where appropriate.

Alberta Cervical Cancer Screening Guidelines include a page for screening LGBTQ2S individuals https://screeningforlife.ca/cervical/get-screened/#lgbtq2s_and_cervical_cancer_screening

2. Women and non-binary persons with penises

Women and non-binary people with penises may report scrotal pain or erectile dysfunction that may be related to feminizing hormone therapy. Feminizing hormones may affect sperm production but should not be considered an adequate means of preventing pregnancy. Tissue damage, laceration, infection, UTI, itch, rash and testicular pain are all risks associated with tucking (putting scrotum and penis between buttocks and into inguinal canal to provide a smooth appearance). Physical exams to rule out cause of pain is warranted when client is agreeable. Client’s experiencing pain suspected to be related to tucking may require counseling regarding safer practices including shorter periods of tucking or looser tucking.

3. Lab Requisitions

In January 2019, the Government of Alberta made ‘X’ an available gender marker for Alberta Birth Certificates. Albeit a significant milestone for trans health, many trans clients will continue to have barriers to changing gender markers on their IDs and their markers will often not match their gender identity. RNs filling out lab requisitions should take the following care to avoid unnecessary cancelled tests:

- Ensure client's gender identity is used on all specimen labels and requisitions
- When sending specimens with labels or requisitions that could be interpreted as errors by the lab (ie. cervical sample, male gender), make clear note on requisition that patient is a trans male.
- If sending a Cervical Cancer Screening Test for a trans male, ensure to include testosterone use, status of monthly bleeding, use of hormonal contraception and use of lubricant (if applicable) on cytopathology requisition.

4. Neovaginas

Persons with a surgically created vagina will not have a uterus, fallopian tubes or ovaries, therefore no bimanual will be warranted.

Some surgical techniques could include the use of urethral tissue during the vaginoplasty which could result in gonorrhea or chlamydia infections of the mucosal tissue in the neovagina. The risk of infection of inverted penile skin is not known although lesions are possible. The neovagina will have a blind cuff (similar to after a complete hysterectomy), no fornices, and may have a more posterior orientation.

Screening guidelines:

- Serological testing – required
- Urine for GC/CT – required
- Swabs for GC/CT NAAT and GC culture – recommended
- Visual examination of the neovagina is necessary and best performed with an anoscope, if vaginal symptoms warrant and client agreeable
 - Observe for HPV, HSV and syphilitic chancre or chancroid
 - Folliculitis can occur within a neovagina if all hair follicles were not successfully removed pre-operatively
 - May see granulation tissue from the surgical site
- Vaginal swab for trichomonas and yeast, if symptoms warrant
 - Standard pH of the neovagina is more alkaline than the vagina, generally 5-7
 - If a wet mount and/or gram stain is microscopically examined there will be few lactobacilli
- Increased discharge and odor can be caused by colonization of normal skin bacteria
 - Advise keeping the area clean and continue to douche as directed by physician after surgery (often a weak betadine or iodine/tap water solution)

Prostate tissue remains in transgender women, therefore prostatitis must be considered in cases of urinary symptoms and the client referred to a primary healthcare provider as appropriate.

5. Neopenises

Many anatomical variations exist for men who have had gender affirming surgery. Some neopenises may be esthetic and some may be functional. Some men retain a patent vagina after penile surgery and the use of testosterone is associated with vaginal atrophy. Therefore, it

is important to ask about previous surgery and what anatomy remains as well as the location of the urethra.

Men with a uterus and fallopian tubes who have vaginal intercourse may need vaginal specimens and pelvic inflammatory disease must be considered if symptomatic.

Screening guidelines:

- Serological testing - required
- Urine specimen – required
- Vagina swabs for GC and CT if applicable and warranted
- Visual examination for HPV, HSV, syphilitic chancre or chancroid
- Urethral swab – warranted if symptomatic and/or significant exposure history (epithelial cells can harbour pathogens)
- Consider pregnancy testing, if warranted

E. Treatment and Screening Guidelines

Recommendations for treatment of confirmed STIs are the same as those for cisgender clients. When reported sexual partners are MSM, treatment guidelines for MSM can be followed, regardless of the client's anatomy. As most neo-vaginas meet the criteria for bacterial vaginosis due to an inability of the tissue to support lactobacilli, BV treatment of the neo-vagina should only be considered if symptoms persist. Treatment can be provided as per these guidelines.

Similarly, screening intervals should be based on all the same risk factors considered for cisgender clients (ie. Multiple or anonymous partners, chem sex, STW, condomless sex, etc). Research suggests increased prevalence of HIV among trans individuals making 3 month screening intervals and initiation of HIV PrEP of special consideration for clients reporting high risk behaviours.

F. Counselling and Referrals

Trans clients experience significant health disparities related to persistent discrimination and stigmatization in our society and in our health care system. Disproportionate amounts of domestic violence, assault, substance abuse, stress, depression/anxiety, suicide attempts and death by suicide are reported in the literature. STI Clinic RNs have an opportunity to advocate for and assist trans clients in navigating the barriers to seeking health care and work to reduce these health disparities, recognizing that trans clients may have significant distrust of health care providers. Phrases that may help the RN explore counselling and referral needs are:

- “Are there any other aspects of your health that you are concerned about?”
- “Do you have a health care provider that you trust?”
- “Do you feel you have adequate social supports in your life?”
- “Do you have a place where you always feel safe?”

Efforts should be made to build a trusting relationship with the trans client. When clients are receptive, STI Clinic RNs should offer counselling and/or referrals taking special care not to overwhelm the client or imply they have the answers. Examples of referrals could include but are not limited to:

- HIV PrEP Providers
- LGBTQ2S-friendly health care providers and/or supportive agencies
- Mental health care or counselling services
- Post-sexual assault care
- Addictions care
- Food, housing, income supports

XVI. Partner Notification

Partner notification is a secondary prevention process through which sexual partners and other contacts exposed to an STI are identified, located, assessed, counselled, screened, and treated.

It is expected that the clinic nurse will discuss partner notification with each client when an STI diagnosis is made or when treating an individual for a presumptive STI. This will identify those at risk, reduce disease transmission and ultimately prevent disease sequelae.

The language/terminology used in interviews describing types of sexual contact should be tailored to the client, i.e. partners, hook ups, johns, clients, are all ways to describe sexual contacts.

A. Types of Partner Notifications

1. Health provider referral or active partner notification:

- The nurse obtains identifying information from the client regarding their sexual contacts.
- The responsibility to complete partner follow-up is assumed by the STI Clinic.
- This is the preferred method for partner notification for notifiable STI.

2. Combined or conditional referral:

- Identifying information is obtained as above but the client agrees to inform partner(s) within a specified time frame. If client does not inform partner(s), the responsibility to inform is assumed by the STI Clinic.

Above approaches apply to:

- chlamydia;
- gonorrhea;
- syphilis - primary, secondary and early latent;
- HIV - when requested by client or as per regional protocol
- pelvic inflammatory disease;
- orchitis/epididymitis;
- chancroid, LGV; and
- nongonococcal urethritis
- mucopurulent cervicitis

3. Client referral or passive contact tracing:

- The client is counselled around informing sexual partners of their risk and encouraging them to seek assessment and treatment as needed.

Above approach applies to:

- Genital herpes
- Human papilloma virus
- Late latent syphilis (see page)
- Trichomonas

B. Methods of Partner Notification

1. Health Provider/active partner notification and conditional referral:

- Inform client of rationale for partner notification,
- Discuss confidentiality of information including that the index information will never be disclosed to named partners,
- Obtain all identifying information from client for sexual partners/contacts,
- Use standardized interview periods as outlined for each infection, using a calendar during the interview, to illustrate the period of infectibility, may help an individual to recall partners,
- Extend time frames to identify untreated partner(s) as necessary,
- Record and submit contacts information as per agency policy (i.e., CDOM DI or Notification of STI form),
- All partner(s) identified within the time frame should be located, tested and treated prophylactically,
- All contacts who reside outside the clinic service area will be referred to AHS STI Centralized Services.

