

UPDATE – Northwest Territories HIV/AIDS Manual for Health Professionals

Section 1: HIV and AIDS: Basic Facts

Page 6: Diagnostic Laboratory Testing for HIV, first and second bullets have been updated to read as:

- **Enzyme-linked immunosorbent assay (ELISA):** Usually the first screening for HIV infection.

False positive results do occur, therefore positive results are automatically subject to confirmatory testing.

A positive diagnosis of HIV follows two or more positive **ELISA tests confirmed by the [Geenius™ HIV-1/2 Antibody Differentiation Assay](#).**

Elisa tests are done at Stanton Territorial Hospital Laboratory. Positive results are sent to the provincial laboratory (via DKML) in Edmonton for confirmatory testing. Maximum TOT for a negative HIV result is 72 hours. TOT for a confirmed positive HIV result is now less than 10 days.

- **Western blot confirmation** has been replaced by the Geenius™ HIV-1/2 Antibody Differentiation Assay.



Northwest Territories
HIV/AIDS
Manual
for
Health
Professionals



Northwest
Territories Health and Social Services

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Introduction

In Canada and around the world, the number of people living with HIV infection is rising. In 2002, approximately 56,000 people were living with HIV in Canada; an increase of 12 % since 1999. Of that number, approximately 30% were unaware of their HIV status.¹ Without diagnosis those infected are unable to access available treatment strategies or necessary counseling to prevent the further spread of HIV. In the Northwest Territories the rate of HIV infection is comparable to the rest of Canada. However, the consistently high incidence of sexually transmitted infections, and the growth of the illicit drug trade, indicate a significant risk for an increase in the incidence of HIV.

The unique delivery of health care services in the NWT presents challenges for the care and treatment of those infected with HIV. Treatment is coordinated by the specialist physician. However, the effective use of antiretroviral drug therapy can increase survival and quality of life for infected individuals, and transform HIV infection into a chronic, manageable disease. The shift from the inpatient to the outpatient arena means family physicians, nurse practitioners and community clinic nurses are likely to be confronted with an increasing array of HIV-related health issues, including side effects of antiretroviral therapy, drug interactions, and patient adherence to treatment regimens. A further component to the management of HIV is the coordination of community based health, counseling, and social services, according to the needs of the infected individual.

This manual provides essential information regarding diagnosis, care, treatment and support for HIV infected individuals. **However, it is not meant to be comprehensive.** Wherever possible, web sites to access further and up to date information are provided. Questions regarding treatment should be directed to the internal medicine or pediatric specialist physician at Stanton Territorial Hospital. Questions regarding support services should be directed to the appropriate Health and Social Services Authority, or the Office of the Chief Medical Health Officer, GNWT Department of Health and Social Services.

In the absence of a cure for HIV infection, prevention is the most effective strategy for reducing the number of new cases. Health professionals play a key role in health promotion within the community. Included in the manual are reproducible fact sheets for use in patient education and community health promotion. Further assistance for community based health promotion is available through the Office of the Chief Medical Health Officer, GNWT Department of Health and Social Services.

1. Public Health Agency of Canada. HIV/AIDS Epi Updates, May 2005, Surveillance and Risk Assessment Division, Centre for Infectious Disease Prevention and Control, Public Health Agency of Canada, 2005



Section I

HIV and AIDS: The Basics

The Virus

Human Immunodeficiency Virus (HIV) is a retrovirus, a category to which only a few known viruses belong. The retroviral characteristic of HIV is its capacity to translate RNA into DNA, reversing the more common process that takes place in cells.

HIV is particularly devastating to the immune system due to its method of reproduction. A combination of two antigens allows the virus to attach itself to and infect T-cells. One important feature of the t-cell structure is the CD4 receptor site. The CD4 is a protein on the surface of the cells, and is the receptor site for HIV. When HIV successfully latches onto the CD4 site, it injects its core with the viral RNA and the reverse transcriptase. When the CD4 cell is activated, rather than performing its proper function, it makes and releases new HIV. This happens any time the immune system responds to an infection, allergen, or cancerous cell. Although new CD4 cells are constantly produced, HIV gradually dominates the system, leading to the progression of HIV disease. At the same time, the immune system becomes increasingly dysfunctional, resulting in the development of opportunistic infections, certain cancers, and **Acquired Immune Deficiency Syndrome (AIDS)**.

T-cells are the main target of HIV in the blood. However, HIV is capable of infecting other cells (macrophages, B-cells, monocytes) and of crossing the brain-blood barrier, infecting nervous system cells. Most immune cells cannot cross that barrier, which protects the brain and spinal cord tissues, allowing HIV to retreat where immune cells cannot follow.

There is a variety of strains of HIV. HIV-1 Strain B predominates in Canada (89.9% of samples analyzed). However, a wide variety of non-B strains have also been identified in Canada (10.1% of samples analysed).²

Modes of Transmission

HIV is spread when blood, semen, or vaginal fluids from an infected person enter another person's body. This may occur through:

- **Sexual Contact**
The virus may enter the body through a tear in the lining of the rectum, vagina, urethra or mouth.
- **Exposure to Infected Blood**
 - Injection drug use: shared needles, syringes or cotton
 - Tattooing and body piercing: shared needles
- **Mother to Child**
Vertical transmission may occur in pregnancy, delivery or breast-feeding. The risk of maternal - child transmission is greatly reduced through antiretroviral therapy.
- **Blood Products and Organ Transplants from an infected donor**
All donated blood is screened in Canada for HIV antibodies, and most blood products are heat-treated to destroy HIV. Blood donors are screened for risk factors.

² Public Health Agency of Canada. HIV/AIDS Epi Updates, May 2005. Surveillance and Risk Assessment Division, Centre for Infectious Disease Prevention and Control, Public Health Agency of Canada, 2005.



HIV Is Not Spread through:

- saliva, sweat, tears, urine, feces, or insect bites
- casual contact, such as sharing food, utensils, towels, bedding, toilet seats
- touching

Risk of Infection

Risk factors for HIV infection include:

- A man who has sex with other men
- Multiple sex partners, male or female
- A sex partner who has multiple partners, male or female
- Injection drug use, especially if sharing needles, syringes, cookers, or other equipment
- Sex partners who inject drugs
- A recent episode of a sexually transmitted infection
- Repeated episodes of sexually transmitted infections
- Being born to a mother infected with HIV
- Being breastfed by a mother infected with HIV

The **likelihood of transmission** of the virus during sexual contact also depends on the following:

- Consistent proper use of condoms
- Abrasions or sores on the genitals or rectum. These may be caused by STIs, rough intercourse, or overuse of spermicides.
- Resistance to HIV
- The stage of infection or the viral load of the partner who has HIV

For further information on transmission and risk behaviours refer to Section II, HIV Testing and Counseling.

The Stages of HIV Infection

The stages of HIV infection are defined by **clinical symptoms** and **viral load**.

1. Primary Infection / Acute Retroviral Syndrome

Upon infection, a burst of rapid HIV replication lasts approximately two to three months. Symptoms of acute retroviral syndrome are often mistaken for symptoms of another viral infection, such as influenza or mononucleosis.

Symptoms may include:

- Nausea or vomiting
- Diarrhea
- Enlarged lymph nodes
- Fever
- Headache
- Skin rash
- Sore throat
- Weight loss

Symptoms usually disappear on their own after 2 to 3 weeks.



A person in this acute stage usually **does not test positive for HIV**. Standard laboratory tests for HIV detect the presence of antibodies to the virus. **Seroconversion** may not occur for **up to 6 months** after infection. The period when infection has occurred and may be transmitted to others, but is not yet indicated by laboratory testing, is known as the **window period**.

2. Asymptomatic Infection

Following primary infection, many years with no signs or symptoms of illness may occur. For some, known as Non-progressors, this stage may last for 15 to 20 years.

Factors which can affect the speed of disease progression:

- genetics
- the strength of the virus
- the immune response to the virus
- basic health and nutritional status
- lifestyle factors, including substance abuse, addictions, poverty, smoking, ongoing risk behaviours
- initiation of antiretroviral therapy

3. Symptomatic Infection

When symptoms occur, they may initially be vague and hard to describe. HIV may be suspected if symptoms persist, or if a cause of symptoms cannot be identified. HIV may also be suspected when several of the following symptoms are present:

- | | |
|---|---|
| • chronic fatigue | • night sweats |
| • confusion or difficulty concentrating | • swollen lymph nodes |
| • dry cough | • personality changes |
| • diarrhea | • recurrent outbreaks of herpes simplex |
| • fever | • shortness of breath |
| • loss of appetite | • tingling, numbness, weakness in the limbs |
| • mouth sores | • yeast infection of the mouth (thrush) |
| • nail changes | • unexplained weight loss |

In addition, HIV may be suspected when a woman has at least one of the following:

- three or more vaginal yeast infections per year, unrelated to the use of antibiotics
- recurrent pelvic inflammatory disease (PID)
- abnormal pap test or cervical cancer

Symptoms of HIV specific to children also may include:

- delayed growth
- enlarged spleen

4. Acquired Immune Deficiency Syndrome (AIDS)

Left untreated, HIV progresses to AIDS, and ultimately to death. Progression to this stage may be delayed with effective use of antiretroviral drug therapy.

AIDS is diagnosed when the CD4+ cell count falls below 200 cells per microlitre of blood, and when one or more opportunistic infections or certain cancers develop.



AIDS Defining Illnesses include:

- Bacterial infections, such as tuberculosis, mycobacterium avium complex (MAC), or pneumocystis carinii pneumonia (pcp)
- Fungal infections, such as Candida overgrowth or cryptococcal meningitis
- Parasitic infections, such as cryptosporidiosis, toxoplasmosis
- Viral infections, such as cytomegalovirus, progressive multifocal leukoencephalopathy
- Cancers, such as non-Hodgkin's lymphoma, Kaposi's sarcoma, anal and cervical cancer

For further information on symptoms of HIV, HIV related illness and AIDS defining illness, refer to Section II, Management of HIV.

