

## 5.1 Introduction to Sexually Transmitted Infections and Bloodborne Pathogen Investigation

This section outlines the policy and procedure required to complete investigation, control and reporting for infections transmitted through exposure to blood or bodily fluids or sexual contact. For sexually transmitted infections (STIs) and bloodborne pathogens (BBPs) contact follow up and notification is required and is completed in a confidential and timely manner at the local or regional level. Partner notification may be done by the client, public health or physician as decided by the attending health care professional in consultation with office of the Regional Medical Officer of Health (RMOH). The purpose of this notification and follow-up is to prevent transmission of these infections.

Investigations and reporting are the responsibility of the office of the Regional Medical Officer of Health (RMOH). As the lead in the region the RMOH collaborates with family physicians, Communicable Disease Control (CDC) and public health staff to provide effective and confidential follow-up of laboratory confirmed cases of STIs and BBPs.

Any sexual health program must abide by the *Federal Criminal Code of Canada* and *Child, Youth and Family Services Act*. Thus at any time when there is concern about the ages or the relationship of individuals diagnosed with a STI, Child, Youth and Family Services should be consulted for further advice. All Health Care Providers (HCPs) have a professional responsibility to report any minor identified as being abused. As of May 1, 2008 the age at which youths can consent to non-exploitative sexual activity has been raised from 14 to 16 years of age. More information may be obtained from the following links:

- Federal Criminal Code of Canada <http://www.efc.ca/pages/law/cc/cc.htm>
- Child Youth and Family Services Act <http://assembly.nl.ca/legislation/sr/titleindex.htm>

### Policy

All laboratory confirmed reportable STIs and BBPs are to be reported to the RMOH or designate, appropriately treated and case follow-up completed. Reports from the provincial public health laboratory are sent to the office of the RMOH, CMOH (Chief Medical Officer of Health) as well as the attending physician. Reporting of these infections allows for public health agencies to monitor the prevalence and incidence of these infections in the community and thus help to plan prevention and intervention programs to reduce the risk of infection and disease.

Reportable STIs in Newfoundland and Labrador include:

Chancroid  
Chlamydia  
Gonorrhea  
Lymphogranuloma venereum (LGV)  
Syphilis

Reportable BBPs in Newfoundland and Labrador include:

Hepatitis C  
HIV infection  
Hepatitis B (See Section 4 Diseases Preventable by Vaccination)

Regional health unit may also test for, manage and treat other sexually transmitted infections that are **not** reportable to the CMHO. These include:

Granuloma inguinale  
 Human Papillomavirus  
 Genital herpes (HSV-1 & -2)  
 Ectoparasitic infestions (Pubic lice, scabies)

These non-reportable infections are not addressed in the Disease Control Manual but are addressed in the Public Health Agency's Canadian Guidelines on Sexually Transmitted Infections. <http://www.phac-aspc.gc.ca/std-mts/index-eng.php>

### Abbreviations

BBP	Bloodborne pathogen
CDCN	Communicable Disease Control Nurse
CHN	Community Health Nurse
CMOH	Chief Medical Officer of Health
HBV	Hepatitis B Virus
HCP	Health care provider
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
MCP	Medical Care Plan
MSM	Men who have sex with men
NP	Nurse Practitioner
RMOH	Regional Medical Officer of Health
STDs	Sexually transmitted diseases
STIs	Sexually transmitted infection

### Definitions

<b>Anonymous Testing</b>	HIV test is carried out using an alphanumeric code, initials or a false name. The person ordering the test and the laboratory carrying out the test on the blood sample do not know the identity of the person to whom the code belongs. There is no address or contact information collected that could lead to the identification of the person presenting for testing. Face-to-face pre-test and post-test counseling is considered part of the testing. This testing is not available in Labrador (NL).
<b>Case</b>	A person who has a diagnosed STI/BBP
<b>Case Management</b>	STI case management consists of treatment, counseling and obtaining the names of contacts and determining how they will be notified of their potential exposure, need for evaluation and possible treatment.
<b>Confidential Testing</b>	All testing is confidential and must not be shared without the client's permission. Client is to be advised that some STIs are reportable by law provincially and nationally.
<b>Contact</b>	A person who has had sex, reused injecting equipment or has had some relevant exposure to the case. Relevancy of

	risk would be directly related to the degree of precautions used during exposure.
<b>Contact Tracing</b>	The process of identifying contacts of a person with and STI/BBP and ensuring that they are aware of their exposure. Relevant contacts include those with whom the case had sex during the period when the case was infectious. No information about the case is shared with the contact.
<b>Co-infection</b>	Having two infections in the same person at the same time. For example, a person infected with both HIV and HCV has a co-infection. With a co-infection the progression of either disease can potentially be accelerated as a result of infection with the other disease.
<b>Incubation Period</b>	The period of time between acquisition of an infection and the appearance of symptoms.
<b>Index Case</b>	The original person identified with an infection. The index may or may not have infected other persons but represents a starting point for the process of contact tracing.
<b>Infectious Period</b>	The period of risk of transmission of infection, not to be confused with incubation period. The infectious period varies for different infections and can begin before symptoms appear. All asymptomatic infected people should be assumed to be infectious for contact tracing purposes.
<b>Non-nominal Testing</b>	Initials or a false name or an alphanumeric code are used instead of a name on the laboratory requisition, but the client record, a confidential document, contains the true identification and contact information. Face to face pre- and post-testing counseling is undertaken as part of the assessment. In NL this testing is the testing procedure of choice.
<b>Nominal Testing</b>	The correct name and other identifying information (such as MCP number) is used on laboratory requisition and client record. Pre- and post-testing counseling is undertaken as part of the assessment.
<b>Partner Notification</b>	The client takes the responsibility for contacting those individuals who may be contacts. This is a voluntary process.
<b>Repeat Infection</b>	A second episode, which may be the same STI or a different one, within a specified timeframe generally 1 or 2 years.
<b>Safer Sex</b>	For HIV infection, safer sex can be defined as any form of sex in which HIV does not pass from the blood, semen or

	<p>vaginal fluids of one person directly into the body of another. This may include the proper use of condoms or avoiding anal or vaginal intercourse. Although lower in risk, there is still some risk associated with oral sex. The use of barriers (condoms and dental dams) for oral sex is still recommended as part of the complete range of safer sex methods.</p>
<b>STDs</b>	<p>This is the older term for sexually transmitted diseases (STDs) but still may be used by some practitioners and jurisdictions.</p>
<b>STIs</b>	<p>Sexually transmitted infections (STIs) that are reportable infections in Newfoundland and Labrador and managed by RHA/public health are discussed in this manual. They include Chlamydia, gonorrhoea, infectious syphilis, late syphilis, HIV, HCV, and HBV.</p>
<b>Trace back Period</b>	<p>The period prior to diagnosis of a STI where the case is asked to name all sexual contacts in order to do contact tracing.</p>

## **Roles and Responsibilities**

### **Laboratory:**

Routine reporting to CMOH, RMOH and attending physician within four working days for all list B STIs.