2. Client referral or passive partner notification

- Counsel client to take responsibility for notifying all appropriate sexual partner(s) to undergo testing and treatment,
- Use standardized periods for identifying partner(s) as outlined for each infection

Considerations

- The index case should be given the opportunity to first notify steady partner(s) before the STI Clinic initiates follow up. If the client is unable or unwilling to notify his/her partner, the STI Clinic should assume this responsibility. Verification that the partner was notified must occur for cases of infectious syphilis, gonorrhea, chlamydia and HIV.
- The Public Health Act authorizes detention of recalcitrant clients for medical examination, treatment and/or counselling. The Chief Medical Officer of Health or the medial officer of health in a zone can issue a certificate to detain an individual who is infected with a notifiable STI. The certificate is authority for a peace officer to apprehend the individual for examination, treatment and/or counselling.

C. Standardized Interview Periods For Obtaining Contact Information

Specific STI	Index Case	Time Frame
<i>Neisseria gonorrhoea</i>	All	All contacts in last 2 months. It may be necessary to extend this time period until a sexual contact is identified.
<i>Chlamydia trachomatis</i>	All	All contacts in last 2 months. It may be necessary to extend this time period until a sexual contact is identified.
Non-gonococcal Urethritis (NGU) and Orchitis/Epididymitis	External Reproductive Organs (Male)	All contacts in last 2 months. It may be necessary to extend this time period until a sexual contact is identified.
Mucopurulent Cervicitis (MPC) and Pelvic inflammatory Disease	Internal Reproductive Organs (Female)	All contacts in last 2 months. It may be necessary to extend this time period until a sexual contact is identified.
Syphilis*	Primary	All sexual and perinatal contacts in the last year of early syphilis must be located, examined, tested and treated. If index case has a negative test result < 1 year ago, contacts should be traced to 3 months prior to the date of negative result.
	Secondary	
	Early Latent	
	Late Latent	Marital or other long-term partners and children should be tested.
	Congenital	mother should be tested
	Reactive mother in Pregnancy	Spouse / newborn tested based on case-by-case review.
HIV	Date of sero conversion known	6 months prior to positive laboratory test to present
	Date of sero conversion not known	At least one year or as far back as practical but not further than January 1978.

NOTE: It may be appropriate to test children born to mothers with syphilis of any duration. Consultation with clinic physician should be sought on a case-by-case basis.

XVII. Client Education/Counselling

“Interventions at the individual level help people to change by providing knowledge or by attempting to alter beliefs, attitudes, perceived norms, motivation, skills or biological states related to high-risk activities” (Program Operations Guidelines for STD Prevention, Community and Individual Behavior Change Interventions, Centers for Disease Control and Prevention Atlanta).

A. The Information, Motivation, and Behavioural (IMB) Skills Model

(Excerpted from the Canadian Guidelines for Sexual Health Education, PHAC 2008).

Within sexual health education programs, evidence supports the use of the Information, Motivation and Behavioural Skills (IMB) Model. Information, motivation and behavioural skills are basic concepts that are easily understood and this model is well supported by research. Evidence of the IMB model's effectiveness in the area of sexual risk reduction has been demonstrated in a number of diverse populations including young adult men, low-income women and minority youth.

The IMB model proposes that information regarding sexual health, motivation to take action on this information, and behavioural skills for taking action are all involved in the process of adopting healthy behaviours. Using this model, sexual health education / counselling is based on three essential elements:

- *Information* – helps clients to become better informed and to understand information that is relevant to their sexual health needs and is easily translated into action.
- *Motivation* – motivates clients to use their knowledge to avoid risky behaviours and maintain consistent health practices.
- *Behavioural Skills* – helps clients to acquire the relevant behavioural skills that will reduce negative behaviour and enhance sexual health.

The IMB model can help individuals to reduce risk behaviours, prevent negative sexual health outcomes and guide individuals in enhancing sexual health.

Information:

- Information included in sexual health education / counselling should be:
- Directly linked to the desired behaviour while avoiding negative outcomes.
- Easy to translate into the desired behaviour
- Practical, adaptable, culturally competent and socially inclusive
- Age, gender and developmentally appropriate.

Motivation:

- Where sexual health behaviours are concerned, motivation takes 3 forms:
- *Emotional motivation* – A person’s emotional responses to expressing their sexuality
- *Personal motivation* – A person’s attitudes and beliefs related to a specific sexual behaviour strongly predict whether or not they engage in the behaviour.
- *Social motivation* – A person’s beliefs or perceptions regarding social norms may also influence behaviour

Behavioural Skills:

Behavioural skills consist of the following:

- *The practical skills for performing the behaviour.*
- *The personal belief in one’s ability to do so.*

B. Common Counselling Topics

Following the completion of the risk assessment, numerous topics may be identified where sexual health or STI related education / counselling is indicated. Below are a number of commonly encountered subjects that offer the opportunity for client education / counselling. Both one-to-one discussion and print resources are used to facilitate and reinforce learning and behaviour change. The topics for discussion are individualized for each client, based on history and risk assessment.

- Basic anatomy
- Infection transmission
- Treatment and follow-up – provide written handout specific to the infection and the medication provided
- Sexual abstinence / condom use following treatment
- Partner notification
- STI prevention
- Testicular self-examination
- Regular Cervical Cancer Screening test

In addition to, or in combination with the above information, clients may be motivated toward healthy sexual practices by discussions focused on harm reduction and avoidance of risk behaviours. Motivational topics may include, but are not limited to:

- Examination of risk behaviours
- Safer sex / birth control practices
- Condom use
- Serial monogamy
- Impaired sex – drugs / alcohol use
- Transactional sex – exchanging sex for money, food, drugs, accommodations
- Needle exchange

Behavioural skills may need to be taught or reinforced for a positive change to occur. A common behavioural skill taught to clients to facilitate healthy sexual behaviour is correct condom use.

C. STI Prevention/Safer Sex Counselling

(Adapted from the Canadian Guidelines on Sexually Transmitted Infections, 2008 PHAC).

It is important to acknowledge that STI prevention and safer sex practices take advance planning:

- Buying and having condoms at hand (including proper storage)
- Seeking out and having STI/HIV screening done
- Negotiating condom use for all sexual activities (oral, genital, anal)
- Limiting drug or alcohol use, which may reduce inhibitions and affect decision-making and negotiating skills.

Although providing condoms at no charge to clients is a recommended first step, providing counselling as a prevention strategy should include the following:

- STI modes of transmission
- Risks associated with various sexual activities (oral, genital, anal)
- Abstinence, mutual monogamy, barrier-method options (penis condom, vaginal condom, dental dams)
- Correct condom use based on the individual's personal situation i.e., for receptive anal intercourse, always use a condom (extra strength when available) and extra lubrication.
- Latex and polyurethane condoms are effective in preventing the majority of STI's, but they do not provide complete protection against HPV or HSV infection

Natural skin condoms may be permeable to HBV and HIV.