Diagnostic Laboratory Testing for HIV

HIV is most commonly diagnosed when antibodies to the virus are detected in the blood. **Tests to detect antibodies to HIV include:**

- **Enzyme-linked immunosorbent assay (ELISA):** Usually the first screening for HIV infection. False positive results do occur, therefore positive results are automatically subject to confirmatory testing.

A positive diagnosis of HIV follows two or more positive **ELISA tests, confirmed by a positive Western blot assay.**

Elisa tests are done at Stanton Territorial Hospital Laboratory. Positive results are sent to the provincial laboratory (via DKML) in Edmonton for confirmatory testing. Maximum TOT for a negative HIV result is 72 hours. TOT for a confirmed positive HIV result is 10 days.

- **Western blot:** This test distinguishes HIV antibodies from other antibodies that may react to the ELISA. A Western Blot is done to confirm the results of two positive ELISA tests. However, the Western Blot test can produce inconclusive results in some samples.
- **Indirect fluorescent antibody (IFA):** a test also used to confirm the results of an ELISA.

Molecular Diagnostic Tests include:

- **HIV RNA viral load test:** detects the genetic material (ribonucleic acid, or RNA) of HIV, rather than antibodies to the virus. It is used in the follow-up of an infant born to a mother known to be HIV positive. The infant will also be followed by HIV antibody testing at 12 - 18 months to demonstrate either sero-conversion (loss of maternal antibodies) or persistence of a positive antibody test.

Viral load test can also be used for suspected acute sero-conversion. In this case the viral load would only be performed in consultation with the virologist at ProvLab, Alberta and an infectious disease specialist.

Viral load test is also used in the **management of HIV disease** (refer to the Treatment Section).

- **HIV genotype test:** a test for resistance to antiretroviral drugs. This test requires referral to an HIV specialist.
- **DNA PCR for HIV:** A virologist may refer a sample to the National HIV reference laboratory for DNA PCR testing. This is done in response to unresolved serological results (ie. persistent indeterminate HIV antibody tests).



Screening for HIV using urine or saliva samples is currently not licenced in the NWT. Home blood test kits to detect HIV infection are currently not available in Canada.

Routine Prenatal Screening for HIV is recommended for all pregnant women. If there is a risk of repeated exposure, testing should be repeated throughout the pregnancy.

Routine HIV testing of pregnant women is not done in many **developing countries**. Parents or guardians of children born in or adopted from developing countries should be counseled on HIV testing for their children. (Refer to the Testing and Counseling Section of this manual).

Testing for HIV infection requires counseling.

For further information on prenatal testing, refer to Section II, HIV Testing and Counseling.

Refer to Appendix 6 for the Collecting and Handling of Specimens

HIV Stats at a Glance



HIV/AIDS Information Sheet

HIV in Canada

Source: Public Health Agency of Canada. HIV/AIDS Epi Updates, May 2005, Surveillance and Risk Assessment Division, Centre for Infectious Disease Prevention and Control, Public Health Agency of Canada, 2005

An estimated **56,000** people in Canada were living with HIV infection (including AIDS) at the end of 2002. This represents a 12% increase from the estimate of 49,800 at the end of 1999.

Of those 56,000, approximately **17,000**, or 30% are not aware of their infection.

HIV and the Aboriginal Population

Source: Public Health Agency of Canada. HIV/AIDS Epi Notes: Aboriginal Peoples. December, 2004

It has been estimated that **3,000 to 4,000** Aboriginal people in Canada were living with HIV (including AIDS) in 2002. This is an estimated 5% - 8% of all people living with HIV in Canada.

Aboriginal peoples make up a growing percentage of positive HIV reports and reported AIDS cases in Canada.

- In 1998, 18.8% of positive HIV test reports were among Aboriginal people. This increased to 25.3% in 2003.
- Before 1993, 1.2% of reported AIDS cases were among Aboriginal peoples. This increased to 13.4%

HIV/AIDS has a significant impact on Aboriginal women in Canada.

- Before 1993, females represented 11.9% of reported AIDS cases among Aboriginal peoples. In the year 2003, this percentage increased to 44.0%.
- During 1998-2003, females represented 44.6% of positive HIV test reports among Aboriginal peoples.

HIV in the NWT

Source: Northwest Territories Health and Social Services. Sexually Transmitted Infections: The Naked Truth. January, 2005

The rate of HIV infection is comparable to the rest of Canada.

STI data demonstrates unprotected sexual activity in the NWT. Consistently high incidence of STIs indicate the significant potential for HIV transmission.

- In 2005, NWT had the highest rate of gonorrhea in the country and the second highest rate of Chlamydia.
- Between 2000 and 2005, the rate of STI among 15-24 year olds increased by 30%.

HIV Prevention and Youth

Source: Public Health Agency of Canada. HIV/AIDS Epi Updates, May 2005, Surveillance and Risk Assessment Division, Centre for Infectious Disease Prevention and Control, Public Health Agency of Canada, 2005

A national study found approximately 60% of grade 9 and 11 students think there is a vaccine available to prevent HIV/AIDS. The same survey found 36% of grade 11 students think there is a cure for HIV/AIDS.

HIV/AIDS Frequently Asked Questions



HIV/AIDS Information Sheet

What is HIV/AIDS?

HIV stands for Human Immunodeficiency Virus, which is the virus that causes AIDS (Acquired Immunodeficiency Syndrome). The virus attacks the body's immune system, which is your defense against infections.

How is HIV/AIDS spread?

The virus is spread from an infected person to someone else when there is an exchange of body fluids such as blood, semen, or vaginal fluids.

This can occur during sexual intercourse or when needles are shared. A pregnant woman can infect her child at the time of birth, and afterward, during breastfeeding. Pregnant women are routinely tested for HIV.

How is HIV not spread?

HIV is not spread by everyday social contact. Touching, hugging and shaking hands with an infected person are safe. Pets and insects cannot spread HIV.

Some people worry that they can get HIV by donating blood, but this is not true. A new, clean needle is used every time.

Donated blood is always checked for HIV so the risk of getting it from a blood transfusion is very low.

How can I tell if I have HIV?

A simple blood test can tell you if you are infected with HIV. It's called the HIV antibody test. A positive test result means that you have been infected with HIV and that you can spread it to others. A negative result means that no antibodies to HIV were found in your blood at the time of testing. Most infections will be detected at three months, but HIV antibodies can take as long as six months to develop, so you may need to get tested more than once to be sure you don't have the virus.

AIDS is the last stage of HIV infection. Infected people may get infections such as an unusual and serious pneumonia, or certain types of cancers.

I think I could be infected with HIV. What should I do?

If you have taken chances, and are worried that you might be infected with HIV, go to a health clinic right away. The blood test for HIV will be done, and all your information will be kept private. A doctor or nurse can help you to understand about the test and ways to keep yourself safer.

If you have been exposed to HIV, then your sex partners and anyone with whom you have shared needles and syringes must be told that they also may have been exposed to the virus. They will have to be tested for HIV infection. Talk to the doctor or nurse about this - they can help.

How is HIV/AIDS treated?

There is no cure for HIV infection or AIDS at this time. The virus remains in the body for life. There are drugs that can slow the progress of HIV and can help those infected to live full and active lives for many years.



Section II

HIV Testing and Counseling

Rationale

Guidelines for the counseling and testing for HIV emphasize the need for early diagnosis and intervention, for the reduction of barriers to the process, and for routine screening of pregnant women. The three main goals of counseling and testing are:

- to ensure individual awareness of HIV status
- to link those who are infected, and those who are at risk of infection, with appropriate care and treatment according to need
- to prevent the further transmission of HIV

Early diagnosis of HIV infection is critical to the health of the infected person, and to controlling the spread of the virus. Studies indicate that with diagnosis and appropriate counseling, most patients reduce behaviours which place them and those around them at risk.³ Diagnosis is also the first step toward entry into medical care. Later diagnosis may allow for advanced immune suppression, and the development of opportunistic infections or other illness related to HIV. Early referral to the care of a specialist physician is essential to maximize the benefit of antiretroviral therapy.

HIV counseling should involve frank and open discussion on a variety of issues, including sexual practices, sexual history, relationships, substance abuse and addictions. Health professionals and patients alike may find required questioning awkward or difficult. For the health care professional it may be important to examine ones own values, beliefs and judgments regarding sexuality, sexual practices, and other high risk behaviours prior to counseling patients. This section outlines the procedures for pre and post HIV test counseling. Where possible, suggestions of phrases or questions are provided to assist the health professional in the counseling setting.

3. Gallant, Joel. HIV Counseling, Testing and Referral American Family Physician 70: 2 2004



Confidentiality

The persistent social stigma surrounding HIV/AIDS can be an impediment to counseling, testing, treatment, and prevention efforts. **Confidentiality** means personal information will not be shared outside of the established care team without the consent of the client. Diligence and respect for confidentiality is of particular importance when counseling and managing HIV in a community setting. In some cases, frequent and repeated assurance of confidentiality may be required.

Confidentiality is not a promise that the health care professional will be the only person to know a positive result. Information may be shared with other care providers for the benefit of the client, and with the client's informed consent.

Confidentiality and prevention of transmission are not exclusive. Informing others who have been exposed to the virus is an ethical and legal requirement. The Communicable Disease Regulations under the NWT Public Health Act give health professionals the authority to trace contacts of the person infected with HIV, and to advise them of the need for testing. For further information, refer to **Partner Notification and Contact Tracing** in this section.

