This assessment is effective November 2015. For more information or to provide feedback on this or any other decision support tool, email certifiedpractice@crnbc.ca

STI ASSESSMENT

Within the scope of nursing practice with clients experiencing, or at risk for STI, comprehensive assessment includes: a sexual health history, a risk assessment, a physical assessment, and specific diagnostic tests.

The nursing clinical decision to perform a sexual health history may be client-initiated (e.g., client reports symptoms or concerns) or nurse-initiated. CRNBC STI DSTs are not indicated for use in clients who are less than 12 years old. If a pelvic examination is required as part of the physical assessment, RN(C)s[1] must follow PHSA's Pelvic Exam DST (indicated for clients aged 14 and up).The following criteria apply when providing STI certified practice care (*See Appendix A: CRNBC STI DSTs Age Requirements*):

- Consultation and/or referral with a physician or nurse practitioner (NP) is required for all symptomatic clients aged 12-13 years
- Low barrier screening techniques (e.g. urine specimen and/or vaginal swabs) are recommended for asymptomatic clients aged 12-13 years
- Low barrier screening techniques (e.g. urine specimen and/or vaginal swabs) are recommended for clients aged 12-13 years who are asymptomatic and also a contact to STI
- Consultation and/or referral with a physician or NP is required for all pregnant clients.
- Clients who are breastfeeding may also require consultation and referral to a physician or NP depending on the recommended treatment. Refer to the Consultation/Referral section of the applicable DST.
- The Lower Urinary Tract DST (Female) is for use in clients aged 14 years and up. For clients aged 12-13 years who present with symptoms of lower UTI, consultation/referral to a physician or NP is required

[1] Note: RN(C) is an authorized title recommended by CRNBC that refers to CRNBC-certified RNs, and is used throughout this Decision Support Tool (DST).

STI Risk Factors

- anonymous sexual partnering (i.e., internet, bath house, rave party)
- sex workers and their clients
- *survival sex*: exchanging sex for money, drugs, shelter or food
- street involvement, homelessness
- victims of sexual assault/abuse
- sex with blood exchange
- sharing sex toys
- previous STI
- sexual contact with someone with a known STI
- sexually active youth under 25 years of age
- a new sexual partner or more than 2 sexual partners in the past year
- serial monogamous individuals who have one partner at present but who have had a series of one partner relationships over time
- no contraception or sole use of non-barrier methods of contraception.(i.e., oral contraceptives, Depo-Provera, intrauterine device)
- sharing drug use paraphernalia: pipes, injecting equipment
- other substance use such as alcohol or chemicals, especially if associated with having sex
- unprotected oral, genital or anal sex

Sexual Health History

A sexual health history is the first component of a comprehensive assessment. The history focuses on information relevant to sexual and reproductive health and includes:

1. Demographic information and methods of contacting client
2. Symptoms
    - onset
    - duration
    - current situation (improving or deteriorating)
    - location
    - symptom radiation to adjacent areas

- quality
- timing (frequency, duration)
- severity
- precipitating and aggravating factors
- relieving factors
- associated symptoms
- effects on daily activities
- previous diagnosis of similar episodes and/or infections (STI, HBV, HCV, HIV)
- previous treatments
- effectiveness of previous treatments

3. Immunization history (hepatitis A, B and HPV)
4. Reproductive health history for women
    - contraception
    - date of last menstrual period
    - regularity of menses
    - pregnancy (current or previous)
    - surgical history (hysterectomy, other invasive intrauterine procedures)
    - Pap screening and results
5. History of sexual assault
6. Recent antibiotic use (date of last dose, reason for use)
7. Other medications – prescription and over the counter
8. Allergies (e.g., latex, antibiotics and other medications)
9. Sexual contact
    - condom use
    - sites exposed
    - sexual partners (number, sex of partners, most recent sexual contact)
10. Previous STI testing and results
11. Previous HIV testing and results
12. Drug and alcohol use/practices

13. Named as a contact to STI

Cardinal Signs and Symptoms (Specific to STI)

- abnormal urethral, vaginal or rectal discharge
- pain with intercourse
- urinary abnormality – dysuria, frequency, urgency, abnormal colour/odour,
- vaginal bleeding with intercourse or between menstrual cycle
- ano-genital irritation and inflammation
- ano-genital lesions