### **RMOH or designate:**

- Assign and initiate investigation within four working days
- Ensure confidentiality
- Ensure completion of investigation, follow up and reporting

### **Investigator:**

- Communicable disease control nurse (CDCNs) or community health nurses (CHNs) educated in communicable disease and nurse practitioners (NPs) are permitted to undertake testing for STIs or BBP at selected sites with in a regional health authority under direction/designation of their MOH.
- Ensure case has been informed, counseled, tested and treated by public health or designate
- Follows up as necessary with contacts (through the physician or public health)
- Contacts physician of case to verify that follow up of case and contacts has taken place with the appropriate time frame
- Ensure education for prevention has been appropriately disseminated
- If STIs are identified in children, child abuse must be considered and reported by the health care provider (HCP) managing the case to Child, Youth and Family Services

### **Guidelines around confidentiality:**

- Explain the method of contact notification to case to ensure full cooperation
- Never divulge personal information of the case or any contacts
- Never e-mail names of cases or contacts
- Mark all correspondence as personal and medical confidential
- Test results are not to be given over the telephone

### **Guidelines around contact tracing:**

- Every attempt must be made to identify, locate, examine and treat partners/contacts of cases
- If physicians/HCP of the case other than the MOH or the CDCN, CDN or NP completes the follow up of contacts then they are to notify the RHA that this follow up has been taken place
- If a physician/HCP may choose to have the assistance of the MOH or the CDCN, CDN or NP to do contact tracing and follow up for the notifiable STI case then the physician /HCP shall advise the RHA of this within two weeks of receiving notification of the case
- In absence of a response from the physician/HCP within the two week time frame to the RHA then the appropriate STI services will be initiated by the MOH or the CDCN, CDN or NP (See Appendix C)

## **Reports from other Provinces and Territories**

Persons testing positive for STIs or BBPs in other provinces are reportable in the province or territory where the person resides. These reports are forwarded to the office of the CMOH for follow up as necessary. When follow up is complete the region must notify the office of CMOH of the outcome of follow-up within two months.

Persons who have moved from Newfoundland and Labrador who may be cases or contacts will also be followed up through contact within provincial/territorial CMOH offices through the Newfoundland and Labrador Provincial Medical Officer of Health.

For the most up to date information on STI's please refer to Public Health Agency's Canadian Guidelines on Sexually Transmitted Infections  
<http://www.phac-aspc.gc.ca/std-mts/index-eng.php>

## 5.2 Chancroid

## List B

### Case Definition

#### **Confirmed Case**

Laboratory-confirmed case:

- detection of *Haemophilus ducreyi* taken from an ulcerated lesion in the genital area

### Clinical Presentation

Chancroid is an acute bacterial infection localized in the genital area and characterized clinically by single or multiple painful ulcers at the site of infection. Swelling of the regional lymph nodes is present in about half of the cases of chancroid. Men typically have single ulcers, while women have multiple lesions. The diagnosis can be confused with syphilis and a culture is needed to confirm diagnosis.

### Epidemiology

**Occurrence:** Chancroid occurs more often in men and is often associated with poverty and with men who frequent sex-trade workers. It is most prevalent in tropical and subtropical regions of the world. It is less common in Canada. The last reported case in Newfoundland and Labrador was in 1995.

**Reservoir:** Humans

**Transmission:** Exchange of infected secretions from open lesions during direct sexual contact, can affect vaginal or rectal or urethral tracts. Auto-inoculation to non-genital sites may occur but is rare. *H. ducreyi* is often identified as a co-infection of HIV or syphilis.

**Incubation period:** 3-5 days, up to 14 days.

**Period of Communicability:** Until lesions are healed; usually 1-2 weeks after antibiotic treatment or several weeks or months without antibiotic therapy.

**Diagnosis:** Identification of the organism is made by isolating it from the base of the ulcer, or pus from the affected lymph nodes. Consult the Public Health Laboratory or your local laboratory for more information on specimen collection direction as a special culture or transport media is required for the specimen. (See Appendix B)

### Control Measures

**Management of Case:** The management of chancroid should be appropriate for the presenting symptoms, signs and sexual history. Antibiotic treatment for this STI is indicated. Sexual contact should be avoided until all lesions are healed. See *Canadian STI Guidelines* for more in-depth information and treatment management of chancroid.

**Management of Contacts:** Contact investigation should include partners who have had sexual contact with the index case within 10 days of symptom onset. These contacts should be notified of their risk and advised to be tested. Sexual partners should be evaluated for other STIs. Treatment of sexual partners is recommended (without waiting for laboratory confirmatory results). Sexual partners with out visible signs may be carriers and should receive presumptive treatment.

**Management of Outbreaks:** Intensify routine follow up.

### Preventive Measures

- Education on safer sex practices, and reducing the number of partners

- Partner notification is important as it will decrease the risk of re-infection and transmission
- Include information about risk for STIs during pre-travel consultation
- Male circumcision reduces susceptibility to *H. ducreyi*

### **Procedure and Reporting Requirements**

- Physicians, laboratories and communicable disease control nurses (CDCNs), and infection control practitioners (ICPs) must immediately report suspect or confirmed cases to the Regional Medical Officer of Health (RMOH)
- RMOH office will notify local physicians, nurse practitioners, community health nurses, CDCNs, and ICPs, in the particular region as required for follow-up and case investigation as applicable
- RMOH reports to provincial office as per list B
- CDCN enters case into the electronic reporting system
- Provincial Disease Control
  - reports aggregate case information to Public Health Agency of Canada
  - provides an analysis of the case/s with reports in the Communicable Disease Report (CDR)

## 5.3 Chlamydia

## List B

### Case Definition

#### **Confirmed case - Genital Infections**

Laboratory evidence of infection in genitourinary specimens:

- detection of *C. trachomatis* by culture
- OR
- detection of *C. trachomatis* nucleic acid
- OR
- detection of *C. trachomatis* antigen)

#### **Confirmed Case - Extra-genital infections**

Laboratory evidence of infection in rectum, conjunctiva, pharynx and other extra-genital sites:

- detection of *C. trachomatis* by culture
- OR
- detection of *C. trachomatis* nucleic acid
- OR
- detection of *C. trachomatis* antigen

#### **Confirmed Case—Perinatally Acquired Infections**

Laboratory evidence of infection:

- Detection and confirmation of *C. trachomatis* in nasopharyngeal or other respiratory tract specimens from an infant who developed pneumonia in the first 6 months of life:
    - isolation of *C. trachomatis* by culture

OR

    - demonstration of *C. trachomatis* nucleic acid

OR

    - demonstration of *C. trachomatis* antigen
- OR
- Detection and confirmation of *C. trachomatis* in conjunctival specimens from an infant who developed conjunctivitis in the first month of life:
    - isolation of *C. trachomatis* by culture

OR

    - demonstration of *C. trachomatis* nucleic acid

OR

    - demonstration of *C. trachomatis* antigen

Laboratory confirmation of infection:

- detection of *Chlamydia trachomatis* by appropriate laboratory techniques in genitourinary specimens

### Clinical presentation

Genital infections caused by *Chlamydia trachomatis* often go unrecognized because the majority of infected persons are asymptomatic. When present signs and symptoms in men may include urethritis, urethral discharge and epididymitis and in women may include urethritis, vaginal discharge, and lower abdominal pain.