Counseling for HIV

Responsibilities of the health care provider:

- Provide information about risks and risk reduction
- Refer for treatment or other services as indicated
- Listen and provide support
- Assist with partner identification and notification
- Refer for long term counseling if appropriate
- Ensure confidentiality
- Advocate if necessary

Responsibilities of the patient:

- Decide to be tested
- Return for test result and follow up
- Assess risks and choose behaviours
- Personal health and safety
- The health and safety of others
- Provide names of contacts

Factors to Consider

There are psychological and social factors which should be considered when counseling for HIV. The presence of any one of the factors listed below may affect how information is given, how the client responds and reacts in session, and how risk behaviours are addressed.

If factors inhibit the counseling process, several sessions may be required to complete the pre or post test protocols.

Table 1
When Not To Test

It is inappropriate to test under the following circumstances.

- An individual unable to provide consent due to alcohol or drug impairment, or cognitive deficiency.
- An individual under undue pressure by someone else, ie. a partner, a parent, an employer
- An individual in a depressed, suicidal, or anxiety state illness



Addictions

Alcohol and drug use can increase risk behaviours and adversely affect decision making. The issues underlying substance abuse, including violence in the home, sexual abuse, poverty, low self-esteem, etc. can impede behaviour change.

Fetal Alcohol Spectrum Disorder

Disorders and disabilities, such as FASD, which affect learning, the processing of information and decision making, should be considered when counseling.

Mental Illness

The health care provider must consider the patient's capacity to assess risk behaviours, and to cope with information provided.

Family Violence

Family violence can cause difficulties in relationships, including the ability to negotiate safer sex.

Sexual Abuse and Sexual Assault

Survivors of sexual abuse and sexual assault can have difficulty discussing sexual health and behaviour. Experience of sexual abuse can result in a sense of powerlessness and futility in sexual relationships.

Pre Test Counseling

Table 2 outlines the pre test counseling protocol. A detailed explanation follows.

Pre Test Counseling Detail

Information to be included in the pre test counseling session includes the following.

1. Clarify

- HIV testing and counseling are confidential.
- The test is for antibodies to HIV. It is not a test for AIDS.
- A negative test may mean no infection or that it is too soon after infection to detect antibodies. The window period may last 2 to 6 months.
- A positive test means infection with HIV.
- A positive test means the client is infectious through sexual contact, blood, or breast milk.
- Transmission risks:
 - Blood to blood
 - Sharing of needles or syringes
 - Sexual contact
 - Maternal child

Table 2
Pre Test Counseling Outline

Clarify

1. client/professional relationship
2. test description
3. window period
4. transmission



Discuss

1. personal risks
2. risk reduction



Explore

1. benefits of testing
2. risks of testing
3. support
4. consent



Explain

1. need to return for result and retest
2. post test counseling will follow result

BC Centre For Disease Control HIV Pre and Post Test Counseling Workshop 2004



- Transmission risks are not:
 - Casual contact (hugging, kissing, etc.)
 - Sweat, saliva, tears
- A positive test is reportable to the Office of the Chief Medical Health Officer

For further information and for fact sheets to be given to the patient, refer to Section I, HIV/AIDS: The Basics.

2. Discuss

- Specific risks to this case
- If pregnant, discuss availability of drug therapy to decrease the risk of mother to child transmission. **For further information on HIV in pregnancy, refer to Section III, Management of HIV.**
- Risk reduction behaviours:
 - Consistent and proper use of latex condoms
 - Protected sex
 - No sharing of needles, syringes, injection drug use equipment or tattooing equipment

3. Explore

- Patient benefits and risks of testing:
 - Early identification and treatment means staying healthy longer
 - Reduced risk of transmission
 - Peace of mind
 - Perceived losses, including rejection, discrimination, fears, life changes
 - Concerns over privacy in the community setting
- Coping strategies for either result:
 - Personal coping style and strengths
 - Identify personal, medical and community supports
 - Acknowledge the difficulty of the two week wait for result
- Patient's ability to deal with a positive result
 - Suicidal risk
 - Query postponement of testing
 - Referral for counseling before test result returns

4. Explain

- The patient must return to receive the result.
- If the patient does not return and the result is positive, efforts will be made to locate the patient.
- Waiting to be found is not acceptable, as a timely diagnosis is important for the patient and for others.
- If the test is positive, a confirmatory test will have already been done.
- Explain how to use a condom and give a copy of the "What You Need to Know About Condoms" information sheet located in the Prevention Section of this manual. **For further information on risk reductions and safer sex strategies, refer to Section V, Health Promotion for the Prevention of HIV.**
- Make the necessary follow up appointments and give an appointment card



How To Get The Information You Need

The counseling process requires frank discussions of a variety of issues, including sexual practices, sexual history, relationships, substance abuse and addictions. Health professionals and patients alike may find required questioning awkward or difficult.

Establish a secure and comfortable counseling environment.

- Close doors
- If voices can be heard through walls or doors, turn on a radio or stereo at a low volume.
- Be aware of relatives or friends of the patient who may be in the clinic at the time of the counseling session. If the patient is uncomfortable, arrange for a time when privacy is ensured.
- A desk between the health professional and patient may ease or increase awkwardness.

There are two ways to access information required for HIV counseling:

- Taking a sexual history. Refer to checklist in Appendix 1.
- Ask open ended questions, as suggested in Table 3.

Routine Screening for HIV in Pregnancy

Screening for HIV in pregnancy is on an opt-out basis. It does not require completion of the full pre test counseling protocol. Table 4 outlines the basic information which should be given to women prior to testing.

HIV Serology Interpretation

HIV antibody test results are reported as **Positive**, **Negative** or **Indeterminate**.

A **positive result** indicates the presence of HIV antibodies produced in response to HIV infection. It has undergone confirmatory testing.

A **negative result** indicates the absence of HIV antibodies. A person in the **window period** between the initial infection and the detection of antibodies may test antibody negative. **If there was risk of exposure to HIV in the 6 months prior to testing, repeat the HIV test after 3 to 6 months.**

Table 3
Open-ended Questions in Patient-Centered Counseling for Preventing HIV Infection

- What, if anything, are you doing that you think may be putting you at risk for HIV infection?
- What are the riskiest things you have done or are doing?
- If your HIV test comes back positive, how do you think you may have become infected?
- When was the last time you put yourself at risk for HIV infection? What was happening then?
- How often do you use drugs or alcohol?
- How do you think drugs or alcohol influence your HIV risk?
- How often do you use condoms when you have sex?
- When and with whom do you have sex without a condom? When with a condom?
- What are you doing currently to protect yourself against HIV infection? How is that working?
- Tell me about specific situations when you have reduced your HIV risk. What was going on that made that possible?
- How risky are your sexual partners or needle-sharing partners? For example, have they been tested for HIV recently?

Adapted from Centers for Disease Control and Prevention. Revised guidelines for HIV counseling, testing, and referral. MMWR Recomm Rep 2001; 50:17.

Table 4
Information for Pregnant Women Before HIV Testing

HIV is the virus that causes AIDS. HIV is spread through unprotected sexual contact and injected drug use. Approximately 25 percent of HIV-infected pregnant women who are not treated during pregnancy transmit HIV to their infants during pregnancy, labour and delivery, or breastfeeding.

A woman might be at risk for HIV infection and not know it, even if she has had only one sexual partner.

Effective interventions (ie. antiretroviral drug therapy) for HIV infected pregnant women can protect their infants from acquiring HIV and can prolong survival and improve the health of the mother and her child.

HIV testing is recommended for all pregnant women.

Services are available to help women reduce their risk of HIV infection, and to provide medical care and other assistance to those who are infected.

Adapted from Centers for Disease Control and Prevention. Revised Recommendations for HIV Screening of pregnant women. MMWR Recomm Rep 2001; 50: 63-86



An **indeterminate result** indicates the screening test is repeatedly reactive, but the confirmatory test yields results that are neither positive nor negative. This may be due to the window period, or reaction with agents in the testing product. **Retest is indicated.**

It is not recommended that a copy of the lab result be given to a client. An exception is a travel Visa request for HIV antibody testing. Proof of identification is required to release a laboratory report.

HIV Negative Result

Table 5 outlines the counseling protocol for a negative result. A detailed explanation follows.

Negative Result Counseling Detail

1. Interpret

- A negative result can still be stressful considering the window period.
- Review what a negative result represents, or ask for the patient's understanding of the results.
- **Suggestion:**

"What this means is that up to six months ago you were not infected with HIV. Up to two months ago you probably were not infected, but you may be one of the few people who take six months to make enough antibodies to test positive."

2. Risk Reduction

- **Suggestions to facilitate discussion of risk reduction:**

"Do you recall your most recent risk for HIV exposure? What happened?"

"Have you come across any difficult situations which made use of a condom (or clean needle) difficult or impossible?"

"What can you say to your about safer sex (or safer injection) practices?"

"What would help you reduce the risks you describe taking?"

Re-testing is recommended if the patient has risked exposure to HIV in the past 3 months. If the patient is likely to continue risk behaviours, screening for HIV more frequently or on a regular basis is appropriate.

Table 5 HIV Negative Result Counseling Outline

1. Interpret

- a. No infection or
- b. Assess risks within the past three months to determine if the window period may be in effect.



2. Emphasize Risk Reduction

- a. Safer sex practices
- b. Safer injection drug practices
- c. Healthy sexual relationships
- d. Proper use of a condom

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HIV Positive Result

Schedule approximately a **one hour visit** when expecting to give an HIV positive test result. Given the stressful nature of the result, it is best to give only **a minimum of essential information**, with plans for further information and counseling in follow-up.

The priorities for post test counseling are:

- Interpreting results
- Dealing with issues important to the client
- Discussing coping and support systems
- Scheduling follow-up and referrals

Table 6 outlines the counseling protocol for a positive result. A detailed explanation follows.