Risk Assessment

Risk assessment provides information regarding the sites potentially exposed to infection. This assessment provides information used to support clinical judgments regarding:

- required diagnostic tests
- sites for specimen collection
- partner notification and referral services
- client education

Risk Assessment draws from essential knowledge of immune system function regarding modes of transmission for STI and the relationships between modes of transmission and the *types* of sexual contact (e.g., anal, oral, vaginal) and condom use. For example, some STI (e.g., HSV) are passed via skin-to-skin contact; some are transferred when there is exchange of body fluid (e.g., chlamydia); and others are transmitted when introduced directly into the bloodstream (e.g., HCV, HIV).
In combination with the sexual health history and clinical findings, the information gathered from the risk assessment informs the diagnostic process and assists in determining potential areas of client education and harm reduction measures.

In addition to sexual health history and physical assessment findings, the assessment includes:

- date of last sexual contact
- sex of contacts (male, female, and/or transgender)
- number of partners in the past 2 months (specific to infections with a 60 day reportable requirement)
- number of partners in the past 6 months (specific to infections with a 180 day reportable requirement)

- feasibility of contacting sexual partners should they require notification, testing and treatment
- types of sexual contact (oral, vaginal, anal intercourse)
- frequency of condom use and for which types of sexual contact (anal, vaginal, oral)
- how sexual contacts are met (e.g., internet, commercial sex establishments, mobile phone applications)
- sexual and drug use practices of sexual contacts (if known)
- STI and HIV status of sexual contacts (if known)
- possible occupational exposure to blood borne infections (e.g., needle stick) or accidental exposures (i.e., exposure to blood during a fight)

PHYSICAL ASSESSMENT

The physical assessment is a head-to-toe approach in which the nurse uses inspection and palpation to assess potential sites of infection and inflammation. Physical assessment for all clients includes:

- inspection of the mouth and throat (e.g., for lesions, redness, swelling)
- inspection of the trunk, forearms and palms (e.g., for signs of rash, lesions)
- inspection of external genital, pubic, and peri-anal areas (e.g., for bleeding, discharge, irritation, lesions, rash)
- palpation of the inguinal nodes (for swelling/tenderness)
- inspection of urinary meatus for
    - redness and/or swelling
    - discharge (e.g., mucoid, mucopurulent, purulent)
- urine specimen (if appropriate) – ideally the client should not have voided in 1-2 hours/collect first 10-20 ml
    - colour
    - odour
    - consistency
    - time since last void

Additional Physical Assessment: Male Anatomy

- palpation of testicles for tenderness or abnormal lumps

- if the client is symptomatic or urethral discharge is noted at the meatus, ask the client to *milk* the urethra in attempt to expel discharge from meatus for inspection and testing

Additional Physical Assessment: Female Anatomy

- palpate Bartholin's glands (for tenderness and swelling)
- assess vaginal discharge
    - increased amount
    - consistency, colour, and odour (e.g., mucoid, purulent, thick, frothy, malodorous)
    - pH
- assess for any abdominal pain
- inspect vulva, cervix and vaginal wall (e.g., redness, swelling, lesions, and nature of discharge)
- bimanual exam (cervical motion tenderness, adnexal tenderness, and/or fundal tenderness or to identify abnormalities on palpation)

Diagnostic Screening Tests

In addition to routine diagnostic screening (which usually includes gonorrhea, chlamydia, syphilis and HIV for men and women, along with vaginal pH and KOH whiff testing for women), other diagnostic screening is completed based on the client's health history, risk assessment and presentation of symptoms such as abnormal vaginal/urethral symptoms (e.g., discharge, irritation), genital ulcers, lesions, and the sites of the body potentially exposed to infection.

The chart on the next page outlines the routine tests to include in a standard STI screen.