## **Epidemiology**

**Occurrence:** In Canada chlamydia is the most commonly diagnosed and reported bacterial STI. The number of cases reported in Canada in 2006 was greater than 65,000 for a rate of 202 per 100,000. The Chlamydia rate may actually be higher but because the disease is often asymptomatic, many infected cases are undiagnosed.

The reported rate indicates that Chlamydia has been steadily increasing since 1997. Chlamydia is more common among females between the ages of 15-24 and young men aged 20-29. (See Appendix A)

**Reservoir:** Individuals who are asymptomatic, particularly untreated infected males continue to serve as a large reservoir capable of transmitting *C. trachomatis* to sexual partners. *C. trachomatis* grows in the vagina and/or urethra of infected persons. It may be found in the rectum and/or throat as well. The bacteria may spread to other parts of the reproductive tract causing major sequelae.

**Transmission:** Exchange of infected secretions during intimate contact is necessary for transmission. The bacteria can affect oral, vaginal, rectal or urethral tracts. Newborns delivered vaginally are at risk and may develop conjunctivitis and pneumonia. As well, prepubertal children who present with genital, urethral, or rectal infections should be considered for possible cultures to rule out sexual abuse.

**Incubation period:** The incubation period although not well defined, is usually 7-14 days or longer.

**Communicability:** The period of communicability is not clear and relapses do occur. Individuals and contacts are advised to abstain from unprotected intercourse until treatment is complete if it is multiple-dose course or for 7 days after single dose therapy. If untreated the period of communicability may extend for months.

**Diagnosis:** The diagnosis of *C. trachomatis* is based on the client's history, examination and the laboratory test performed. The type of diagnostic test used may depend on the symptoms presented or the type of laboratory test available in the region. Consult your Public Health or local laboratory regarding tests available and their test performance. (See Appendix B)

## **Control Measures**

**Management of Case:** The management of chlamydia infections should be appropriate for the presenting symptoms, signs and sexual history. Treatment is indicated for positive Chlamydia tests, a syndrome compatible with infection and a diagnosis of chlamydia infection in a sexual partner. Treatment is also indicated in clients with a diagnosis of *N gonorrhoeae* as there is significant probability of co-infection. See *Canadian STI Guidelines* for more in-depth information and management of *C. trachomatis* in children and pregnant women.

**Management of Contacts:** Partner notification should include partners who have had sexual contact with the index case within 60 days. If there has been no sexual partner(s) in the 60 day period then trace back to last sexual partner. These contacts should be notified of their risk and advised to be tested. Treatment of sexual partners is recommended (without waiting for laboratory confirmatory results).

**Management of Outbreaks:** Intensify routine follow up.

### **Preventive measures**

- Education on safer sex practices to the population at risks i.e. adolescents and young adults in the 15-25 yrs. of age group and those with multiple sexual partners.
- Partner notification and treatment is important as it will decrease the risk of re-infection and transmission.
- Consideration for other STIs should also be discussed at visit. Screening and counseling recommended based on assessment.
- Barriers to prevention practices should be identified as well as the means to overcome them.
- All pregnant women should be tested for Chlamydia during their first prenatal visit
- Repeat screening of individuals with Chlamydia infection after 6 months

### **Procedure and Reporting Requirements**

- Physicians, laboratories, communicable disease control nurses (CDCNs), and infection control practitioners (ICPs) must report confirmed cases to the Regional Medical Officer of Health (RMOH)
- RMOH office will notify local physicians, nurse practitioners, community health nurses, CDCNs, and ICPs, in the particular region as required for follow-up and case investigation as applicable
- RMOH reports to provincial office as per list B
- CDCN enters case into the electronic reporting system and completes an outbreak form if indicated
- Provincial Disease Control
  - reports aggregate case information to Public Health Agency of Canada
  - provides an analysis of the case/s with reports in the Communicable Disease Report (CDR)

## 5.4 Gonorrhoea

## List B

### Case Definition

#### **Confirmed Case of Genital Infection**

Laboratory confirmation of infection:

- detection of *Neisseria gonorrhoea* by appropriate laboratory techniques in genitourinary specimens.

#### **Confirmed Case of Extra-genital Infections**

Laboratory confirmation of infection:

- detection of *Neisseria gonorrhoea* by appropriate laboratory techniques in specimens from pharynx, rectum, joint, conjunctiva, blood, and other extra-genital sites.

#### **Confirmed case of Perinatally Acquired Infection**

Laboratory confirmation of infection:

- detection of *Neisseria gonorrhoea* by appropriate laboratory techniques in a neonate (up to 4 weeks of age) leading to the diagnosis of gonococcal conjunctivitis, scalp abscess, vaginitis, bacteremia, arthritis, meningitis or endocarditis

#### **Clinical Case**

- urethral or cervical/vaginal discharge without laboratory confirmation, in a person with a history of sexual contact with a laboratory confirmed case in the preceding six to eight weeks

Note: Reports to the Provincial CDS system includes only laboratory confirmed cases. Contact information may be recorded with the case in the provincial CDS.

### Clinical Presentation

More than 50% of males and females are asymptomatic. The most common symptoms of genital tract infection in females are vaginal discharge, dysuria, abdominal pain, abnormal vaginal bleeding, dyspareunia and rectal pain and discharge if proctitis. The disease among females is suggested by cervicitis, pelvic inflammatory disease, urethritis, perihepatitis and bartholinitis.

Among males common symptoms of genital tract infection with *Neisseria gonorrhoea* are urethral discharge, dysuria, urethral itch, epididymal pain and rectal pain and discharge if proctitis. The most common features of the disease in males are urethritis and epididymitis.

If the infection is located in the pharynx the individual may experience a sore throat and difficulty swallowing. If untreated the gonococcus may settle in other parts of the body, causing infection of the joints, skin, heart and brain.

### Epidemiology

**Occurrence:** Preliminary data reports that gonorrhoea incidence in Canada between 1997 and 2006 has more than doubled. There were 4,477 reported cases in 1997 and preliminary data shows 10,808 cases of gonorrhoea in 2006. In 1997 the rate per 100,000 was 14.9 and the preliminary rate for 2006 is 33.1. Most affected are males 20-24 years of age and females 15-19. Rates for Newfoundland and Labrador are outlined in the table following this section. All reported cases occurred among individuals between 15

and 29 years of age. Males accounted for 88% of cases in which 63% of those were between 20-24 years of age. (See Appendix A)

**Transmission:** Gonorrhoea occurs almost always by direct sexual contact from one sexual partner, via oral, genital or rectal routes. Perinatal transmission may occur. In children over 1 year, it is considered an indicator of sexual abuse.