Positive Result Counseling Detail

1. Clarify

- Check the result and review the chart before seeing the patient.
- Verify you have the correct patient and the correct result.
- If possible, have a counselor on stand-by to deal with the patient's reaction.
- Reveal the result to the patient.
 - **Give the result right away, without any preamble.**
 - Show the patient the copy of the lab result.
 - **Suggested statement:**
"Your HIV result came back positive. This means you are infected with HIV."
 - Given the stressful nature of a positive test result, the patient's mind may close at this point. **This is a good time to remain silent.**
 - Wait for a reaction from the patient to indicate the direction to proceed.
 - **Suggested questions:**
"Did you expect this result?"
"What is the main thing on your mind right now?"
"Do you remember what a positive result means?"
 - Explain that confirmation tests to rule out false-positives have been done.
- Assess whether the patient wishes to end the session here, or is willing to go on. If the session ends, schedule a follow-up appointment for as soon as possible.

Table 6
HIV Positive Result Counseling Outline

Clarify

- a. ID of client and test
- b. Interpretation of result
- c. Client-centered approach



Discuss

- a. Client concerns
- b. Partner notification



Explore

- a. Need for retest
- b. Risk reduction
- c. Supports: personal, medical, community



Explain

- a. Retest procedure
- b. Confirmatory testing
- c. Expansion of the care team

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2. Discuss

- Identify and work with the patient's main concerns.
- **Common patient questions are:**
 - "Do I have AIDS?"*
 - "How long will I live?"*
 - "How do I tell my partner?"*
 - "Who has to know?"*
- Emphasize a positive HIV test does not mean the patient has AIDS, or the patient is ill now.
"It is possible to remain healthy for many years".
- Emphasize the patient is infectious and is responsible for the health and safety of self and others.
- Assist the patient to list those with whom they have had **unprotected and protected** sex, or with whom they have shared needles. Contacts should be listed for the previous **6 months**, or longer if necessary. Contacts will be advised of exposure to HIV and the need for testing.
- Partner notification is essential, but highly stressful.
 - Consider the support of family or friends.
 - Offer to schedule an appointment for the patient and partner together, to be followed with individual appointments for both.

For further information refer to Partner Notification in this section.

3. Explore

- Offer to retest if the patient does not believe the result.
- Help the patient to identify a personal support network.

Suggestions:

- Ask if the patient told anyone they were having the test.
- Review the pros and cons of telling too many people.
- Consider the patient's work place.

For further information refer to Section IV, Support for the Person Living With HIV.

• **Important questions to ask:**

- "What are you going to do when you leave this building?"*
- "What will you do tonight?"*
- "If you are feeling stressed tonight, do you have someone you can talk to?"*

- Educate the patient on the prevention of the spread of HIV. Remember the patient may not have disclosed all risk behaviours.
- Stress that two people who are both HIV positive may have different strains of HIV. Therefore unprotected sex or needle sharing may risk further infection.

4. Explain

- Refer to specialist physician. **For further information on the referral process, refer to Section III, Management of HIV.**
- Screen for syphilis, hepatitis C, hepatitis B, tuberculosis, other STIs.
- Other possible referrals:
 - Alcohol and drug support service counselors
 - Community service organizations
 - Psychologist or counselors
 - Clergy
 - Community based exercise programs
- **For further information refer to Section IV, Support for the Person Living With HIV.**
- Give the HIV/AIDS help line phone number and other relevant information sheets.



Reporting HIV Infection

Confirmed cases of HIV infection must be reported to the Chief Medical Health Officer, in accordance with the Communicable Disease Regulations. An HIV Report form will be forwarded following initial notification.

In the event of an unclaimed positive HIV result, every effort should be made to locate patient. If the patient cannot be located, contact the Office of the Chief Medical Health Officer.

If a person infected with HIV behaves in a manner that endangers the health and safety of others, refer the case to the Office of the Chief Medical Health Officer. If required, a Progressive Public Health Intervention will be initiated.

Partner Notification and Contact Tracing

Partner notification and contact tracing must begin immediately following an HIV positive result. The NWT Public Health Act gives the health care provider authority to undertake contact tracing, and to inform those exposed to the virus.

Steps for Contact Tracing

1. Inform the patient of what must occur. For some individuals, issues of disclosure and/or concern for others can cause anxiety and stress. Patients who test positive for HIV should be advised of their responsibility to disclose their HIV status to anyone they have engaged with in activities that had a significant risk of HIV transmission. **For further information, refer to Section IV, Support For Those Living With HIV.**
2. **Suggested statements:**
"We have a responsibility to ensure that all sexual contacts of HIV be notified so they can be tested and treated. This is important because people can be HIV positive and not know it. They could unknowingly pass the infection to others."
"I need to collect information on all your partners in the past 6 months (or more) so I can notify them help them get tested."
"Your identity will be protected. We never reveal who named a person or the date of the sexual contact."
3. Record contact information on the NWT Sexually Transmitted Diseases Report.
4. Give the patient the option to notify their own contacts. The patient must provide confirmation that notification has occurred. If notification has not occurred within **1 week**, the health care professional will undertake notification of contacts.



Methods of Notification

Telephone

- Verify you are speaking to the right person.
- Identify yourself
- State what you have to discuss is personal and confidential. Ask if it is an appropriate time to talk.

Written Notice

- A simple note consisting of a name and telephone number to call for an urgent personal message. Because mail is often opened by others, no mention of HIV contact should be made.
- The return address on the envelope should not identify the nature of the content.

Visit

- Identify yourself only to the contact, if possible.
- Verify you are speaking to the right person.

What to Say

1. *"We have information that you may have been exposed to the virus that causes HIV and advise that you should be tested to know if you have been infected."*
2. Assure the contact of confidentiality.
3. Be clear about where to go to be tested and counseled. Schedule an appointment.

If on verbal notification there is resistance to testing and counseling, provide a written notification to the contact. Document the date of notification on the NWT Sexually Transmitted Disease Report. Ultimately the decision for testing and counseling rests with the contact. However, if there are concerns for the safety of others, refer the case to the Office of the Medical Health Officer.

Disclosure and Failure to Disclose

See Section IV: Support for The Person Infected With HIV.

Should I Be Tested For HIV?



HIV/AIDS Information Sheet

Should I be tested for HIV/AIDS?

- Are you uncertain about your sexual partners' sex practices or drug use?
- Have you had sexually transmitted diseases?
- Have you shared needles to take drugs or other substances?
- Have you ever had anal sex?
- Have you had sex with someone infected with HIV/AIDS?

If you answered "yes" to any of those questions, you should be tested.

Why should I be tested?

- To protect your health
- You can find out whether or not you can infect others.
- Regardless of the result, testing often increases a person's commitment to good health habits.
- If you do not have HIV, you may feel less anxious and take steps to protect yourself.
- If you do have HIV, it would allow you to begin treatment earlier as a means to slow the spread of HIV in your body and keep you from getting HIV-related illnesses. Many people who were diagnosed in the early stages of HIV infection can live healthy lives longer. It is most important to be tested and find out early, before you become ill.
- Women and their partners considering pregnancy can take advantage of treatments to potentially prevent transmission of HIV to the baby.

I don't think I want to know if I have HIV.

It's better to find out now. It's easier to cope with HIV when you are healthy than when you are ill. You can also take advantage of support and other services that can help you to cope with HIV. You do not have to deal with it alone.

The counseling that is part of the HIV test will give you the information and support you need to assess your risk and deal with test results. Make sure you get the counseling and information you need before you are tested.

I don't want to be tested because I don't want people to find out.

The doctor or nurse understands your need for privacy and confidentiality. Steps will be taken to ensure that your choice to be tested and the results of your test are kept private.

Pros and Cons of HIV Antibody Testing



HIV/AIDS Information Sheet

1. Medical Treatment and Care

- First step in the assessment process
- A baseline - other tests can be used to determine the stage of HIV infection
- Decisions related to clinical monitoring and care, as well as pregnancy

2. Prevention of the Transmission of HIV

- Information and counseling related to safer sex and drug-using behaviour
- Referral for related issues, including addictions, abuse/assault, income, etc.

3. Decision-Making in Relationships

- Starting a new relationship - a need to know status
- Telling partners (recent and past) about HIV status
- Reinforcement of need for consistent condom/dental dam use
- Planning for children, particularly if HIV positive
- Previous behaviours, including injection drug use, sexual identity and practices

4. Management of Stress

- Need to discuss personal concerns
- Reduce the stress of unknown HIV status
- Increase in stress and psycho-social challenges upon positive result

5. Implications for Travel and Life Insurance

- Requirement for work visa
- Requirement of some insurance companies

6. Planning of Services

- Reportable disease
- Helpful to the allocation of health and social services resources



Appendix A - Checklists

HIV Pre-Test Counseling Checklist

1. Assess the patient's risk factors for HIV infection.

- ☐ Contact of known HIV-positive person
- ☐ Number of sexual partners _____ in last 6 months _____ in lifetime _____
- ☐ Sex with men:

anal sex _____	with a condom _____	without a condom _____
oral sex _____	with protection _____	without protection _____
vaginal sex _____	with a condom _____	without a condom _____
- ☐ Sex with women:

vaginal sex _____	with a condom _____	without a condom _____
oral sex _____	with protection _____	without protection _____
anal sex _____	with a condom _____	without a condom _____
- ☐ Sex with both
- ☐ Needle sharing for injection drug use (including steroids)
- ☐ Body piercing/tattoos
- ☐ History of STI or Hepatitis B or C
- ☐ History of transfusion of blood/blood products before 1985

2. Assess the window period.

- ☐ Test #1: baseline (if indicated)
- ☐ Test #2 3 months after the most recent risk behaviour
- ☐ Test #3 6 months (if indicated)

3. Provide information.

- ☐ Test for antibodies to HIV
- ☐ Confidentiality, record keeping and reporting of a positive result
- ☐ HIV transmission
- ☐ Meaning of a negative test and the window period
- ☐ Meaning of an indeterminate result and seroconversion
- ☐ Meaning of a positive result
- ☐ Risk reduction
- ☐ Need for partner testing

4. Obtain informed consent.

- ☐ patient concerns
- ☐ Support system in case of a positive result

5. Provide support and arrange follow-up.

- ☐ Appointment for test result
- ☐ Referral
- ☐ Partner notification



HIV Post-Test Counseling Checklist

1. Negative Result

- ☐ Ensure the result belongs to the patient
- ☐ Interpret the test result and limitations of the window period.
- ☐ Discuss the need for repeat testing.
- ☐ Review risk reduction behaviours.
- ☐ Discuss the need for partner testing.
- ☐ Discuss the need for referral for help with other issues.