XVIII. Accepted Abbreviations for Charting

History	
act	Active
BC	birth control
BCP	birth control pill
C/O	complains of
Ca	Cancer
colp	Colposcopy
CSTW	Commercial sex trade worker
EGW	external genital warts
ETOH	Alcohol
G	Gravidity
GI	gastrointestinal
GU	genitourinary
gyn	Gynecology
hetero	heterosexual
hx	History
IDU	injection drug user
LMP	last menstrual period
LSC	last sexual contact
MSM	men who have sex with men
NKA	no known allergies
NKDA	no known drug allergies
P	Parity
pass	Passive
preg	Pregnancy
S/C	sexual contact
SA	spontaneous abortion
sm	Small
SP	steady partner
STI	sexually transmitted infection
surg	Surgical
TA	therapeutic abortion
UTI	urinary tract infection
vag	vagina/vaginal
Physical Exam	
Cx	cervix
O/E	on examination
R	rectum
SLR	Sore Lesion Rash
T	throat
wt	weight
X/Ur	urethra

Diagnosis	
AIDS	acquired immunodeficiency syndrome
BFP	biological false positive
BV	bacterial vaginosis
CT	Chlamydia trachomatis
DX	diagnosis
EGW	external genital warts
GC/NG	Neisseria gonorrhoeae
HAV	hepatitis A virus
HBV	hepatitis B virus
HCV	hepatitis C virus
HIV	human immunodeficiency virus
HPV	human papilloma virus
HSV	human simplex virus
LGV	Lymphogranuloma venereum
MPC	mucopurulent cervicitis
NG/GC	Neisseria gonorrhoeae
NGU	non-gonococcal urethritis
NYD	not yet diagnosed
PID	pelvic inflammatory disease
R/O	rule out
STS	syphilis (serologic test)
TRICH	trichomonas vaginalis
Treatment	
BID	twice a day
IM	intramuscular
meds	medications
PDPT	Patient delivered partner therapy
PO	by mouth (per os)
QID	four times a day
RX/TX	treatment or prescription
Rx'd/Tx'd	treated
STAT	immediately
TID	three times a day

Laboratory	
Ab	antibody
Ag	antigen
DFA	direct fluorescent antibody
EIA	enzyme immunoassay
FTA-Abs	fluorescent treponemal antibody absorbed test
KOH	potassium hydroxide
MHA-TP	Microhaemagglutination test for treponemal antibody
MIC	Mean inhibitory concentration
NAT/NAAT	nucleic acid amplification test
neg	negative
NR	non-reactive
PCR	polymerase chain reaction
pH	hydrogen ion concentration
PMN	polymorphonuclear leukocytes
pos	positive
R	reactive (in context)
RPR	rapid plasma reagin
STS	serologic test - syphilis
TPPA	Treponema Pallidum Passive Particle Agglutination
TV	Trichomoniasis vaginalis
U/S	ultrasound
Uu	Ureaplasma urealyticum
VDRL	Venereal Disease Research Laboratory
Instructions	
Appt	Appointment
FU	follow up
NA	not applicable
PC/TC	phone call/telephone call
TOC	test of cure
VM	voicemail

XIX. Charting Guidelines

To ensure the significant and pertinent information of the admission history, physical and laboratory examination, treatments and client education are recorded on all client charts, concurrently with the examination and management of each client.

A. Suggested Admission Information

- On the initial visit to the clinic (and on each repeat visit), once in the exam room, it is the responsibility of the clinic nurse to confirm the client's name and date of birth verbally. In the Edmonton and Ft. McMurray clinics, the nurse will also ask the client to read the chart label to confirm correct information and spelling. When an error is noted by the client, the nurse will ensure that clerical staff corrects the client labels prior to the completion of the client visit.
- The nurse will also request, and record current address and contact information, i.e., phone number(s)/e-mail/cell phone.
- It is the nurse's responsibility to confirm and/or update client demographics and contact information **on each repeat visit**.

B. History

1. Chief complaint

- Describe in a few words the main reason the client is attending the clinic.
- List all symptoms, associated symptoms, previous similar symptoms and/or investigations/treatments as described by the client.
- If previous treatment has been received, document what was prescribed, by whom and the treatment outcome.

2. Functional Inquiry

- Describe the client's response to direct questions related to the genitourinary system
- In each CDOM dropdown record one of the following responses: yes, no, unknown, declined to answer, missing, excluded from assessment or not examined.
- All positive responses should be described in the space allotted. Descriptions should include duration, number/amount/type, location, frequency and time of occurrence.
- Descriptions of sores/lesions/ rashes must also include size, distribution, itchy/non-itchy, painful/not painful, new/healing/ healed.

3. Sexual history

- Document the information as listed under sexual history
- Age sexually active is only asked on the first visit. On subsequent visits this information may be brought forward from a previous entry.
- Notation will be made on each visit regarding consent to any sexual activity Note: for non-consensual sex see Section XIV for Sexual Assault/Abuse for management.
- Record usual sexual practices (oral, vaginal, anal), multiple sexual partners, condom/dental dam use, as well as any practices that may expose them to blood borne pathogens or bacteria (toys, rimming, etc.).
- Information about sex partners should include HIV status, exchange of drugs, money, housing or food for sex, IDU, needle sharing, bisexual partners with a penis, country of origin

- Location of casual unknown sexual contact, e.g., hotel, bathhouse, etc.
- How was the sexual contact arranged for casual unknown partners, e.g. met in bar, internet, telephone, etc.

4. Past history

- Review of past illnesses/conditions.
- Previous STI: record type, when, treatment, (name/description, dosage, duration), and by whom.
- Blood donations/transfusions: record when and where.
- Drug allergy: describe type of reaction and consider setting alert on CDOM Client Record describing same.
- Concomitant medication: includes both present and recent medications (within past month). Record dose and frequency for both present and recent medications. Reason client is on medication should be recorded.
- Medical care/born outside Canada: record where, when, and type of treatment (only if an invasive procedure otherwise record non-invasive).
- Substance use: record type of substance, route of use, for how long, last used
- Needle and drug paraphernalia sharing: record length of time involved and when last shared.
- Previous HIV test: record, date, result and by whom.
- Previous immunization for HBV.
- Previous immunization for HAV.
- Previous immunization for HPV.

C. On Examination

- This section reflects and describes what the nurse has observed during the physical examination.
- When a client refuses examination or when examination is inappropriate, record reason examination not completed.
- Where appropriate, record NAD (no abnormality detected), not examined, or when a positive finding is found record positive (pos).
- For all positive findings, elaborate by describing location, type, colour, size, number/amount, consistency, and stage of healing.
- For abnormalities on the external genitalia and/or cervix indicate location of each finding on diagram.
- Indicate when symptoms noted in the history are not confirmed by examination

D. Impression

- Based on history, physical examination and laboratory findings record STI/provisional diagnosis.

E. Plan/Education

- Outline educational topics discussed.
- Record specific date and follow up plan for client return visit when necessary.

F. Laboratory Examinations

- Record all laboratory specimens taken.
- Record laboratory identifiers as per individual clinic routine.
- Record type/site/test for each specimen.
- Record results for all onsite laboratory and microscopic examinations.
- **Note:** It is the individual clinician's responsibility to ensure that all identifiers related to specimen collection correlate with the client record, laboratory requisition, and specimen.

G. Treatment

- Record in the CDOM DI:
 - Name, dosage, frequency, route, and time for all STAT medications and vaccines.
 - Name, dosage, frequency, route, and duration for all medications given to client to take away.
 - Name, dosage, frequency, route, and duration for all prescription medications given to client.
 - In addition, record lot numbers for all vaccines and injectable medications.

H. Sign-Off

- Both notes and medications must be dated and signed showing designation of author.
- The clinic nurse must review and co-sign client record when mentoring students or other health professionals

I. Follow Up Visits

- Client record must be reviewed prior to each follow up visit.
- All records must be checked to ensure all laboratory reports/letters/information/referrals are in place and corresponds to the individual client medical record.
- Document any follow up assessment, observations, and/or interventions that have been done.
- Each visit must be dated and signed appropriately.