**Incubation period:** 2-7 days or longer.

**Period of Communicability:** Effective treatment ends communicability within 8 hours; communicability may extend for months if untreated.

**Diagnosis:** Diagnosis is based on findings consistent with the case definition listed above. (See Appendix B)

### **Control Measures**

**Management of Case:** All confirmed and suspect clinical cases must be treated. Management choices should be based on the site of infection and laboratory results or if being treated as a contact. When treating contacts relevant history, physical examination and epidemiologic factors should be considered when making treatment decisions. It is advised that those who are treated for gonorrhoea should also be treated for Chlamydia. For complicated cases please refer to Canadian Guidelines for Sexually Transmitted Infections.

**Management of Contacts:** Partner notification, including partners for two months previous, is critical in maintaining control of this disease.

**Management of Outbreaks:** Intensify routine follow up.

### **Preventive measures**

- Education on safer sex practices to the population at risks
- Partner notification and treatment is important as it will decrease the risk of re-infection and transmission.
- Consideration for other STIs should also be discussed at visit. Screening and counseling recommended based on assessment.
- Barriers to prevention practices should be identified as well as the means to overcome them.

### **Procedure and Reporting Requirements**

- Physicians, laboratories, communicable disease control nurses (CDCNs), and Infection Control Practitioners (ICPs) must immediately report suspect or confirmed cases to the Regional Medical Officer of Health (RMOH) or designate
- RMOH office will notify local physicians, nurse practitioners, community health nurses, CDCNs, and ICPs, in the particular region as required for follow-up and case investigation as applicable
- RMOH reports to provincial office as per list B
- CDCN enters the case into the electronic reporting system and completes an outbreak form if indicated

- Provincial Disease Control
  - reports aggregate case information to Public Health Agency of Canada
  - provides an analysis of the case/s with reports in the Communicable Disease Report (CDR)

## 5.5 Lymphogranuloma Verereum (LGV)

## List B

### Case Definition

#### **Confirmed Case**

Presence of *Chlamydia trachomatis* (*C. trachomatis*) serotype L1, L2, and L3 from genitourinary specimens confirmed by DNA sequencing or restriction fragment length polymorphism (RFLP)

#### **Probable Case**

Positive *C. trachomatis* testing (nucleic acid amplification or serology) **Plus** the presence of proctitis **OR** inguinal/femoral lymphadenopathy or a sexual partner with LGV.

### Clinical Presentation

Classic LGV infection can be divided into three distinct stages. Primary infection appears three to 30 days after infection and presents as a small painless papule at the site of inoculation (vagina, penis, rectum, oral cavity, occasionally cervix) that may ulcerate. The primary lesion is self-limiting and may go unnoticed. The secondary stage occurs two to six weeks after the primary lesion and is characterized by painful, unilateral lymph nodes in the inguinal/femoral or anorectal region. Clinical symptoms accompanying this stage include fever, headache and myalgias. If left untreated, infection may progress to the tertiary stage, resulting in lymphatic obstruction leading to genital elephantiasis, and rectal involvement leading to the formation of strictures and fistulae. Systemic complications including hepatitis, pneumonia and arthritis have been described.

### Epidemiology

**Occurrence:** LGV seen worldwide but had been more common in sub-tropical and tropical areas until 2004 when it has been identified in men who have sex with men (MSM) In Canada it is not nationally notifiable and is considered an uncommon STI. It is reportable in Newfoundland Labrador as a list B disease but to date there have been no reported incidence of this STI.

**Reservoir:** Humans, particularly asymptomatic females.

**Transmission:** Direct contact with open lesions of infected people during vaginal, anal or oral sexual activity. Transmission may also occur via skin to skin contact.

**Incubation Period:** The period of communicability is variable with a range of 3-30 days for a primary lesion; if a bubo is the first manifestation, 10-30 days to several months.

**Period of Communicability:** The period of communicability is variable from weeks to years during presence of active lesions. Relapses do occur

**Diagnosis:** Diagnosis is based on the findings consistent with the above listed case definition. (See Appendix B)

### Control measures

**Management of Case:** There is no vaccine for this bacteria. Cases should be treated with three weeks of antibiotics. Retesting for infection should be completed 3-4 weeks after treatment to ensure effective treatment response. Clients should be informed to abstain from sexual contact until all lesions are healed. A follow up visit with your doctor is needed. See Canadian Guidelines on Sexually Transmitted Infections chapter on LGV for specifics.

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**Management of Contacts:** Sexual partners of probable and confirmed cases from the previous 60 days should be contacted, tested and treated regardless of symptoms.

**Management of Outbreaks:** An outbreak management team should be established to address contact tracing, STI prevention, education, and control measures.

### **Preventive Measures**

- Education on safer sex practices to the population at risks
- Partner notification is important as it will decrease the risk of re-infection and transmission
- Consideration for other STIs should also be discussed at visit. Screening and counseling recommended based on assessment
- Barriers to prevention practices should be identified as well as the means to overcome them

### **Procedure and Reporting Requirements**

- Physicians, laboratories and communicable disease control nurses (CDCNs), and infection control practitioners (ICPs) must immediately report suspect or confirmed cases to the Regional Medical Officer of Health (RMOH)
- RMOH office will notify local physicians, nurse practitioners, community health nurses, CDCNs, and ICPs, in the particular region as required for follow-up and case investigation as applicable
- RMOH reports to provincial office as per list B
- CDCN enters the case into the electronic reporting system and completes an outbreak form if indicated
- Provincial Disease Control
  - reports the aggregate case information to Public Health Agency of Canada
  - provides an analysis of the case/s with reports in the Communicable Disease Report (CDR)

## 5.6 Syphilis

## List B

### Case Definition

The following case definitions are not complete; for complete details on all case definitions, please refer to:

<http://www.phac-aspc.gc.ca/hcai-iamss/bbp-pts/index-eng.php>

### **Confirmed Case - Primary Syphilis**

Laboratory confirmation of infection:

- identification of *T. pallidum* by dark-field microscopy, fluorescent antibody, or equivalent examination of material from a chancre or a regional lymph node

OR

- presence of one or more typical lesions (chancres), and reactive treponemal serology, regardless of non-treponemal test reactivity, in individuals with no previous history of syphilis

OR

- presence of one or more typical lesions (chancres) and at least a 4-fold (e.g. 1:8 to 1:32) increase in the titre over the last known non-treponemal test in individuals with a past history of syphilis treatment

### **Confirmed Case - Secondary Syphilis**

Laboratory evidence of infection:

- identification of *T. pallidum* by dark-field microscopy, fluorescent antibody or equivalent examination of mucocutaneous lesions, condylomata lata and reactive serology (non-treponemal and treponemal)

OR

- presence of typical mucocutaneous lesions, alopecia, loss of eyelashes and lateral third of eyebrows, iritis, generalized lymphadenopathy, fever, malaise or splenomegaly, AND either a reactive serology (non-treponemal and treponemal) or at least a 4-fold (e.g. 1:8 to 1:32) increase in titre over the last known non-treponemal test.