2. Positive Result

- ☐ Ensure the result belongs to the patient.
- ☐ Evaluate the patient's psychological response to the diagnosis.
- ☐ Interpret the test result.
- ☐ Clarify the difference between HIV and AIDS.
- ☐ Help the patient identify a personal support network.
- ☐ Review risk reduction.
- ☐ Obtain permission to contact the patient.
- ☐ Assess the degree of urgency related to starting partner notification or treatment.
- ☐ Reinforce the patient's right to privacy.
- ☐ Discuss treatment options.
- ☐ Discuss pregnancy issues and choices.
- ☐ Refer for medical and social services.
- ☐ Schedule follow-up.

Sexual History Checklist: Female

Surname:		Given Name(s):		Phone: (H) (W)	
HCP#:				DOB:	
Marital Status: S M D CL		Gravida/Para:			
ALLERGIES:				Physician:	
Medical/Surgical History:					
Blood Transfusion History:					
Age of 1 st Sexual Intercourse:		Sex With: <input type="checkbox"/> Men <input type="checkbox"/> Women <input type="checkbox"/> Both <input type="checkbox"/> IDU <input type="checkbox"/> Sex Trade Worker <input type="checkbox"/> Steady <input type="checkbox"/> Casual			
Previous STD:		LMP:	LMP:	LMP:	LMP:
EXAMINATION & FUNCTIONAL INQUIRY		DATE:	DATE:	DATE:	DATE:
CHIEF COMPLAINT	Symptoms, Screening, HIV Testing, Follow-up, Other				
No. of Partners	Past 6 mos/ Lifetime				
Date of Last Sexual Exposure	Date of Exposure Use of protection				
Type of Sexual Activity	Oral/ Vaginal/ Anal <input type="checkbox"/> Oral <input type="checkbox"/> Anal <input type="checkbox"/> Vaginal	<input type="checkbox"/> Oral <input type="checkbox"/> Anal <input type="checkbox"/> Vaginal	<input type="checkbox"/> Oral <input type="checkbox"/> Anal <input type="checkbox"/> Vaginal	<input type="checkbox"/> Oral <input type="checkbox"/> Anal <input type="checkbox"/> Vaginal	<input type="checkbox"/> Oral <input type="checkbox"/> Anal <input type="checkbox"/> Vaginal
Condom Use	<input type="checkbox"/> Never <input type="checkbox"/> Always <input type="checkbox"/> Sometimes	<input type="checkbox"/> Never <input type="checkbox"/> Always <input type="checkbox"/> Sometimes	<input type="checkbox"/> Never <input type="checkbox"/> Always <input type="checkbox"/> Sometimes	<input type="checkbox"/> Never <input type="checkbox"/> Always <input type="checkbox"/> Sometimes	<input type="checkbox"/> Never <input type="checkbox"/> Always <input type="checkbox"/> Sometimes
Contraception	Type of Birth Control				
Uses/Shares Needles or Works		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Substance Use:	IDU/ Alcohol Other				
Trauma	History of Sexual Abuse or Assault				
Eyes	Jaundice				
Mouth/Throat	Sores/Lesions				
Skin	Rashes/Lesions				
Abdomen	Pain/ Masses				
Perineum/Vulva	Masses/Lesion/Itch Inflammation				
Urethra	Burning/Frequency Urgency				
Perianal/Anus	Discharge/Pain Lesions/Inflammation				
Lymphadenopathy	Groin/ Other				
Vagina	Discharge/Odor Bleeding Menstrual Irregularities				
Cervix	Lesions Discharge/IUD String/ Dyspareunia				
Bimanual	Adnexal/Ovarian Tenderness				
Immunization	Immunization Status				
Partner's HIV Status					

Sexual History Checklist: Male

Surname:		Given Name(s):		Phone: (H) (W)	
HCP#:				DOB:	
Marital Status: S M D CL		ALLERGIES:		Physician:	
Previous STD's:					
Medical/Surgical History:					
Blood Transfusion History:					
Age of 1 st Sexual Intercourse:		Sex With: <input type="checkbox"/> Men <input type="checkbox"/> Women <input type="checkbox"/> Both <input type="checkbox"/> IDU <input type="checkbox"/> Sex Trade Worker <input type="checkbox"/> Steady <input type="checkbox"/> Casual			
EXAMINATION & FUNCTIONAL INQUIRY		DATE:	DATE:	DATE:	DATE:
CHIEF COMPLAINT	Symptoms, Screening, HIV Testing, Follow-up, Other				
No. of Partners	Past 6 mos/ Lifetime				
Date of Last Sexual Exposure	Date of Exposure Use of protection				
Type of Sexual Activity	Oral/ Vaginal/ Anal	<input type="checkbox"/> Oral <input type="checkbox"/> Anal <input type="checkbox"/> Vaginal	<input type="checkbox"/> Oral <input type="checkbox"/> Anal <input type="checkbox"/> Vaginal	<input type="checkbox"/> Oral <input type="checkbox"/> Anal <input type="checkbox"/> Vaginal	<input type="checkbox"/> Oral <input type="checkbox"/> Anal <input type="checkbox"/> Vaginal
Condom Use	<input type="checkbox"/> Never <input type="checkbox"/> Always <input type="checkbox"/> Sometimes	<input type="checkbox"/> Never <input type="checkbox"/> Always <input type="checkbox"/> Sometimes	<input type="checkbox"/> Never <input type="checkbox"/> Always <input type="checkbox"/> Sometimes	<input type="checkbox"/> Never <input type="checkbox"/> Always <input type="checkbox"/> Sometimes	<input type="checkbox"/> Never <input type="checkbox"/> Always <input type="checkbox"/> Sometimes
Uses/Shares Needles or Works		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Substance Use:	IDU/ Alcohol Other				
Trauma	History of Sexual Abuse or Assault				
Eyes	Jaundice				
Mouth/Throat	Sores/Lesions				
Skin	Rashes/Lesions				
Abdomen	Pain/ Masses				
Urethra/Penis	Burning/Frequency Urgency				
Penis/Scrotum Testicles	Pain/Swelling/Masses Testes Descended				
Perianal/Anus	Discharge/Pain Lesions/Inflammation Itch				
Lymphadenopathy	Groin/ Other				
Immunization	Immunization Status				
HIV Symptoms: fatigue, night sweats, weight loss, diarrhea, fever, recurrent yeast infections, seroconversion illness					
Partner's HIV Status					
Nursing Diagnosis					



Appendix 2

Standard Precautions

All staff are encouraged to take the following precautions in clinical situations and at work where applicable:

- Wear protective gloves when performing any procedure which may bring you into contact with blood or body fluids
 - venipuncture, swabs, pap smears, etc.
- Discard used needles and sleeves into puncture-resistant containers.
 - Do not recap used needles.
 - Fill "sharps" containers only as far as the "fill" line and dispose of same according to Biohazardous Waste Policy.
- Dispose of all needles, syringes, vials, ampoules, and clinical glass (glass contaminated with blood, body fluids or chemicals) and any other clinical item that could cause a cut, puncture or abrasion, in an approved "sharps" container.
- Wash hands immediately and thoroughly with soap and water:
 - If they become contaminated with blood or body fluids
 - After removing gloves and before leaving the exam room, and/or
 - Before and after any client contact
- Wear a mask and/or protective eye wear where splashing or aerosolization of body fluids is anticipated.
- Wear a gown or lab coat when specimens are likely to soil clothing.
- Transport all specimens in clean, secure containers.
- Wear gloves to clean the outside of a soiled specimen container with a disinfectant.
- Transport slides and blood tubes in non-breakable metal containers.
- Avoid pelvic exams if you have significant burns or cuts on your hands.
- Between clients, clean equipment, counter tops or examination table with a disinfectant especially when there is obvious contamination with body fluids.
- Immediately clean up all spills of blood or body fluids with appropriate disinfectant. Gloves are to be worn and paper towels discarded in the garbage.
- Refer to the protocol, **Handling and Transport of Infectious and Hazardous Materials. (CDC Manual)**