Appendix 1: Nursing Guidelines

1. Liquid Nitrogen Cryotherapy for the Treatment of External Genital Warts and Molluscum Contagiosum

Purpose:

- Treatment of visible external genital warts (EGW) may be provider administered client applied.
 - For client applied treatments please refer to “Guideline: Vyloma (Imiquimod 3.75%) Cream for the Treatment of External Genital Warts”.
- Treatment of molluscum contagiosum (MC) is provider administered.
- The primary goal of treatment for both conditions is to eliminate the visible lesions.
- The standard of care for treatment in the STI Clinic is liquid nitrogen (liquid N₂) cryotherapy.³
- The goal is for STI Clinic RNs to have a consistent approach to treatment as clients will frequently be seen and treated by different RNs.

Background Information:

- Clinically visible EGW are present in approximately 1% of sexually active adults.² Spontaneous regression of EGW occurs in approximately 10-30% of clients.³
- Pregnant and diabetic clients may be treated at the STI Clinic by a clinic RN.
- Topical EMLA (local anesthetic) may be applied up to 1 hour prior to treatment (Please refer to STI Clinic: Procedure: OTC Medication).¹
- EMLA may be used in pregnancy/lactation only if clearly indicated, i.e. cannot tolerate cryotherapy without EMLA.¹

Procedure:

- Diagnosis of HPV and MC as per “The Blue Book (July 7, 2014) Standards for the Management and Evaluation of STI Clinic Clients” (The Blue Book)
- The STI Clinic RN will:
 - Explain treatment options as outlined in the Blue Book.
 - Advise clients consenting to cryotherapy the importance of consistent follow up every 1-2 weeks.
 - Discuss the use of Emla as outlined in the Blue Book.

³ The Blue Book (July 7, 2014) Standards for the Management and Evaluation of STI Clinic Clients

² Money,D. and Provencher, D., “Epidemiology and Natural history of HPV Infection” JOGC August 2007

³ Roy, M. and Bryson, P. “Treatment of External Genital Warts and Pre-invasive Neoplasia of the Lower Tract” JOGC August 2007

- Before each treatment, examine the entire genital area for lesions.
- Discuss with the client if they have experienced improvement of symptoms since last visit (if applicable).
- Compare assessment of lesions present with the diagramed lesions at last visit (if applicable).
- Lesions previously treated and still in the healing stage will not be retreated.
- Treat each visualized EGW and/or MC lesion separately with liquid N₂ using a cryogun.
- Hold the canister in an upright position with the cryogun nozzle-tip approximately 1-2 cm⁴ away from the lesion before the trigger is pressed to activate flow of Liquid N₂.
 - For EGW and MC each freeze cycle will create up to a 1mm white frost halo around the lesion.
 - Allow a pause between each cycle to allow for thawing; however, it is unnecessary to wait until complete thawing has occurred.
 - For EGW the RN may complete 3-5 freeze/thaw cycles.
(Edmonton clinic: 3 freeze/thaw cycles only)
 - For MC the number of freeze/thaw cycles may vary depending on size of the lesion. Larger lesions may receive 3 cycles and smaller lesions 2 cycles.
- Advise client regarding after care:
 - Discontinue genital shaving and waxing throughout course of treatment.
 - Keep treated area clean and dry.
 - Changes in pigmentation are common and may be permanent e.g., lighter or darker colour of skin.
 - Blister and scab formation may occur.
 - Provide counseling as per the Blue Book.
 - Advise client to follow up in 7-10 days for reassessment/possible retreatment.

Documentation:

- Assessment, clinical findings, treatment and recommended follow up on the client's STI Clinic record including a diagram of lesion(s).

2. Vyloma (Imiquimod) 3.75% Cream for the Treatment of External Genital Warts

Reason for Policy:

The standard of care for the treatment of external genital warts in the clinic remains nitrogen cryotherapy. This protocol allows the client the option of self-treatment with Vyloma cream as a medically equivalent therapy.

Protocol:

Eligible patients: Non-immunocompromised patients with external genital warts involving penis, vulva or perianal area. Diabetic and HIV positive patients with CD4 counts >200 may also be considered for treatment.

Note: When prescribing Vyloma to HIV positive patients, patient should be warned that Vyloma may not be effective for them. Patient should also be advised of importance of an annual rectal exam/anal PAP with physician managing their HIV care.

Refer to clinic physician: Immunocompromised, pregnant or nursing patients and patients with intra-anal warts, intravaginal or cervical warts or warts on the urethral meatus.

PROCEDURE:

Collect data regarding warts in the standard fashion. Offer patient treatment for warts with liquid nitrogen cryotherapy (standard wart therapy) or with Vyloma cream (alternative wart therapy). It is also acceptable to treat initially with liquid nitrogen, and then complete treatment with Vyloma cream.

If patient chooses Vyloma alone:

- Provide with prescription for Vyloma 3.75% cream (8-week supply). Patients must be advised of the cost of this medication (approximately \$700 for 8 wk supply). Patients should have option to fill half the prescription at a time if they choose.
- Advise to wash hands and affected area with mild soap and water prior to application
- Advise to apply cream once daily at bedtime.
- Advise to wash off residual cream with mild soap and water the next morning (approximately 8 hrs later).
- Apply very small amounts of cream the first day; if there is no adverse reaction, can increase the amount of cream applied at next application. Cream can be applied with the end of a Q-tip or toothpick to ensure precise application

- Treat for up to 8 weeks. If wart resolves before this, treat for one week after the visible wart is completely gone, then stop and advise client watch area carefully for recurrence.
- If warts not responding to treatment with Vyloma after 8 weeks, refer to clinic physician.

If patient is to be treated with liquid nitrogen at the outset, then complete treatment with Vyloma:

- Advise to wait 2-3 days after nitrogen treatment before starting Vyloma, then advise as above.

Potential side effects:

- Local skin reactions (erythema, erosion, edema, blistering) – wash Vyloma off and wait until reaction subsides before considering reapplying. If reaction severe, refer to clinic physician.
- Remote skin reactions. Patients can rarely (1%) develop redness, erosion and edema at skin sites remote from where applied. Stop Vyloma and refer to clinic physician.
- Rarely, systemic symptoms have been reported: fever, fatigue, flu-like symptoms. Stop Vyloma and refer to clinic physician.

Client Teaching:

- Review with client the signs and symptoms of HPV to ensure correct application.
- Advise client to avoid artificial sunlight during treatment.
- Advise client that Vyloma cream may weaken condoms and diaphragms, an alternate form of contraception should be used.
- Advise clients Vyloma is to be used for external genital warts only.

REFERENCES

Medicis Canada. Your guide to Vyloma Cream treatment. 10/31/13.

3. Emergency Contraceptive Pill (ECP)

Purpose:

To provide Registered Nurses working in the Sexually Transmitted Infection (STI) Clinics with the direction for the provision and administration of Levonorgestrel (LNG) Emergency Contraceptive Pills (ECP)

Indication:

ECPs are indicated to prevent pregnancy after unprotected or inadequately protected sex

Background Information:⁴

1. "Sexual contact" is inclusive of receptive vaginal and/or anal sex or penis to vulva contact with or without ejaculation
2. Conception is only possible during a limited period in the menstrual cycle
3. LNG acts by interfering with ovulation and also influences the contractibility of the fallopian tubes
4. LNG does not affect endometrial receptivity of implantation
5. LNG Emergency Contraception (EC) is most effective when taken within 24 hours of unprotected or inadequately protected sexual contact but remains effective up to 5 days (120 hours) after
6. The effectiveness decreases as the time between intercourse and ingestion increases and should be initiated as soon as possible
7. LNG EC may be less effective with a body mass index > 25 kgs/m². However, hormonal EC may still retain some effectiveness regardless of a woman's body weight or body mass index.
8. LNG EC is associated with higher failure rates if there is subsequent unprotected intercourse
9. LNG EC is not an effective method of **ongoing** contraception. Clients will be referred back to their own healthcare provider or the Sexual and Reproductive Clinic for further discussion and evaluation for a reliable method of contraception