- NOTE: The possibility of a prozone reaction should be considered in individuals who are suspected of having secondary syphilis but whose non-treponemal test is non-reactive.

### **Confirmed Case - Early Latent Syphilis**

Laboratory confirmation of infection:

- an asymptomatic patient with reactive serology (non-treponemal and treponemal) who within the past 12 months had one of the following:
- non-reactive serology
- symptoms suggestive of primary or secondary syphilis
- exposure to a sexual partner with primary, secondary or early latent syphilis

### Clinical Presentation

Syphilis is a sexually transmitted infection and the early symptoms include a current or past history of a rash or a previous genital lesion. A classic sign is a symmetrical maculopapular rash involving the palms and soles with associated lymphadenopathy. Those individuals who are higher risk of disease are those who have had contact with a

known case of syphilis including those from an endemic area, or who have sex with someone from an endemic area as well as those who are involved in commercial sex work.

There are several stages of disease and they include primary, secondary, early latent-asymptomatic, tertiary and congenital. In primary syphilis the symptoms include painless, indurated chancre, (usually genital) and non-tender regional lymphadenopathy. The secondary stage presents with a non-pruritic maculopapular eruption, generalized non-tender lymphadenopathy will appear and condyloma lata, mucous patches, fever and malaise will occur. In the latent-asymptomatic stage, the early period appears less than 1 year and 25 % of cases will relapse to secondary cases. Gummata lesions of skin, bone, subcutaneous tissue can appear in the tertiary stage as well as cardiovascular symptoms including aortic aneurysm and aortic regurgitation as well as neurosyphilis.

The risk of congenital syphilis is 50% for babies born to mothers with untreated primary, secondary or early, latent syphilis. There may be no symptoms in 2/3 of these cases. Some of the symptoms that may occur are low birth weight babies, rhinitis, hepatosplenomegaly, rash, anemia, metaphyseal dystrophy, and stillbirth. The symptoms of early syphilis may present in the first 2 years of life. Routine screening is performed on all pregnant women in Canada.

### **Epidemiology**

**Occurrence:** This disease occurs worldwide. Infectious syphilis (primary, secondary and early latent stages) is the least common of the nationally reportable bacterial STIs. In Canada the preliminary rate for infectious syphilis for 2006 is at 4.6/100,000, up from 3.9/100,000 in 2004. The rate of infectious syphilis is increasing in both males and females, but more so in males. In 2005 and 2006 there were 9 babies born in Alberta with congenital syphilis. Nationally in the decade before 2005, 2 congenital cases or less a year was reported in Canada. (See Appendix A)

**Reservoir:** Humans.

**Transmission:** Approximately 90% of all syphilis is sexually transmitted. Exposure mainly occurs during oral, anal, or vaginal intercourse. Transmission of syphilis occurs by direct contact with infectious exudates from moist lesions of the skin and/or mucous membranes of those who are infected. Transmission may also occur from the following routes: transplacental infection of the fetus during pregnancy, blood transfusions if the donor is in the early stages of disease, through lesions on the hands of health care workers or through touching of children with early congenital disease.

**Incubation Period:** The incubation period for syphilis is 10 days to 3 months in primary syphilis, but usually is 3 weeks.

**Period of Communicability:** The period of communicability for syphilis is variable and can depend on the stage of the infection. Syphilis is infectious while the moist lesions of primary and secondary disease are present. It is also infectious during the early latent stage, and also in mucocutaneous recurrences. Congenital transmission is most likely during primary and secondary maternal syphilis.

**Diagnosis:** Diagnosis is based on findings consistent with the case definition listed

above. (Consultation with a specialist may be required to interpret test results.) It includes taking a good history, physical examination and laboratory investigation. (See Appendix B)

### **Control Measures**

**Management of Case:** The interpretation of syphilis serology should be done in consultation with a MOH and or specialist who is experienced in this field. Once a diagnosis has been confirmed the individual should be treated. Treatment depends on the stage of the infection and if case is HIV positive. Treatment consists of an antibiotic with an alternative recommendation for those who have allergies or are pregnant. Serological testing is important to ensure adequate treatment tests are repeated at 3 and 6 months after treatment and later if needed.

**Management of Contacts:** Partner notification is critical in maintaining control of this disease. The time frame for partner notification will depend on the stage of the infection. Primary syphilis contacts include sexual contacts 3 months prior to onset of symptoms. Secondary syphilis includes sexual partners who had exposure during the past 6 months. Early latent includes sexual contacts one year prior to diagnosis. For those who have had sexual contact with an individual who has been diagnosed with late latent syphilis, an assessment of the marital or long term partners and children should be completed. For those identified as having congenital syphilis, the mother and her sexual partners should be tested.

For exposure that has occurred in the past 90 days to infectious syphilis then the individual who was exposed should be treated. If the exposure was greater than 90 days treatment should be based on the results of serological assessment. Serology should be completed until it is felt that an adequate response is achieved.

**Management of Outbreaks:** Intensify routine follow-up. A communications strategy may be needed.

### **Preventive Measures:**

- Education on safer sex practices to the population at risks
- Partner notification is important as it will decrease the risk of re-infection and transmission
- Testing for other STIs should be considered as well
- Barriers to prevention practices should be identified as well as the means to overcome them
- Screening should be encouraged by physicians during routine visits for those who are sexually active with multiple partners as they are at higher risk for infection

### **Procedure and Reporting Requirements**

- Physicians, laboratories, communicable disease control nurses (CDCNs), and infection control practitioners (ICPs) must report suspect or confirmed cases to the Regional Medical Officer of Health (RMOH)
- RMOH office will notify local physicians, nurse practitioners, community health nurses, and CDCNs in the particular region as required for follow-up and case investigation as applicable

- RMOH reports to provincial office as per list B
- CDCN enters the case into the electronic reporting system and completes an outbreak form if indicated
- Provincial Disease Control
  - reports the aggregate case data to Public Health Agency of Canada
  - provides an analysis of the case/s with reports in the Communicable Disease Report (CDR)

## 5.7 Hepatitis C (HCV)

## List B

### Case Definition

#### **Confirmed Case that does not distinguish Acute from Chronic Infection**

- Detection of anti-Hepatitis C antibodies (anti-HCV) (positive anti-HCV tests should be confirmed by a second manufacturer's EIA, immunoblot or NAT for HCV RNA).

OR

- Detection of Hepatitis C virus RNA

### **Clinical Evidence**

Acute clinical illness is characterized by a discrete onset of symptoms and jaundice or elevated serum aminotransferase levels. Chronic infections may present with disease flares with similar symptoms and signs.