Appendix 3

NWT Public Health Laws Pertaining to HIV and AIDS

NWT Law	<p>Public Health Act, RSNWT 1988, Chapter P-12. Disease Registries Act, RSNWT 1988, Chapter C-7 (Supp). Communicable Disease Regulations, RRNWT 1990, Chapter P-13. Reportable Diseases Order, RRNWT 1990, Chapter D-3. Available on the Canadian Legal Information Institute Web site:http://www.canlii.org/nt/sta/index.html</p>
Reporting of HIV and AIDS	<p>Every person who believes or has reason to believe or to suspect that another person is infected or has died from a communicable disease shall notify the Chief Medical Health Officer of this fact by the quickest means available and provide him or her with any further information that the Chief Medical Health Officer may require. (Communicable Disease Regulation, section 3)</p> <p>Where a medical practitioner or nurse has received a positive test result for one of his or her patients or a medical practitioner, nurse or dentist has reason to believe or suspect that one of his or her patients is infected with a communicable disease, the medical practitioner, nurse or dentist shall: (a) within seven days send a written report to the Chief Medical Health Officer in a form approved by the Chief Medical Health Officer; (b) advise the patient to adopt the specific control measures for the communicable disease in question; (c) provide the patient with the necessary information to comply with the control measures. (Communicable Disease Regulations, section 4(1))</p> <p>A health care professional [medical practitioner, dentist, registered psychologist, nurse] who examines, diagnoses or treats a person in respect of a reportable disease shall provide the Registrar of Disease Registry with a report, including: (a) name, address, sex and age of the person; (b) a description of the reportable condition and the state of the reportable disease; (c) any other information the Registrar considers important. (Disease Registries Act, section 3)</p>
Contact Tracing Partner Notification	<p>"contact tracing" means: (a) identifying the contacts of a person who is or who, on reasonable grounds, is suspected of being infected with a communicable disease, (b) advising any contact identified to adopt the specific control measures for the communicable disease in question, and (c) providing the contact with the necessary information to comply with the measures. (Communicable Disease Regulation, section 1) 5-20 Public Health Laws</p> <p>Within seven days of giving notice of a positive test result, the medical practitioner or nurse shall, in accordance with guidelines provided by the Chief Medical Health Officer, carry out contact tracing or surveillance of those aspects of the occurrence and spread of the communicable diseases that are pertinent to the effective control of the disease, or request the Chief Medical Health Officer to carry out the contact tracing or surveillance. (Communicable Disease Regulation, section 4(1)(e))</p>
Powers to Address High Risk Behaviours	<p>Where a person who is infected with a communicable disease refuses or neglects or is unable to comply with the instructions received from the Chief Medical Health Officer, the Chief Medical Health Officer, where satisfied that the conduct of that person is liable to endanger public health, may cause that person to be removed for isolation and any treatment that may be indicated, to a hospital or place of isolation (Communicable Disease Regulation, section 14(1))</p>



Section III

Management of HIV

Rationale

The most effective treatment for HIV is **Highly Active AntiRetroviral Therapy (HAART)** - combinations of antiretroviral medications that aim to control viral load. Although HIV infection cannot yet be cured, effective drug therapies can help to control the replication of the virus, promote significant immune restoration, and slow or even reverse the disease progression. HAART has practically transformed HIV infection into a chronic, manageable disease, increasing survival and quality of life for infected individuals.

There is a large and ever growing number of possible therapeutic combinations. Concerns about the long-term toxicity of the drugs, and the challenges of stringent regimens have made decisions about which therapy to use, and when to begin it, change it, interrupt it, or stop it more difficult. Treatment guidelines are complex, with frequent modifications to reflect new information. Management of a patient infected with HIV should therefore be coordinated with the advice of a specialist physician. This section provides a **basic outline** of HIV treatment, with suggested internet resources for further up to date information.

Effective treatment of HIV infection is dependent on consistent adherence to prescribed HAART. A large pill burden, multiple daily doses, and adverse events are some of the complexities that negatively impact patient adherence. Patient education and support are essential, along with counseling, substance abuse treatment, and health promotion for basic physical, mental and sexual health.



On Positive Test Result

Referral Process

Treatment of HIV must be coordinated with the advice of a specialist physician and individualized to the particular needs of the patient. Adult HIV patients should therefore be referred to the internal medicine specialist, who will work in consultation with an HIV specialist. Pediatric HIV patients should be referred to the pediatrician, who will work in consultation with a pediatric infectious disease or HIV specialist.

The family physician or community health nurse may be responsible to coordinate all interventions related to primary health care, education and counseling. Questions regarding treatment are directed to Internal Medicine or Pediatrics at Stanton Territorial Hospital.

Upon referral to the specialist, results of the CD4 cell count and a viral load test should be submitted with any other laboratory and x-ray results. Handling of samples is outlined in Appendix 6. Note time constraints on the RNA sample.

Follow-up with the specialist physician is normally scheduled for every 3 to 6 months, and requires the result of a CD4 cell count.

Any concerns related to ongoing risk behaviours should be directed to the Office of the Chief Medical Health Officer.

History and Physical Examination

Adapted from the BC Health Guide

The history and physical examination for the HIV positive patient is directed to the assessment of general health status and the search for HIV related illness.

On positive result, a thorough **medical history** should assess the following:

- Any current or previous HIV-related illnesses
- Any medication allergies
- Up to date immunizations
- Previous hospitalization for illness or surgery

Suggested Questions:

- *Do you have an increased risk for developing HIV? You have increased risk if you:*
 - Are a man who has sex with men (homosexual or bisexual).
 - Have multiple sex partners (male or female)
 - Inject drugs or steroids, particularly using shared needles, syringes, cookers, or other injection equipment.
 - Have a sexual partner who injects drugs
 - Have had a recent episode of an STI
- *Have you ever had symptoms that might indicate illness, such as fever, weight loss, shortness of breath, or prolonged/chronic diarrhea?*
- *Have you ever had tuberculosis, fungal or yeast infections, liver infection (hepatitis), cold sores (oral herpes), or any sexually transmitted infections? All of these diseases can present problems for people who are HIV positive.*

Table 1
Common HIV Related Illnesses

Bacterial Vaginosis
Cryptococcal Meningitis
Cryptosporidiosis
Cytomegalovirus (CMV)
Fungal Infections
Kaposi's Sarcoma (KS)
Mycobacterium Avium Complex (MAC)
Pneumocystis Carinii Pneumonia (PCP)
Toxoplasmosis
Tuberculosis



Physical Examination

- **Temperature:** Fevers are common in people who have HIV, and may be a sign of opportunistic infection. Temperature should be checked at every visit.
- **Weight:** A loss of 10% or more of body weight is considered wasting syndrome, which is one indicator of AIDS. Adequate nutritional counseling may be required. Weight should be checked at every visit.
- **Eyes:** Cytomegalovirus (CMV) retinitis is a common complication of HIV. It occurs more frequently in people with a CD4 cell count of less than 100 cells per microlitre. Symptoms include seeing floaters, blurred vision, or loss of vision. Referral to ophthalmology every 3 to 6 months may be considered if the CD4 cell count is below 100 cells per microlitre.
- **Mouth:** Oral yeast infections (thrush) and mouth sores are common in HIV infection. The mouth should be examined at every visit. A dental examination should occur at least twice per year.
- **Lymph Nodes:** Lymphadenopathy (lymph node enlargement) is not always caused by HIV alone. A biopsy may be considered when lymph nodes are getting larger or are asymmetrical. Lymph nodes should be examined at every visit.
- **Abdomen:** The abdominal examination may show hepatomegaly (enlarged liver) or splenomegaly (enlarged spleen). These conditions may be caused by new infections, complications of therapy, or may indicate cancer. Abdominal examination should occur at every visit.
- **Skin:** Examination may reveal treatable conditions ranging in severity from seborrheic dermatitis to Kaposi's sarcoma. Skin should be examined every 6 months, or whenever symptoms develop.
- **Gynecologic:** Women infected with HIV have more cervical cell abnormalities than those not infected. In the first year following diagnosis, two Pap tests should be taken. If results are normal, schedule one Pap test per year. If results are abnormal, schedule a Pap test every 6 months.

Follow-up examinations depend on the findings of the physical examination, the initial viral load and CD4 cell count measurements. Schedule follow-up examinations at least every 6 months. Increase the frequency of follow-ups upon commencement of HAART.

Immunization and Tuberculosis Testing

Refer all patients to Public Health for the following vaccines:

- DPT (Td): routine use
- IPV: routine use
- Hib: routine use
- Influenza: recommended
- Pneumococcal: recommended
- Meningococcal: use if indicated
- Hepatitis A: recommended
- Hepatitis B: recommended

Mantoux Test: All patients to have baseline tuberculosis screening. If no history of previous positive Mantoux, do a two-step Mantoux baseline and yearly. Mantoux test is not helpful if CD4 is less than 200.

Laboratory Testing

Laboratory testing is directed toward assessment of immune status and potential complications of therapy.



Lab tests can be used to assess the impact of HIV infection on the immune system. There are two tests which measure the progress of HIV: **CD4 Cell Count** and **Viral Load**. For both tests it is a sequence of results which guide treatment decisions. A single reading is more meaningful within the context of previous and subsequent results.

CD4 Cell Count

CD4 cells direct the body's immune response. As HIV infects and destroys CD4 cells, the body is less able to suppress HIV, and the dysfunctional immune system is less able to control opportunistic infections.

In management of HIV infection, a CD4 cell count is usually taken **every 3 to 6 months**. More frequent counts may be required during and after times of stress or illness, or at any time when the viral load shows significant increase.

Because many factors can affect immune cell counts on any given day, minor changes may not be meaningful. A substantial decline in CD4 absolute count or percentage (roughly 50 - 100 cells or more, or 3 or more percentage points), requires follow-up testing.

When a CD4 cell count is inconsistent with previous tests, consider possible **factors which can affect immune cell counts**, including:

- Illness
- Allergies
- Oral contraceptives
- Lack of sleep
- Acute stress or periods of depression
- Street drug or alcohol use
- Corticosteroid drugs, such as prednisone
- Smoking

Consider rescheduling a blood test when the patient:

- Has an active infection, such as a cold, flu or outbreak of herpes
- Has recently stopped or started smoking
- Has had trouble sleeping for more than a few days

Viral Load Test

Results are reported as the number of copies of HIV RNA in a milliliter of blood (copies/ml). Viral load tests can measure as few as 20 or more than 1 million copies in the blood sample. Maximum suppression of viral replication below the level of detection (<50 copies/ml) is necessary to preserve immune function and to guard against development of drug resistant variants.

A change in viral load test results is an important measure of the effectiveness of drug therapy. The initial goal of treatment is to reach an undetectable viral load within 4 - 12 weeks of beginning a HAART regimen, and to maintain that status long term.

A viral load which stays above the detectable level, or above a significant threshold may be caused by:

- Lack of adherence to a drug regimen
- Malabsorption of drugs
- Ineffectiveness of the drug combination

Viral load is an expensive molecular diagnostic assay. In general, it is performed not more than four times a year for a patient. Some clinical exceptions do require more frequent monitoring.