Indications for use:⁵

- Failure to use any method of contraception
- Condom slippage, leakage or breakage
- Missed hormonal contraception (pill, patch, vaginal ring or medroxyprogesterone acetate injection)
- Non-consensual sexual contact

Assessment⁶

1. The Registered Nurse (RN) will:

⁴ Society of Obstetricians and Gynecologist of Canada (SOGC), Canadian Contraception Consensus (part 1 of 4) No. 329, October 2015

⁵ Society of Obstetricians and Gynecologist of Canada (SOGC), Canadian Contraception Consensus (part 1 of 4) No. 329, October 2015

⁶ Alberta Health Services, Practice Support Document, Protocol, "Levonorgestrel Emergency Contraceptive Pill", 2016

- a. Assess client for indications for LNG EC
 - i. Unprotected or inadequately protected sexual contact in the previous 5 days (120 hours)
 - ii. Marked concern for risk of pregnancy as expressed by the client
 - b. Assess for pre-existing pregnancy with a urine pregnancy point of care test
 - c. Refer client to their own healthcare provider or to a Sexual and Reproductive Healthcare Clinic if:
 - i. Pregnancy test is positive or indeterminate
 - ii. The client requests another method of EC such as a copper intrauterine device (IUD)
 - iii. History of allergy to LNG or other ECP components
 - iv. Client requests LNG EC in advance of need
 - d. Consults with the STI Clinic Medical Director if the client reports:
 - i. concomitant use of medication which may reduce the efficacy of LNG EC such as; Rifampin, griseofulvin, certain anticonvulsants, certain antiretroviral medications and St John's Wort
 - ii. Undiagnosed abnormal vaginal bleeding
2. Contraindications for use:⁷⁸
 - a. Pre-existing pregnancy
 - i. The medication will not work but will also not cause harm to the fetus or disrupt an established pregnancy
 - b. Hypersensitivity to LNG or any ingredient in the formulation
 3. The following are **not** contraindications to ECP
 - a. Young age
 - b. Obesity
 - c. Personal or family history of venous thromboembolism
 - d. Prior or current breast cancer
 - e. Prior ectopic pregnancy
 - f. Breast feeding
 - g. Migraine headaches
 - h. Cardiovascular diseases
 - i. Hypertension
 - j. Diabetes
 - k. Prior use of ECP in the same menstrual cycle

Treatment:

1. Levonorgestrel 150 mcgs (1.5 mgs) PO as a single dose
2. Counsel client on LNG EC including potential risks, benefits and factors which may decrease efficacy such as lapse of time since last unprotected intercourse and elevated Body Mass Index (BMI)

⁷ Society of Obstetricians and Gynecologists of Canada (SOGC), Canadian Contraception Consensus (part 1 of 4) No. 329, October 2015

⁸ International Federation of Gynecology & Obstetrics, International Consortium for Emergency Contraception, "Emergency Contraceptive Pills, Medical and Service Delivery Guidelines", 2012

3. Offer AHS Emergency Contraception health information client handout
<http://teachers.teachingsexualhealth.ca/wp-content/uploads/605133-Emergency-Contraception-Final-2016.pdf>
4. Refer client to their own healthcare provider or to the Sexual and Reproductive health Clinic to discuss birth control options
5. Advise client be re-treated if vomiting occurs within 2 hours of treatment
6. Advise follow up pregnancy test if no menses within 3 weeks
7. Offer STI screening as per The Blue Book, Standards for the Management and Evaluation of STI Clinic Clients guidelines

Documentation:

- STI Clinic Visit record
 - Assessment
 - Clinical findings inclusive of pregnancy test result
 - Medication provided inclusive of dose, route and time given
 - Recommended follow up

4. Over the Counter Medication

Background: The Blue Book provides indication(s) for Over the Counter (OTC) medications for the treatment of; yeast, scabies and pubic lice, nausea prevention related to Azithromycin treatment, and pain related to HPV and Molluscum treatment.

Purpose: To provide direction for the STI Clinic RN when providing or recommending these OTC medications.

Procedure: The RN will:

- Complete a client history as outlined in the Blue Book, included but not limited to:
 - assessment for known medication allergies
 - information regarding concomitant medication(s)
 - other factors which may affect the recommendation of OTC ie; pregnancy
- Complete a physical assessment of the client as outlined in the Blue Book
- Make diagnosis of yeast, scabies, pubic lice, HPV and/or molluscum as outlined in the Blue Book
- Review with the client:
 - Diagnosis
 - Rationale for medication
 - Expected benefit(s) of medication
 - Possible interactions
 - Contraindications for the medication
 - Proper use of the medication
 - Potential side effects
 - Recommended follow up

Documentation: Diagnosis and medication provided or recommended will be documented on the client's chart including:

- Diagnosis
- Medication, dosage, frequency and duration
- Recommended follow up

5. Patient Delivered Partner Therapy (PDPT)

PDPT is a proven partner treatment option where partners of clients who are positive for chlamydia or gonorrhea are provided medication without medical or nursing evaluation. This additional treatment option is an alternative way to reach partners who are unwilling or unable to attend health services and impact the rising rates of chlamydia and gonorrhea.

Eligibility:

- Heterosexual partners 18 years or older and a sexual contact to gonorrhea, chlamydia, NGU, MPC unlikely to access timely testing and treatment
- Index is able to provide name or identifying information of contact
- No more than 2 sexual partners in past 60 days

Exclusions:

- MSM because of a high risk for coexisting infections (e.g., HIV) and the need for injectable antibiotic therapy
- Partners who are minors. A reasonable effort must be made to ensure partner is not a minor.
- Partners who are pregnant
- Partners living out of province/country
- Partners to an index case who has LGV or antibiotic resistant GC.

Note: In the event of GC resistance or drug shortages necessitating the use of injectable ceftriaxone for the treatment of gonorrhea, PDPT will not be used.

Procedure:

- Assess eligibility using above inclusion and exclusion criteria
- Nurse will counsel client about informing partners of:
 1. Importance of sexual partners being tested prior to taking treatment
 2. Importance of abstaining from all sexual activity for 7 days following treatment.
 3. Medication(s) information including benefits, side effects, what to do in the event of an allergic reaction.
- Nurse will provide a PDPT kit which should include:
 1. AHS medication instruction sheets i.e., Azithromycin, cefixime
 2. AHS infection information sheets for STI's potentially exposed to
 3. Combination therapy pack i.e., Azithromycin 1g po and Cefixime 800mg po.
 4. Lab requisition for STI testing for sexual partners. Note: a blank requisition can be provided if client is unable or unwilling to provide identifying partner information.
 - Testing includes HIV, syphilis, Hep C, gonorrhea and chlamydia
 - Ordering Provider: Petra Smyczek

5. AHS PDPT information sheet which includes: (i) where to ask questions, access testing and seek additional treatment if necessary, and (ii) instruction on safe medication disposal if they choose not to take it.

Note: Partner notification nurses (PNNs) will attempt to contact all sexual partners provided with PDPT in one week to confirm testing and treatment.