### **Clinical Presentation**

Most infected people are asymptomatic with onset of disease being insidious. Symptoms range from anorexia, fatigue, fever, myalgia, nausea and vomiting progressing to jaundice. More than 50% of those infected will develop chronic HCV infection. Of those chronically infected about half will develop cirrhosis or cancer of the liver.

### **Epidemiology**

**Occurrence:** Worldwide directly related to the prevalence of people who routinely share injection equipment. Approximately 250,000 Canadians are infected with HCV. In Newfoundland and Labrador in 2006 there were 90 cases of HCV reported with a calculated incidence rate of 17.8 per 100,000. The risk factor most commonly reported is injection drug use. (See Appendix A)

**Reservoir:** Humans.

**Transmission:** HCV is transmitted primarily parenterally. Sexual and mother to child has been reported but appears far less frequent than the parental route.

**Incubation Period:** Ranges from 2 weeks to 6 months, but usually form 6-9 weeks.

**Period of Communicability:** From one or more weeks before the onset of symptoms and can continue indefinitely.

**Diagnosis:** Diagnosis is based on the findings consistent with the above listed case definition. (See Appendix B)

### **Control Measures**

**Management of a Case:** Referral of all cases to a specialist is to determine if the individual is a candidate for treatment is indicated for all cases. There is no effective vaccine available to prevent HCV. Individuals who are positive for HCV should be offered immunization against hepatitis A and B (if non-immune) to help avoid further liver damage. As these individuals are also at increased risk of pneumococcal disease they should be offered pneumococcal polysaccharide vaccine (Pneu-P-23). Both are publicly funded programs. Those infected should be counseled on avoiding the use of alcohol to avoid further liver damage. Education about preventing transmission of HCV to others is important in the management of cases. Reporting physician must complete the

Newfoundland Labrador hepatitis C case detail form and return to the regional health authority public health office within two weeks of being notified of the case.

**Management of Contacts:** The risk of transmission to long term sexual partners is very low. Contacts who may have shared contaminated injection drug related equipment or who are at risk for HCV infection should be screened. Education on HCV transmission should be provided. Risk reduction strategies should be discussed and screening for HIV is also recommended.

**Management of Outbreaks:** When two or more cases occur in association with a common exposure, search must be undertaken for additional cases.

### **Preventive Measures**

- Harm reduction counseling is critical in prevention strategies. Individuals identified at high risk for exposure to HCV should be counseled on:
  - Avoiding sharing drug needles or other drug paraphernalia including “works” for injection or bills or straws for snorting
  - Avoiding unsanitary tattoo and body piercing methods
  - Avoiding sharing personal items such as toothbrushes, razors, and nail clippers
  - Persons with risk behaviors for HCV infection should be offered testing for other STIs and BBPs
- Health care or public safety worker should follow standard blood/body fluids precautions and safely handle needles and other sharps.
- Multiple sex partners and the presence of other STIs can increase the risk of sexual transmission of HCV.
- Contact notification must be undertaken in all cases of HCV infection
- All HCV -positive persons who have previously received or donated blood should be reported in confidence to the local Canadian Blood Services by the province
- Infection Control Routine Practices should be in place in health care facilities to prevent exposure of health care workers to blood and body fluids

### **Procedure and Reporting Requirements**

- Physicians, laboratories, communicable disease control nurses (CDCNs) and Infection Control Practitioners (ICPs) must report confirmed cases of HCV infection to the Medical Officer of Health
- HCV is reportable by physicians to the local public health authorities
- Regional offices are responsible for follow-up of identified cases of HCV infection and for the electronic reporting to the provincial office of Disease Control
- The RMOH or designate must contact the primary health care provider to determine the need for education, pre-test and post-test counseling and partner notification
- Provincial Disease Control
  - reports aggregate case information to Public Health Agency of Canada
  - provides an analysis of the case/s with reports in the Communicable Disease Report (CDR)

## 5.8 Human Immunodeficiency Virus

### **Case Definition HIV**

#### **Confirmed case**

##### **Adults, Adolescents and Children >18 months:**

- detection of HIV antibody with confirmation (e.g. EIA screening with confirmation by Western blot or other confirmatory test)

OR

- detection of HIV nucleic acid (e.g. DNA PCR or plasma RNA)

OR

- HIV p24 antigen with confirmation by neutralization assay

OR

- isolation of HIV in culture

##### **Children < 18 months (on two separate samples collected at different times)**

- detection of HIV nucleic acid (e.g. DNA PCR or plasma RNA)

OR

- HIV p24 antigen with confirmation by neutralization assay

OR

- isolation of HIV in culture

##### **For pediatric cases only (<15 years old)**

- Bacterial infections (multiple or recurrent, excluding recurrent bacterial pneumonia)\*
- Lymphoid interstitial pneumonia and/or pulmonary lymphoid hyperplasia+

\* must have laboratory evidence of HIV infection

+ may be diagnosed presumptively if laboratory evidence of HIV infection is present

### **Clinical presentation**

HIV infection can be divided into stages of infection which is defined by clinical symptoms. The primary infection stage occurs several weeks to months after infection with HIV in which the person presents with a self-limited mononucleosis-like illness lasting 1-2 weeks. This stage is often undiagnosed. Following the primary infection many years may pass with no signs or symptoms of illness. This is the asymptomatic infection stage and may last 15-20 years. Factors such as genetics, lifestyle, health and nutritional status can affect the speed of disease progression as well as initiation of antiretroviral therapy. The symptomatic infection stage may initially be vague and difficult to describe. Symptoms such as chronic fatigue, mouth sores, night sweats, lymphadenopathy, anorexia, and diarrhea may be present. This stage can also be characterized by the development of opportunistic infections and cancers attributable to immune system dysfunction.

If left untreated HIV may progress to AIDS and ultimately death. Progression to this stage may be delayed with effective use of antiretroviral drug therapy. This late clinical stage of HIV infection results from progressive damage to the immune system leading to the opportunistic infections and cancers listed under the case definition for AIDS.

HIV infection is most often asymptomatic among infants and children. Prenatal care should include HIV testing to better identify those who are at risk. Mothers who are

identified as HIV infected and receive appropriate treatment have an 80% chance of not transmitting the infection to their babies. Infants are at greater risk of infection if their mothers do not get tested during their prenatal period, or if the mother has risk factors consistent with an increased risk for HIV infection. (See transmission). Children and infants who do present with symptoms may have the following symptoms: irritability, poor weight gain, developmental delay, recurrent respiratory problems, recurrent otitis or sinusitis, persistent rash, persistent thrush, persistent or recurrent lymphadenopathy, diarrhea or fever. A pediatric HIV classification has also been established to provide a description of the extent of symptoms present as well as evidence of immunosuppression which aids in the treatment of this age group.