Principles of Treatment

The precise point at which physicians will initiate a drug therapy varies. It is most often based on an assessment of one or more of the following:

- CD4 count
- Viral load
- Presence of HIV-related symptoms
- A person's capacity for adherence to a drug regimen

When considering treatment, more frequent testing of viral load and CD4 cell counts are undertaken to monitor trends.

There is no best starting combination of drugs. The goal is to drop the viral load as low as possible and raise the CD4 count as high as possible. In choosing, a specialist physician will consider which combination has proven potency, tolerable side effects, and a most likely to be successful dosing schedule. No one combination will remain effective for the duration of HIV illness.

On-line resources for up to date treatment guidelines are listed in Appendix 4.

Drug Classes

Antiretroviral drugs used in HIV management fall into three classes:

- Nucleoside/tide Reverse Transcriptase Inhibitors (NRTIs)
- Protease Inhibitors (PIs)
- Non-nucleoside Reverse Transcriptase Inhibitors (NnRTIs)

Table 2 Antiretroviral Agents Used to Treat HIV Infection	
Category	Drugs
Nucleoside/tide Reverse Transcriptase Inhibitors (NRTIs)	Abacavir (Ziagen) Abacavir/lamivudine/zidovudine (Trizivir) Didanosine ddi (Videx, Videx EC) Emtricitabine (Emtriva) Lamivudine, 3TC (Epivir) Lamivudine/zidovudine (Combivir) Tenofovir (Viread) Stavudine, d4T (Zerit) Zalcitabine, ddC (HIVID) Zidovudine, AZT (Retovir)
Protease Inhibitors (PIs)	Amprenavir (Agenerase) Atazanavir (Reyataz) Fosamprenavir (Lexiva) Indinavir (Crixivan) Lopinavir/ritonavir (Kaletra) Nelfinavir (Viracept) Ritonavir (Novir) Saquinavir (Fortavase) Saquinavir (Invirase)
Non-nucleoside Reverse Transcriptase Inhibitors (NnRTIs)	Delavirdine (Rescriptor) Efavirenz (Sustiva) Nevirapine (Viramune)
Entry Inhibitor	enfuvirtide (Fuzeon, T-20)

A detailed description of each drug listed here can be found at the AIDS Treatment Data Network website <http://www.atdn.org/sf.html>



Related Drugs

Hydroxyurea (Hydrea): An anti-cancer drug that may enhance the performance of certain HIV drugs.

Thalidomide: Thalidomide has been found to inhibit replication of HIV. It has also been found to be effective in the treatment of mouth ulcers resulting from HIV infection.

Possible HAART Combinations

- A protease inhibitor based regimen: combines PIs with NRTIs.
- A protease sparing regimen: combines NRTIs with NnRTIs.
- A two-class sparing regimen: combines three NRTIs
- A once-daily therapy

Combination Issues

Drug interactions require careful monitoring. The potential for negative drug interactions increases with every medication used for HAART, for treatment or prevention of opportunistic infections, and for treatment of side effects and other symptoms. Use of over the counter agents, herbs, or recreational drugs must also be considered.

If antiretroviral drugs are not taken correctly with respect to other medications, supplements and meals, a reduction by as much as 80% in bioavailability is possible.

Drug interactions may not always be obvious. An interaction may occur immediately upon the combination of drugs, or weeks or longer after.

Steps To Ensure Safe Combinations

- Ensure all caregivers are aware of everything being taken, including prescription drugs, over the counter therapies, herbs, nutritional supplements or recreational drugs.
- Take all medications, natural remedies and substances to clinical appointments.
- Review all medications with each prescription change.

Questions to ask when starting HAART

- Do you have other health conditions that might complicate your HIV treatment? Consider depression, anxiety, alcohol, or recreation drug use.
- How do you feel about taking medication on an absolute and precise schedule?
- Do you understand all aspects of the treatment regimen to be taken?
- In what work or social situations will you need to take your drugs?

Monitoring for Potential Side Effects

Highly Active AntiRetroviral Therapy (HAART) can cause numerous transient or long lasting side effects, which range from mild to life threatening. Many, but not all, individuals on HAART will experience side effects. Side effects can reduce the willingness of the patient to adhere to treatment, which subsequently can limit the success of the drug therapy.

Table 3
Severe Adverse Affects
Related to HAART

Anemia
Cardiomyopathy
Hematologic toxicity
Hepatic Steatosis
Lactic Acidosis
Lipodistrophy
Myopathy
Myositis
Pancreatitis
Peripheral Neuropathy



Tables 4 - 6 show antiretroviral agents and their properties. The Canadian AIDS Treatment Information Exchange web site www.catie.ca contains detailed information on HIV medication and side effects.

Table 4
Properties of Nucleoside and Nucleotide Reverse Transcriptase Inhibitors

Drug	Severe Adverse Effects, associated with serious injury or death	Adverse Effects	Medications to Avoid	Food Requirements
Abacavir (Ziagen)	Hypersensitivity reactions, lactic acidosis, and severe hepatomegaly with steatosis have been reported.	Fever, rash, nausea, vomiting, diarrhea, malaise, fatigue, loss of appetite, respiratory symptoms, lactic acidosis, headache, insomnia	None listed	Take without regard to meals. Coadministration with ethanol increases drug levels by 41% but has no effect on ethanol
Didanosine (Videx)	Pancreatitis, lactic acidosis, and severe hepatomegaly with steatosis have been reported.	Peripheral neuropathy, nausea, rash, pancreatitis, diarrhea, headache, fever	None listed	Take 30 minutes before or 2 hours after meals. Alcohol use increases risk of pancreatitis.
Emtricitabine (Emtriva)	Lactic acidosis and severe hepatomegaly with steatosis have been reported.	Headache, diarrhea, nausea, rash, skin discoloration	None listed	Take without regard to meals.
Lamivudine (3TC)	Lactic acidosis and severe hepatomegaly with steatosis have been reported.	Minimal toxicity	None listed	Take without regard to meals.
Stavudine (Zerit)	Pancreatitis, lactic acidosis, and severe hepatomegaly with steatosis have been reported.	Headache, diarrhea, rash, nausea, vomiting, pancreatitis, peripheral neuropathy, and ascending neuromuscular weakness	None listed	Take without regard to meals.
Tenofovir (Viread)	Lactic acidosis and severe hepatomegaly with steatosis have been reported.	Asthenia, headache, diarrhea, nausea, vomiting, flatulence, and anorexia	None listed	Better if taken with food, but not required.
Zalcitabine (Hivid)	Severe peripheral neuropathy, pancreatitis, lactic acidosis, severe hepatomegaly with steatosis, and hepatic failure and death in patients with possible underlying hepatitis B infection have been reported.	Peripheral neuropathy, fatigue, headache, fever, vomiting, nausea, diarrhea, rash abnormal hepatic function, and stomatitis	None listed	Take without regard to meals.
Zidovudine (Retrovir, AZT)	Hematologic toxicity, lactic acidosis, severe hepatomegaly with steatosis, and symptomatic myopathy have been reported	Bone marrow suppression, anemia or neutropenia, gastrointestinal intolerance, headache, insomnia, asthenia,	None listed	Take without regard to meals.

Adapted from: Lesho, E., Gey, D. Managing issues related to Antiretroviral Therapy. American Family Physician 2003, 63:4

**Table 5****Properties of Nonnucleoside Reverse Transcriptase Inhibitors**

Drug	Severe Adverse Effects, associated with serious injury or death	Adverse Effects	Medications to Avoid	Food Requirements	Miscellaneous
Delavirdine (Rescriptor)	None	Rash, increased transaminase levels, headache	Dihydroergotamine mesylate (DHE 45), ergotamine (Ergostat), H ₂ -receptor antagonists, lovastatin (Mevacor), midazolam (Versed), proton pump inhibitors, rifabutin (Mycobutin), rifampin (Rifadin), simvastatin (Zocor), triazolam (Halcio), St. John's wort	Take without regard for meals	May increase levels of dapsone, warfarin (Coumadin), and quinidine. May increase levels of sildenafil (Viagra) and adverse effects; do not exceed 25 mg in a 48 hour period.
Efavirenz (Sustiva)	None	Rash, central nervous system symptoms, psychiatric symptoms, increased transaminase levels, hepatotoxicity, false-positive results from cannabinoid tests	Dihydroergotamine mesylate, ergotamine, midazolam, trazolam, St. John's wort	Take before or after meals; high-fat/ high-carbohydrate meals increase peak plasma concentrations of capsules by 39% and tablets by 79%	Increases levels of ethinyl estradiol by 37%; use alternate method of contraception
Nevirapine (Viramune)	Severe hepatotoxicity including fulminant and cholestatic hepatitis, hepatic necrosis, and hepatic failure; skin reactions including Stevens-Johnson syndrome, toxic epidermal necrolysis, and hypersensitivity reactions have been reported. Should not be restarted after severe hepatic, skin or hypersensitivity reactions.	Rash and hepatitis, including hepatic necrosis	St. John's wort	Take without regard to meals	May decrease levels of ethinyl estradiol by approximately 20%; use alternate method of contraception.