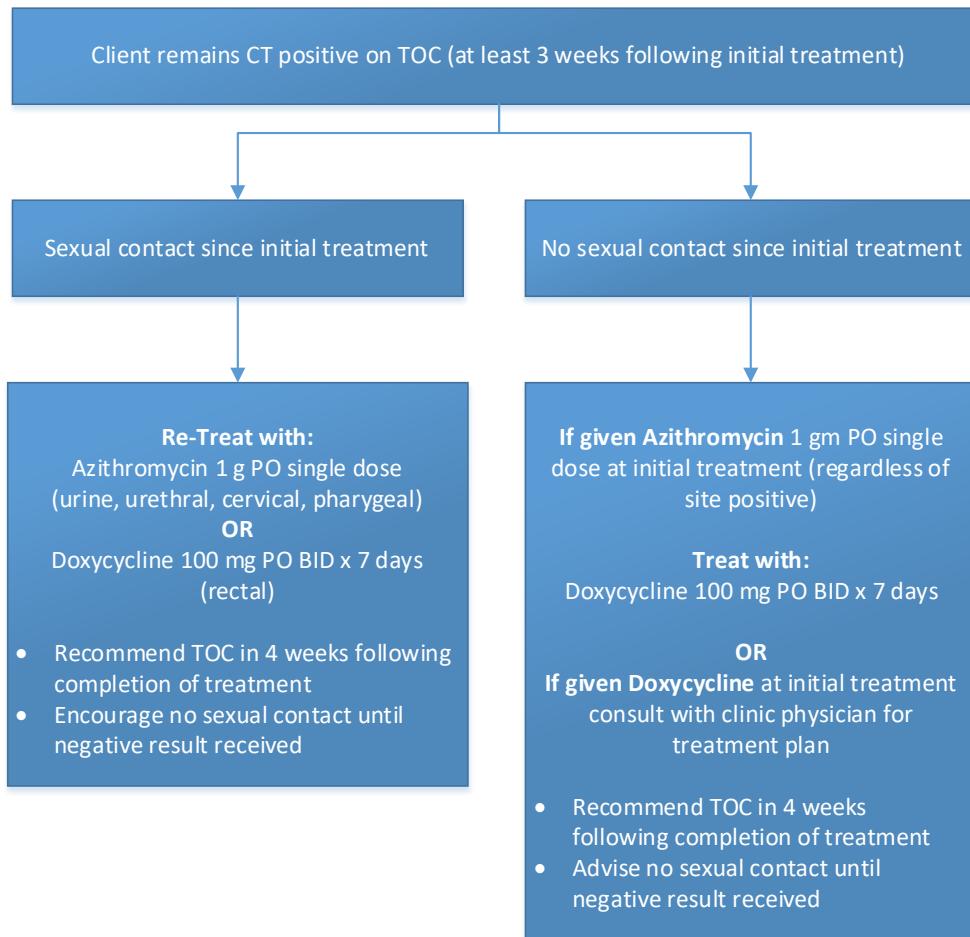
Documentation:

- The RN documents all medications given for the treatment of partners and all information provided in the client's CDOM record.
- Recording of medications should be prefaced with "PDPT" to distinguish medications provided for treatment of partners and those given to the client.
- Contact details are entered in CDOM as per guidelines.
- Include a note in the additional comments section of each Contact section stating index was provided with PDPT meds for this contact, prior to launching the Contact Investigation.
- See CDOM Quick reference: Patient Delivered Partner Therapy for detailed documentation instruction

Appendix 2: Treatment Algorithms

1. Chlamydia Treatment Failure/Relapse

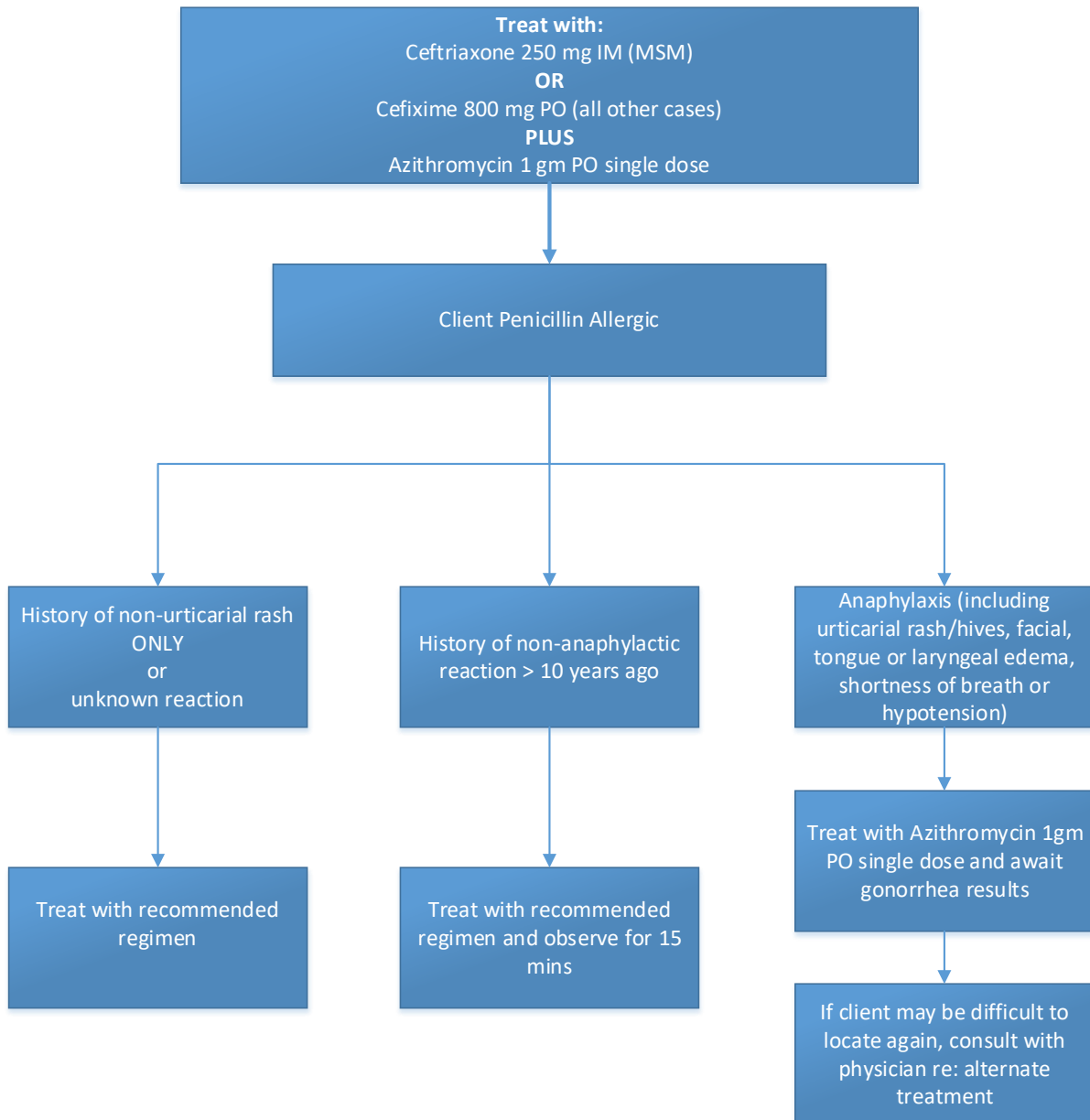
Chlamydia Treatment Failure/Relapse

**Note:**

- Treatment failure is defined as absence of reported sexual contact during the post-treatment period.
- Treat as re-exposure (i.e. re-treat with same medication (preferred treatment) if client reports any sexual contact between TOC and treatment (regardless of use of protection or not).