### **Epidemiology**

**Occurrence:** Worldwide. It is estimated that there are more than 60,000 Canadians infected with HIV/AIDS of which approximately 30 % are unaware of their HIV status. The epidemic is a complex one as there are different rates of infection in specific at-risk populations. Men who have sex with men (MSM) still represent the largest number and proportion of positive HIV test reports; however, the heterosexual exposure category is the second largest exposure category surpassing injection drug use (IDU). Other at risk populations includes women, aboriginal peoples and Canadians of African ancestry. (See Appendix A)

There has been a marked decline in the number of persons diagnosed with AIDS in Canada. The use of highly active antiretroviral therapy (HARRT) is the major factor responsible for this decline.

**Reservoir:** Humans.

**Transmission:** Sexual transmission, parenteral transmission as well as perinatal transmission. At risk behavior for transmission includes the following: unprotected sex, sex with a partner known to be HIV positive, multiple sexual partners, anal sex, sharing of drug related paraphernalia and or a history of hepatitis B. Sexual transmission of HIV is enhanced by the presence of other STIs.

**Incubation Period:** Usually 1-3 months but can be variable. The time from HIV infection until AIDS is diagnosed can be less than 1 year but up to 15 years. If treatment is not started for those with HIV infection 50% will develop AIDS within 10 years.

**Period of Communicability:** Begins early after infection with HIV and presumably extends through life.

**Diagnosis:** The diagnosis of HIV infection is based primarily on a positive serologic test. Case confirmation is based on findings consistent with the case definition. (See Appendix B)

### **Control Measures:**

**Management of Case:** Treatment for those who are HIV positive should be done in consultation with an infectious diseases specialist and the HIV clinic as the treatment is complex and evolving. There are rapid changes in optimal therapy as new research becomes available. Recommendations for any given person should be made with a colleague or specialist experienced in HIV. Partner notification must be undertaken in all HIV infections. Information about HIV clinics should be provided as well.

Untreated asymptomatic individuals should have an assessment every 4- 6 months.

Once it has been established that a child is infected referral to a specialist in the treatment of pediatric HIV should be considered and is preferred.

**Management of Contacts:** Pre-test and post-test counseling should be offered to those who are at risk. This should be done in a confidential manner by an individual who has training or experience in this area. This opportunity should also be used to provide education about prevention strategies. This should include safer sex practices and harm reduction strategies. Contracts may require testing for other STIs and BBIs

If suspected occupational exposure to potential blood or body fluids occurs in a health care facility, baseline testing should be performed. Occupational exposure must be reported to your occupational health department for follow up and recommended action. The baseline testing should include screening for exposure to hepatitis B & C as well as HIV. Consideration must be given to using HIV post exposure prophylaxis as antiretroviral agents can have severe side effects, careful consideration must be given to the benefits and risks of this prophylaxis.

**Management of Outbreaks:** Intensify routine follow up.

### **Preventive measures:**

- Education in the school setting should be offered that focuses on preventative measures and the consistent practice of risk reduction
- Persons with known risk behavior(s) should be offered HIV testing and counseling on prevention and risk reduction strategies
- Help client identify barriers to prevention and risk reduction strategies and means to overcome them
- Discuss the potential use and benefits of Highly Active Antiretroviral Therapy (HART)
- Prompt treatment of any STI will reduce the risk of acquiring HIV
- All pregnant women should be screened for HIV. Treatment of mother during pre-partum and intra-partum period as well as treatment of the infant and during the first 6 weeks of life can decrease transmission by 80%.
- Infants of mothers who are or may be HIV infected must be evaluated
- Persons with risk behaviors for HIV infection should be offered testing for other STIs
- Immunization for hepatitis A and B if non-immune should be offered
- Partner notification should include appropriate referral for clinical evaluation, testing, treatment and health education as needed
- Contacts can be by the CDCN or the primary health care provider
- All HIV-positive persons who have previously received or donated blood should be reported in confidence to the local Canadian Blood Services by the province
- Clients who engage in high risk behaviors should be advised against donating blood, bodily fluids, or organs. All donations of blood, tissues and organs are tested for HIV; only donations tested negative are used
- Infection Control Routine Practices should be in place in health care facilities to prevent exposure of health care workers to blood and body fluids
- Health care or public safety worker should follow standard blood/body fluids precautions and safely handle needles and other sharps.

**Procedure and Reporting Requirements:**

- Physicians, laboratories and communicable disease control nurses (CDCNs) and Infection Control Practitioners (ICPs) must report confirmed cases of HIV infection to the Regional Medical Officer of Health
- The RMOH or designate are responsible for follow-up of identified cases of HIV infection and for the electronic reporting to the provincial office of CMOH
- The RMOH or designate must contact the primary health care provider to determine the need for education, pre-test and post-test counseling and contact tracing
- The primary health care provider must complete the national HIV/AIDS report form provided by the office of the RMOH. When completed it is forwarded to RMOH for review and then forwarded to the CMOM
- CDCN enters the case into the electronic reporting system
- Provincial Disease Control
  - forwards completed national HIV/AIDS report form to Public Health Agency of Canada
  - reports and confirms aggregate case information to Public Health Agency of Canada quarterly.
  - provides an analysis of the case/s with reports in the Communicable Disease Report (CDR)

**References:**

Canadian STI Guidelines, 2008 Edition, Public Health Agency of Canada  
Control of Communicable Diseases Manual, 18th edition, David L. Heymann, MD, editor  
Public Health Agency of Canada websites, accessed October 27, 2008

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**Appendix A: Case Counts and Rates of Sexually Transmitted Infections and Bloodborne Pathogens reported in Newfoundland Labrador 2005-2009**

	2005		2006		2007		2008		2009	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Chlamydia	631	122.7	551	108.0	511	100.9	597	117.9	530	104.1
Gonorrhoea	1	0.2	8	1.6	18	3.6	14	2.8	9	1.8
Hepatitis C	82	15.9	95	18.6	94	18.6	101	19.9	90	17.7
Syphilis	2	0.4	3	0.6	8	1.6	13	2.6	9	1.8
HIV	8	1.6	7	1.4	0	0.0	3	0.6	6	1.2

## Appendix B: Diagnostic Laboratory Tests for Sexually Transmitted Infection and/or Bloodborne Pathogen by Laboratory Performing the Test