Tests to Offer in a Standard STI Screen

Males	Females
• Gonorrhea - urine NAAT • Chlamydia - urine NAAT • Syphilis serology • HIV serology • Gonorrhea culture & sensitivities - pharyngeal and rectal if indicated for men who have sex with men (MSM)	• Gonorrhea – cervical or vaginal NAAT • Chlamydia - cervical or vaginal NAAT • Syphilis serology • HIV serology • KOH whiff test (may not be available in all clinical settings) • Vaginal pH

Additional Testing is Available Based on Symptoms, Request, or Risk Assessment

- GC swab for culture and sensitivity (C&S):
  - for clients who are symptomatic or contacts to GC. Please see appropriate method for specific specimen collection under the *Diagnostic Tests* in this DST.
- Smear for typical intracellular diplococci (TID) and polymorphonuclear leucocytes (PMNs). Not available in all clinical settings and most useful when immediate microscopy is available.
- Hepatitis A, B, C serology as indicated
- Vaginal specimens as indicated. See *Vaginal Specimens*
- Gonorrhea/Chlamydia (GC/CT) NAAT swabs. Rectal and/or throat for MSM who are at higher risk for STI and/or clients assessed as higher risk during the sexual health history. These tests are not available through some labs. Please check with your local lab for availability of GC/CT NAAT screening for rectal and pharyngeal sites.

See Diagnostic Tests on the following pages for detailed information and further indications.

Diagnostic Tests

1. Throat Swabs (if indicated)

- gonorrhea (GC) and culture and sensitivity (C&S) throat swabs are indicated for:
  - men who have sex with men (MSM) who have had receptive oral sex (with or without symptoms)
  - clients who have had receptive oral sex with a partner who has ano-genital gonorrhea
  - others determined to be at potential higher risk (e.g., clients who are involved in sex work) and at the discretion of the nurse
- GC/CT NAAT indicated for clients determined to be at potential higher risk (e.g., clients who are involved in sex work, MSM) and at the discretion of the nurse

2. Urethral and/or Urine Specimens
    - urethral swab for symptomatic males or male contacts to GC. Collect the following:
        - GC C&S (recommended for all male clients who are symptomatic and/or named as a contact to GC)
        - smear for TID and PMN for clients who are symptomatic(to determine the presence of infection and/or gonococcal infection – most useful when immediate microscopy is available). Recommended but may not be offered in all clinical settings
    - urine NAAT (nucleic acid amplification testing) for gonorrhea and chlamydia - client should not have voided in the previous 1-2 hours/collect first 10-20 ml
    - Urine GC/CT NAAT is indicated for women who have undergone hysterectomy and may be used when a pelvic examination is not appropriate.
    - Urine dipstick and/or urinalysis (microscopic and/or macroscopic), and/or C&S as indicated for females with suspected lower urinary tract infection
    - Urine pregnancy test if indicated

3. Vaginal Specimens

    Depending on the agency lab kits and guidelines, any of the following diagnostic tests may be used for vaginal specimens:

    - smear or swab
        - Nugent score for bacterial vaginosis (BV)
        - gram stain or culture for yeast
        - if immediate microscopy available, wet mount for *T. vaginalis*, yeast, and clue cells
        - vaginal smear for BV and yeast
        - *T. vaginalis* rapid antigen detection
        - *T. vaginalis* nucleic acid test (NAT)
        - GC/CT NAAT (if not using cervical specimen for GC/CT screening)
    - vaginal pH
    - vaginal KOH whiff test (if available)

    Vaginal specimens are indicated when any of the following are identified:

- abnormal odour (with or without positive KOH whiff test): identified by the client or during physical assessment
- abnormal vaginal discharge: identified by the client or during physical assessment
- vaginal irritation and/or inflammation
- pH $\geq$ 4.5
- symptoms of pelvic inflammatory disease (PID)
- clients determined to be at potential higher risk (e.g. involved in sex work, street involved or residing in correctional facility)
- pre-upper genital tract instrumentation (e.g. IUD insertion)

4. Cervical Specimens

- GC C&S swab if client is symptomatic or a contact to gonorrhea
  - others determined to be at potential higher risk (e.g., clients who are involved in sex-work or are street involved) and at the discretion of the nurse
- GC/CT NAAT swab (if not using vaginal specimen for GC/CT screening)
- Pap smear if indicated
- HSV PCR swab, if lesion present

5. Rectal Swabs, if indicated

- GC C&S
  - men who have sex with men (MSM) who have had receptive anal sex (with or without symptoms)
  - clients who have had receptive anal sex with a partner who has ano-genital gonorrhea
  - others determined to be at potential higher risk (e.g., clients who are involved in sex work or are street involved) at the discretion of the nurse
- NAAT for GC/CT for clients experiencing rectal symptoms
- NAAT for GC/CT for clients determined to be at potential higher risk (e.g., clients who are involved in sex work, MSM) and at the discretion of the nurse. Not available in all laboratory settings. Check with your local lab for availability of this test.