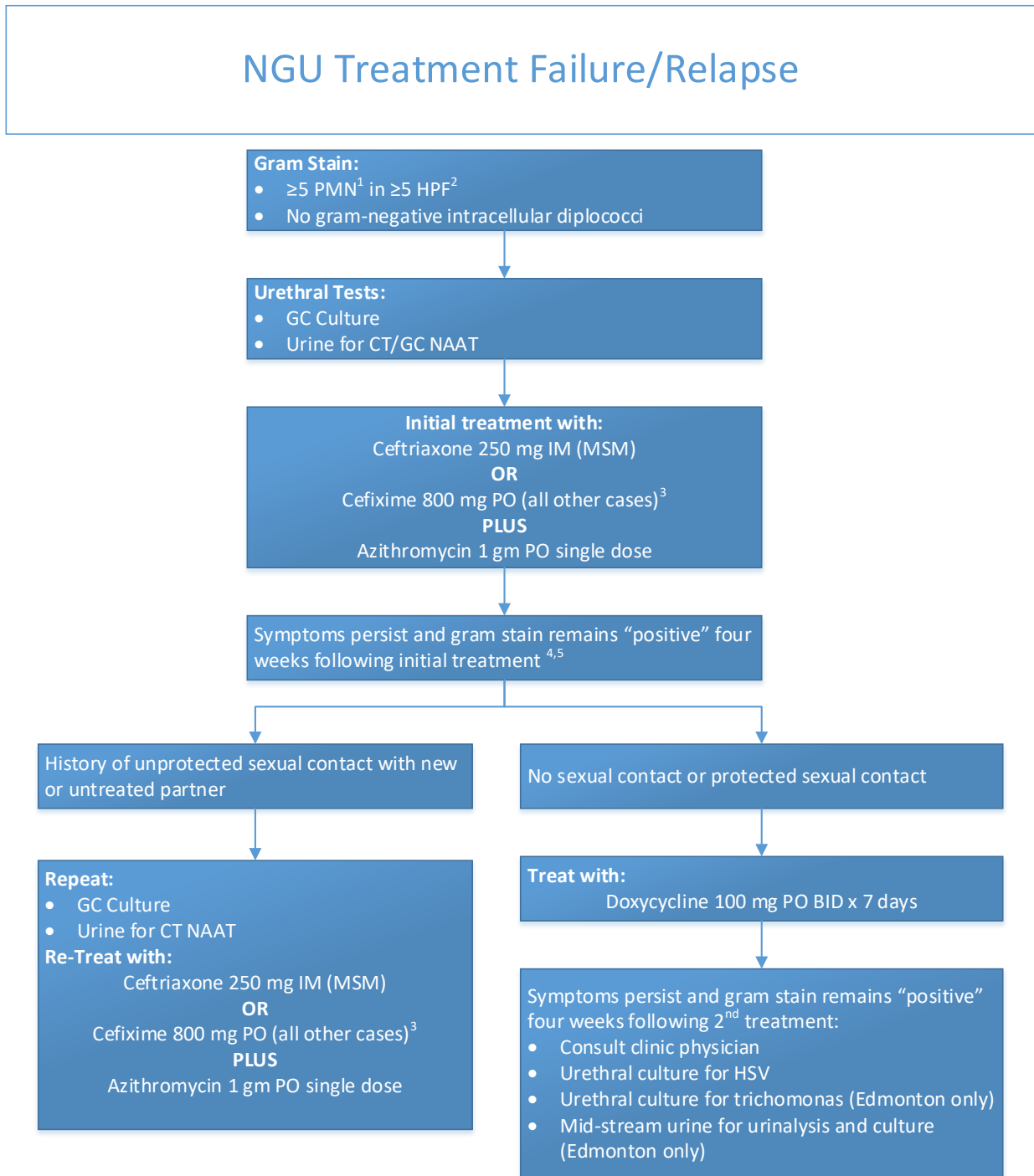
2. NGU/MPC or Contact to CT/NGU/MPC

NGU/MPC or Contact to CT/NGU/MPC



NOTE: Contact physician with any questions regarding drug allergies or medication choice

3. NGU Treatment Failure/Relapse

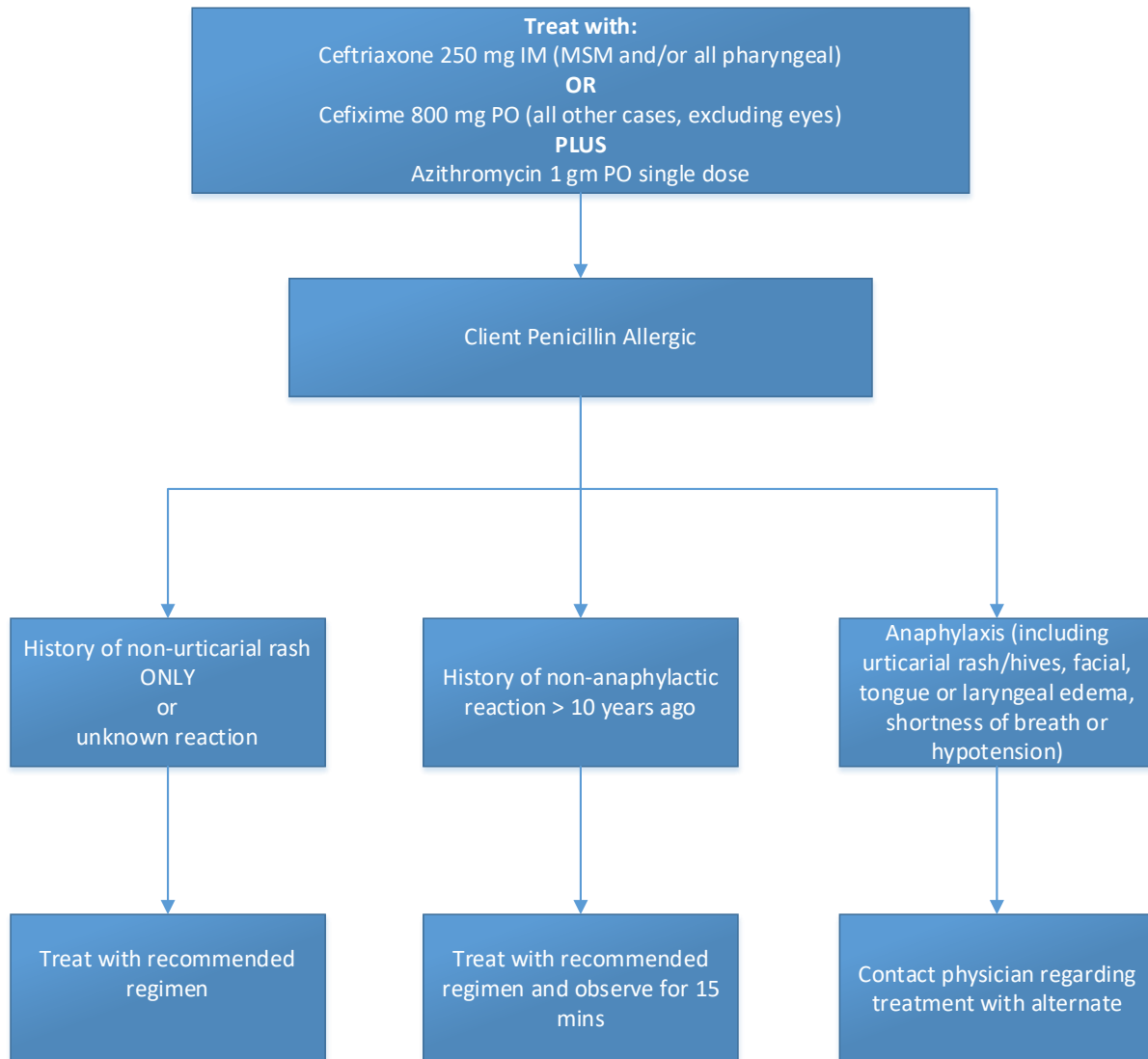


Note:

1. Polymorphonuclear leukocyte
2. High power field
3. When gonorrhoea cannot be excluded, treat for both CT and GC
4. All clients should be instructed not to void for at least 2 hours prior to return visits
5. For men with relapsing NGU, if partner has trichomonas discontinue treatment for NGU and treat as per guidelines. If still symptomatic, refer to clinic physician.