### NEWFOUNDLAND AND LABRADOR PUBLIC HEALTH LABORATORY

	Organism	Specimen
Syphilis	<b>Treponema pallidum</b>	<p><b><u>Serology:</u></b></p> <p>For <b>Treponema pallidum</b> antibody screen test collect blood in serum separator tube (SST). Allow to clot at room temperature for 30 minutes. Do not separate the serum. Store at 2-8°C for up to 72 hours and ship refrigerated.</p>
Lympho granuloma venereum (LGV)	<p><b>Chlamydia trachomatis</b></p> <p><b>Chlamydia trachomatis, types L1, L2, L3</b></p>	<p><b><u>Molecular detection (DNA):</u></b></p> <p>Collect urethral, exo/endocervical swab in Amplicor STD transport medium. Vigorously agitate the swab in the transport medium for 15 seconds, express liquid on the inside wall of the tube and <b>remove the swab</b>. Store at room temperature and submit to PHL within 10 days or submit urine specimen. Patient must not have voided within 2 hours of collection. Collect the first 10 -50 mL urine in sterile dry container. Store at room temperature for up to 24 hours or refrigerate at 2 - 8°C for up to 7 days and ship refrigerated.</p> <p><b><u>Culture:</u></b></p> <p>Routine culture for the detection of genital <b>C. trachomatis</b> is discouraged. Use molecular detection (DNA) above. Collect eye swabs, respiratory secretions from neonates, etc in UTM transport medium. Refrigerate specimen immediately after collection and submit refrigerated to PHL with 24 hours or earlier. If longer storage is required, specimen must be frozen at -70°C or colder and ship on dry ice.</p> <p><b><u>Serology for LGV:</u></b></p> <p>Submit 0.5 mL serum, acute and convalescent preferred, and case history. Referred out.</p> <p><b><u>Molecular typing:</u></b></p> <p>Urethral, exo/endocervical swab or urine as for Molecular detection (DNA) above. Strains of <b>C. trachomatis</b> commonly detected are not serotyped. Therefore, only specimens with specific request for LGV or an aspirate from bubo will be forwarded to NML, Winnipeg for typing.</p>

<b>Gonorrhoea</b>	<b>Neisseria gonorrhoeae</b>	<p><b><u>Molecular detection (DNA):</u></b></p> <p>Same as for <b>C. trachomatis</b> above. Because of the low incidence of GC in the province, nucleic acid testing is not routinely performed.</p> <p><b><u>Culture:</u></b></p> <p>Use Dacron or rayon swab to collect endocervical or urethral swab in Amies transport medium. Refrigerate and submit promptly within 24 hours, ideally within 6 hours, to the nearest Microbiology Lab.</p>
<b>HSV</b>	<b>Herpes simplex type 1</b> <b>Herpes simplex type 2</b>	<p><b><u>Culture/typing:</u></b></p> <p>Swab from base of lesion or aspirate in UTM transport medium.</p> <p><b><u>Direct antigen/typing:</u></b></p> <p>Place cellular material from base of lesion on two wells of microscope slide contained in Micro-Trak kit. Fix with fixative contained in kit. The sensitivity of this examination depends on adequate cellular material being deposited on the slide and the stage of the lesion. Not recommend for routine use. Ideally, swab should accompany smears.</p> <p><b><u>Type specific serology:</u></b></p> <p>Blood collected in serum separator tube (SST) or clot tube (CT). Allow to clot at room temperature. Serum should be removed from blood within 8 hour of collection. Refrigerate 2 - 8°C for up to 48 hours. If longer delay anticipated, freeze serum at -20°C and ship on dry ice. Case history required.</p>
<b>HIV</b>	<b>Human Immunodeficiency Virus</b>	<p><b><u>Serology:</u></b></p> <p>For HIV 1/2 antibody screen, collect blood in SST tube. Allow to clot at room temperature. Store 2-8°C.</p> <p><b><u>Molecular HIV RNA PCR, qualitative:</u></b></p> <p>Collect blood in ACD or EDTA. Maintain at ambient temperature. Submit to PHL immediately. <b>Do not separate plasma.</b> Alert PHL. To be referred out.</p> <p><b><u>HIV RNA PCR, quantitative:</u></b></p> <p>Collect blood in EDTA (2 tubes). Transport whole blood within 6 hours at ambient temperature or separate plasma within 6 hours. Store and ship at ambient temperature up to 24 hours or store plasma 2-8°C up to 4 days and ship under refrigeration. Longer delay requires freezing at -20°C or colder and submit on dry ice.</p>

<b>HBV</b>	<b>Hepatitis B virus</b> HB surface antigen HB core antibody (total) HB core antibody (IgM) HBS antibody HB e antigen HB e Antibody  <b>HBV DNA</b> Qualitative Quantitative Genotyping	<b><u>Serology:</u></b> Collect blood in SST. Allow to clot 30 minutes at room temperature and centrifuge. Do not separate serum. Store at 2 -8°C. Ship under refrigeration, if transportation exceeds a few hours.  <b><u>Molecuar detection (DNA):</u></b> Collect blood in EDTA ( <b>2 tubes</b> ). Ship at ambient temperature within 24 hours or separate plasma within 24 hours and store at 2 - 8°C for up to 72 hours and ship under refrigeration. Provide clinical history. Quantitative PCR and genotyping are available for patients undergoing therapy. Referred out.
<b>HCV</b>	<b>Hepatitis C virus</b>	<b><u>Serology</u></b> Collect blood in SST. Allow to clot at room temperature. Centrifuge. Do not separate serum. Store at 2-8°C and ship under refrigeration, if transport time exceeds a few hours. Anti-HCV serology does not differentiate past or present infection. Reactive anti-HCV will reflex to HCV RNA (qualitative), if sample is suitable i.e. less than 4 days old and appropriate shipped under storage conditions.  <b><u>Molecular detection HCV RNA (qualitative):</u></b> Collect blood in SST or EDTA ( <b>2 tubes</b> ). Transport whole blood within 6 hours of collection at ambient temperature or separate serum or plasma within 6 hours and store 2-8°C up to 4 days and ship under refrigeration. Longer delay requires freezing at -20°C or colder and submit on dry ice.  <b><u>Molecular detection HCV RNA (quantitative):</u></b> Collect blood in SST or EDTA ( <b>3 tubes</b> ). Process and store under same conditions as HVC RNA (qualitative). Quantitative PCR and genotyping is available for patients undergoing drug therapy. Referred out.
<b>Chancroid</b>	<b>Haemophilus ducreyi</b>	<b><u>Culture:</u></b> Collect swab from the base and undermined margins of the lesion into Amies transport medium. Refrigerate at 2 - 8°C <b>immediately</b> after collection and submit on ice packs to be received within 2 days. Alert PHL. Successful recovery of this organism requires prompt transportation and plating.
<b>Pubic Lice</b>	<b>Pthirus pubis</b>	Submit in dry container, in alcohol or 10% formalin.
<b>Trichomoniasis</b>	<b>Trichomonas vaginalis</b>	Test for trichomonas is not performed at PHL. Check with nearest Microbiology Lab for instructions.

## **Appendix C: Sample Template Letter to Physician Notifying of Sexually Transmitted Infection and/or Bloodborne Pathogen**

### **Medical Confidential**

Dear Dr. [Insert physician name]  
Re: [insert client name and address]  
DOB: [insert date of birth]

[Insert health unit name] recently received a positive report of [insert STI/BBP] for the above named client.

As the last named physician on record, we request your assistance in completing client follow up, treatment, and counselling and partner notification. This is to ensure that both client and his/her sexual partners is/are notified and offered information, testing and or treatment.

Please advise our office of client contact and follow up within **two** weeks of dated notification. Failure to contact our office within this time will signify that you wish the contacting regional health authority to initiate the appropriate follow up for this client. If you or your client have any questions or wish assistance in this matter please contact our office at [insert telephone number]

Yours sincerely,