6. Genital Ulcers or Lesions (perianal swab)

    - HSV PCR, if lesion present

    - syphilis
        - Dark-field microscopy (only available in specific sites such as BCCDC due to need to collect and maintain a wet slide)
        - Direct fluorescent antibody testing (DFA) - with DFA, secretions from a lesion are mounted onto a slide and sent to the lab for examination
        - Syphilis PCR: available from the BC Public Health Microbiology Reference Laboratory (appropriate for endemic regions)

7. Venipuncture:

    - Syphilis
        - In BC, serology for syphilis screening is indicated on the lab requisition as *Syphilis Screen.* The diagnostic platform is an Enzyme Immune Assay (EIA). If the EIA is reactive, further confirmatory testing will be automatically completed by the lab.

    - Human Immunodeficiency Virus (HIV)
        - Anti-HIV 1 & 2 EIA

    - Herpes Simplex Virus (HSV)

      HSV serology is not considered routine for STI screening. Please refer to the HSV DST for specific indications for HSV serologic screening for the following:

        - HSV IgG
            - Indicates HSV antibodies only and does not differentiate between HSV 1 and HSV 2
        - Type Specific HSV
            - some areas may have access to HSV type specific serology through their local labs (generally there is a fee charged to clients by the lab for this test)

    - Hepatitis A Virus (HAV)
        - consider HAV testing in clients who are not immune AND have at least one of the following:
            - HCV positive
            - HBV positive (carrier or acute)
            - needle or drug paraphernalia sharing

  - sex trade work
  - MSM
  - Residence in correctional facility (past or present)
  - born in an HAV endemic country
- Include the following serologic tests:
  - Anti-HAV (total)

- Hepatitis B Virus (HBV)
  - consider HBV testing in clients who are not immune, have not been previously immunized **AND** have at least one of the following:
    - born in a country of high HBV prevalence
    - residence in correctional facility (past or present)
    - HCV reactive active or resolved
    - HIV positive
    - needle or drug paraphernalia sharing
    - sex trade work
    - multiple sex partners
    - sex partner from endemic area
    - sex partner of a person who tests positive for HBV
    - MSM

  - Include the following serologic tests:
    - Anti-HBs
    - HBsAg
    - Anti-HBc Total

  - HBV post-vaccination testing is not routine AND is indicated for the following clients:
    - sexual partners of persons with acute or chronic HBV infection
    - household contacts of persons with acute or chronic HBV infection
    - individuals who have had a percutaneous or mucosal exposure to HBV
    - immunocompromised

- Hepatitis C Virus (HCV)
  - consider HCV testing for clients with the following:
    - needle or drug paraphernalia (e.g. crack pipes, cocaine straws) sharing
    - sex trade work
    - residence in correctional facility (past or present)
    - HBV positive - chronic or acute
    - HIV positive
    - co-infection with other STIs where sores and lesions are present such as Lymphogranuloma Venereum (LGV) and Syphilis (moderate to low risk)
    - longer term partner who tests positive for HCV (low risk)
      -
  - Tainted blood products:
    - Blood transfusion or blood product before 1992 in Canada
    - Blood coagulation products before 1997 in Canada
    - Organ or tissue transplant before 1990 in Canada
    - Blood or blood products outside of Canada
  - Include the following serologic tests:
    - Anti-HCV
    - HCV RNA if client is anti-HCV positive

REFERENCES

For help obtaining any of the items on this list, please contact CRNBC Helen Randal Library at circdesk@crnbc.ca

More recent editions of any of the items in the Reference List may have been published since this DST was published. If you have a newer version, please use it.

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APPENDIX A