4. Gonorrhea Positive or Contact to Gonorrhea

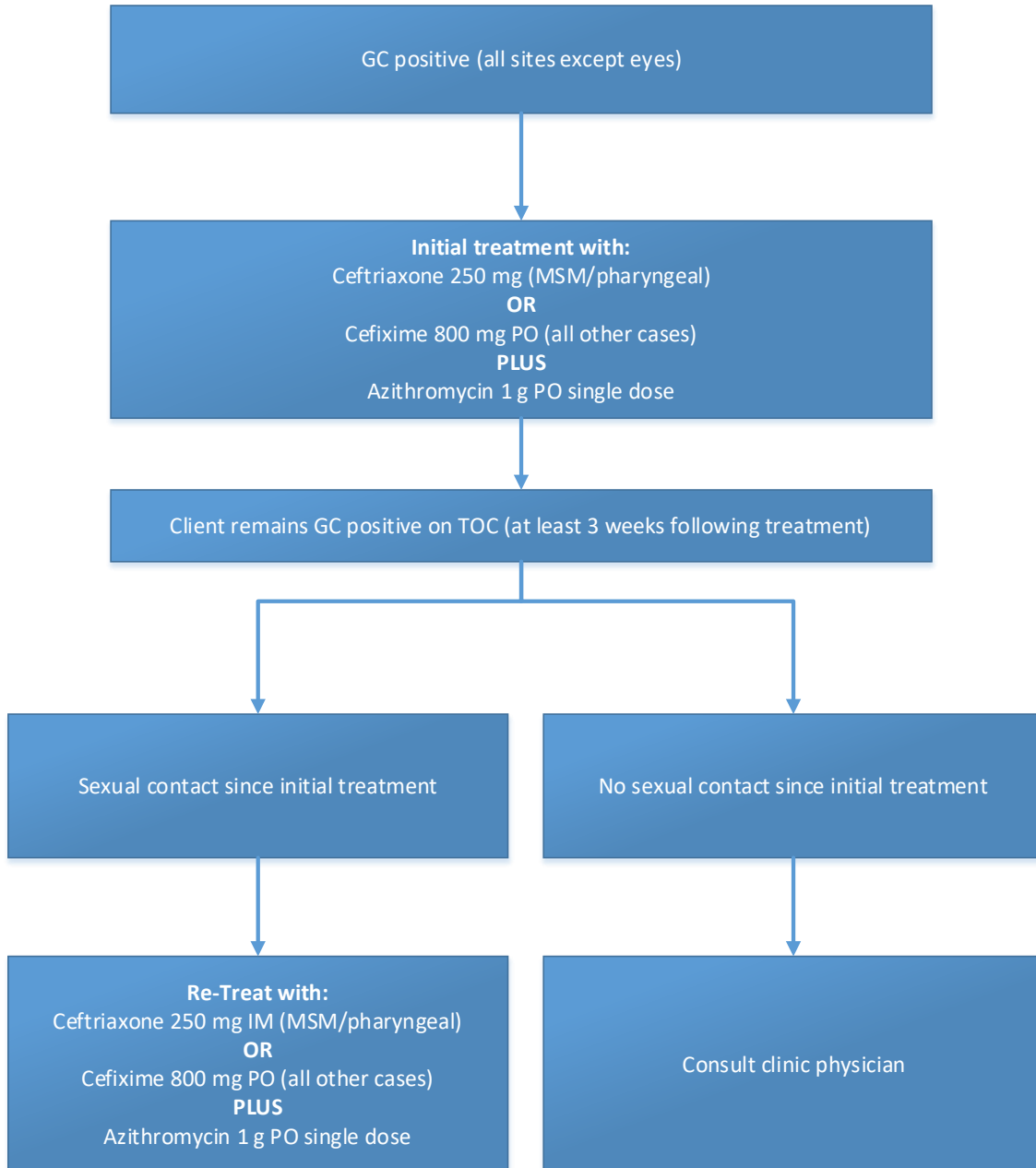
Gonorrhea Positive or Contact to Gonorrhea (Regardless of Chlamydia Result)



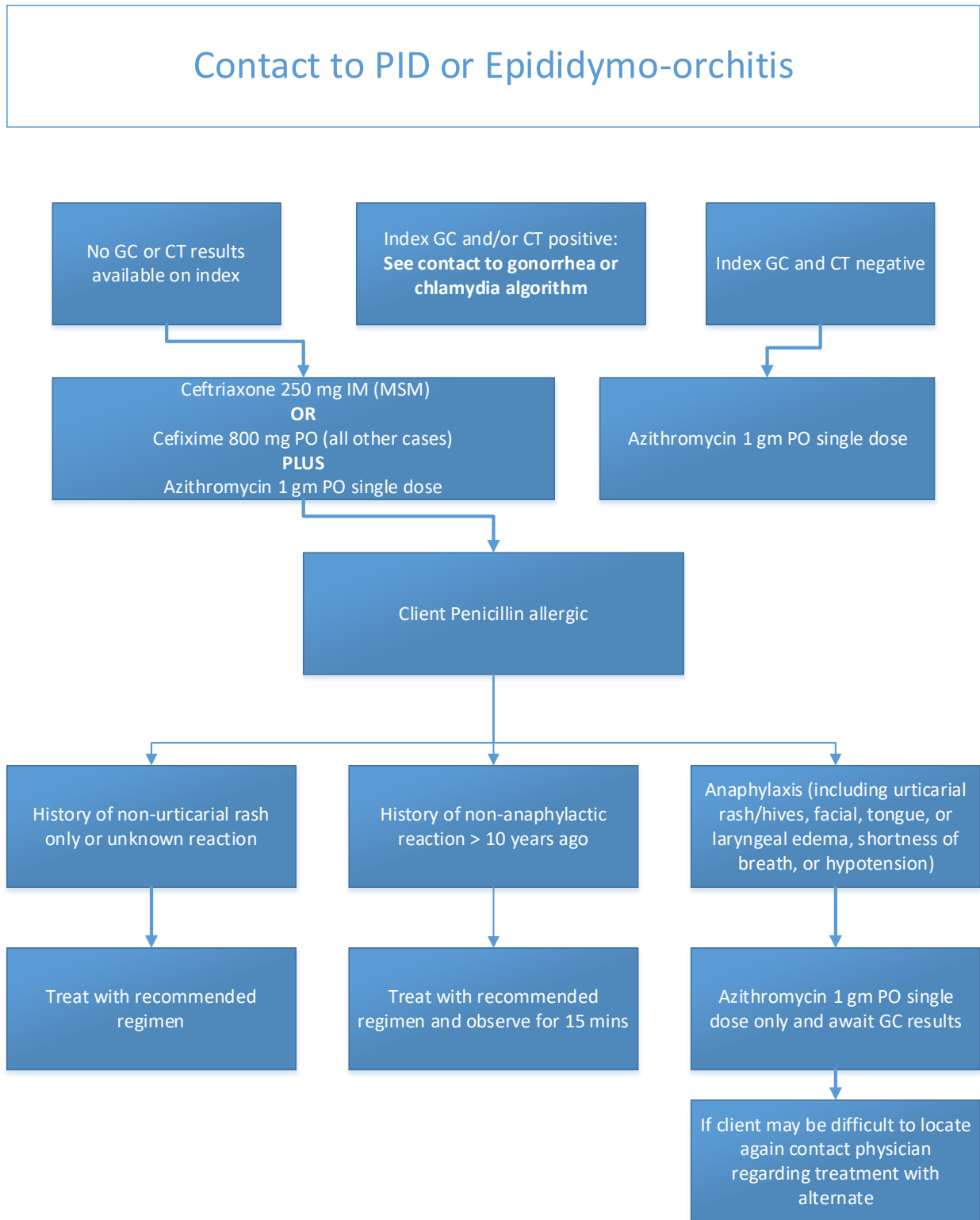
NOTE: Consult physician for all positive eyes, or with any questions regarding drug allergies or medication choice

5. Gonorrhea Treatment Failure/Relapse

GC Treatment Failure/Relapse



6. Contact to PID or Epididymo-orchitis



NOTE: Contact physician with any questions regarding drug allergies or medication choice.