Table 6
Properties of Protease and Fusion Inhibitors

Drug	Severe Adverse Effects, associated with serious injury or death	Adverse Effects	Medications to Avoid	Food Requirements	Miscellaneous
Amprenavir (Agenerase)	Oral solution is contraindicated in pregnant women, children younger than 4 years, patients with hepatic or renal failure, and patients treated with disulfiram (Antabuse) or metronidazole (Flagyl). The oral solution should be used only when capsules of other PIs cannot be used.	Gastrointestinal intolerance, rash, oral paresthesias, transaminase elevation, hyperglycemia, fat redistribution, and lipid abnormalities. May increase bleeding episodes in patients with hemophilia.	Bepridil (Vascor), dihydroergotamine mesylate (DHE 45), ergotamine (Ergostat), lovastatin (Mevacor), midazolam (Versed), rifampin (Rifadin), simvastatin (Zocor), reiazolam (Halcion), St John's wort, garlic supplements	Can be taken with or without food, but not with high-fat meals (fat decreases blood concentration).	May increase levels of sildenafil (Viagra)
Atazanavir (Reyataz)	None	Nausea, jaundice, arrhythmia, hyperglycemia, fat redistribution. May increase bleeding episodes in patients with hemophilia.	Bepridil, cisapride (Propulsid), ergotamine, indinavir (Crixivan), lovastatin, midazolam, pimozide (Orap), rifampin, simvastatin, triazolam, St. John's wort, garlic supplements	Take with food	
Enfuvirtide (Fuzeon)	None	Injection site reactions, hypersensitivity reactions, eosinophilia.	None	None	None
Indinavir (Crixivan)	None	Nephrolithiasis, gastrointestinal intolerance and nausea, increased indirect bilirubinemia, transaminase elevation, headache, asthenia, blurred vision, dizziness, rash, metallic taste, thrombocytopenia, alopecia, hyperglycemia, hemolytic anemia, fat redistribution, and lipid abnormalities. May increase bleeding episodes in patients with hemophilia.	Dihydroergotamine mesylate, ergotamine, lovastatin, midazolam, rifampin, simvastatin, triazolam, St. John's wort, garlic supplements	Take 1 - 2 hours after meals. Can take with skim milk or a low-fat meal. Recommended water intake is at least 1.4 L per day.	Carbamazepine (Tegretol) substantially decreases blood levels; consider alternative. Grapefruit juice decreases blood levels by 26%. Increases levels of sildenafil by 340%.
Lopinavir/Ritonavir (Kaletra)	None	Gastrointestinal intolerance, asthenia, elevated transaminase enzymes, hyperglycemia, fat redistribution, and lipid abnormalities. May increase bleeding episodes in patients with hemophilia.	Dihydroergotamine mesylate, ergotamine, flecainide (Tambacor), lovastatin, pimozide, propafenone (Rythmol), rifampin, simvastatin, triazolam, St. John's wort, garlic supplements	Take with food. Recommended water intake is 2 - 3L per day.	Oral solution contains 42% alcohol. Decreases levels of ethinyl estradiol by 42%; use alternate method of contraception. May increase levels of sildenafil.


Table 6
Properties of Protease and Fusion Inhibitors (continued)

Drug	Severe Adverse effects, associated with serious injury or death	adverse effects	medications to avoid	food requirements	miscellaneous
Nelfinavir (Viracept)	None	Diarrhea, hyperglycemia, transaminase elevation, fat redistribution, and lipid abnormalities. May increase bleeding episodes in patients with hemophilia.	Dihydroergotamine mesylate, ergotamine, lovastatin, midazolam, rifampin, simvastatin, triazolam, St. John's wort, garlic supplements.	Take with food	Decreases norethindrone (Norlutin) levels by 18% and ethinyl estradiol levels by 47%; use alternate method of contraception. Increases atorvastatin (Lipitor) levels by 74%; use with caution. May increase sildenafil levels.
Ritonavir (Norvir)	Coadministration with certain nonsedating antihistamines, sedative hypnotics, antiarrhythmics, or ergot alkaloid preparations can result in life-threatening events.	Gastrointestinal intolerance, paresthesias (circumoral and extremities), hepatitis, pancreatitis, asthenia, taste perversion, >200% increase in triglyceride level, elevated creatine kinase and uric acid levels, hyperglycemia, fat distribution, and lipid abnormalities. May increase bleeding episodes in patients with hemophilia.	Amiodarone (Cordarone), bepridil, dihydroergotamine mesylate, ergotamine, flecainide, lovastatin, midazolam, pimozone, propafenone, puinidine, simvastatin, triazolam, St. John's wort, garlic supplements	Take with food	Increases clarithromycin (Biaxin) levels by 77%. Decreases ethinyl estradiol levels by 40%; use alternate method of contraception. Carbamazepine toxicity; monitor anticonvulsant level closely. Increases desipramine (Norpramin) level by 145%. Decreases theophylline level by 47%. Doubles sildenafil level.
Saquinavir (Fortovase)	None	Gastrointestinal intolerance, dyspepsia, headache, elevated transaminase level, hyperglycemia, fat redistribution, and lipid abnormalities. May increase bleeding episodes in patients with hemophilia	Dihydroergotamine mesylate, ergotamine, lovastatin, midazolam, rifampin, simvastatin, triazolam, St. John's wort, garlic supplements	Take with a large meal	None
Saquinavir mesylate (Invirase)	Saquinavir and saquinavir mesylate are not bioequivalent and cannot be used interchangeably	Gastrointestinal intolerance, headache, elevated transaminase level, hyperglycemia, fat redistribution, and lipid abnormalities. May increase bleeding episodes in patients with hemophilia.	Dihydroergotamine mesylate, ergotamine, lovastatin, midazolam, rifampin, simvastatin, triazolam, St. John's wort, garlic supplements	When taken with ritonavir, timing of meals has no effect.	Grapefruit juice increases blood level. Increases sildenafil level 2 to 11 fold.



Resistance

The development of drug resistance is most commonly due to poor adherence to a drug regimen. Failure to take medications regularly and reliably causes the virus to be exposed to suboptimal drug serum concentrations and drastically increases the chance that drug resistance will develop.

This is a particular problem when drugs are cross-resistant, meaning that the development of resistance to one drug in a particular class results in resistance to the others in that class as well. HIV resistance can be transmitted at the time of infection. The increasing rate of HIV resistance is a challenge to finding effective treatment regimes.

An increase in viral load, confirmed over time, may indicate drug resistance.

Resistance Tests can specifically confirm resistance to particular drugs.

Adherence

In treating HIV infection, adherence to the drug regimen must be close to perfect to achieve lasting viral suppression. Even for highly committed patients, adherence can wane over time.

Monitoring adherence at every clinical encounter is essential.

Response to Decreasing Adherence

- Shorten the follow-up interval
- Increase intensity of the follow-up encounter
- Consider the impact of new diagnoses on adherence (i.e. depression, wasting, addictions) and include adherence intervention in the management plan
- Recruit additional health team members, depending on the problem
- Direct Observe Therapy (DOT) may be necessary

Table 7

Situations which can affect adherence to therapeutic regimens

- Side effects associated with HAART
- Complex dosing schedules
- Food restrictions
- Infections which cause vomiting or diarrhea
- Fasting for tests
- A difficult or stressful period in life
- FASD, ADHD, learning disabilities or cognitive disabilities
- Mental illness
- Alcoholism
- Substance abuse
- Pill fatigue

Table 8

Tips To Improve Adherence

- Educate the patient on the goals of therapy and the importance of adherence to the regimen.
- Anticipate and treat side effects.
- Recruit the patient's family and friends for support.
- Provide a written dosing schedule or pictures of medications.
- Divide pills into appropriate doses for each day, and each time of day, at the beginning of the week. Pill boxes are available from the pharmacy.
- Wear a watch with an alarm, or carry a medication beeper.
- Store medications where they are easily seen.
- Practice with candy (Smarties, jelly beans, mints, etc.) for several days before starting a new regimen.



HIV Infection in Pregnancy

There should be a clear referral pathway for pregnant women infected with HIV, consisting of:

- Specialist physician
- Obstetrician
- Pediatrician
- Counselor when possible

It is good practice for the pregnant woman to consult with the pediatrician prior to delivery.

The management of HIV in pregnancy requires antiretroviral drug therapy to prevent disease progression in the mother and vertical transmission to the newborn. There is little data on the safety of antiretrovirals in pregnancy. In prescribing treatment, the specialist physician will consider a balance between maternal health needs, the need to reduce vertical transmission and possible adverse effects of HAART to the fetus.

Guidelines and clinical recommendations for management of HIV infection in pregnancy are regularly updated on the website of the British HIV Association. <http://www.bhiva.org>

Prevention of Vertical Transmission

Maternal antiretroviral therapy during pregnancy and labour, followed by 6 weeks of neo-natal zidovudine therapy, can significantly decrease the risk of vertical transmission. Additional anti-retroviral therapy may be needed in some high-risk newborns.

Elective caesarean section may prevent vertical transmission.

Breastfeeding is an important route of transmission. HIV infected women are advised to refrain from breastfeeding.

Counseling the Mother Infected With HIV

HIV infected mothers may have multiple physical, emotional and social concerns, including coming to terms with the reality of their own infection, while facing uncertainty about the HIV status of their infant. Counseling and support should be recruited from the broader health team, as well as from family and friends. Counseling should include:

- The importance of strict adherence to HAART for the prevention of the disease progression.
- Standard precautions to reduce the risk of transmission
- Support for formula feeding
- What to expect in the management of the infant
- Consideration of long term care for their children in the event of the patient's incapacitation or death.

Table 9
Factors Increasing the Risk of Vertical Transmission of HIV

Maternal Factors

Low CD4 lymphocyte Count
High viral load
Advanced AIDS
Preterm delivery
Chorioamnionitis
Presence of p24 core Antigen

Obstetrical Events

Instrumental delivery
Use of fetal scalp monitor
Fetal scalp pH measurement
Use of DeLee suctioning
Artificial rupture of membranes
Rupture of membranes for longer than 4 hours
Other events increasing fetal exposure to maternal blood



Management of the Newborn

Management of the newborn exposed to HIV infection is coordinated by the pediatric specialist.

Unique considerations in infants born to HIV infected mothers include:

- in utero-exposure to antiretroviral drugs
- perinatal exposure to HIV and other infections
- differences in diagnoses and disease manifestations from adults
- altered antiretroviral pharmacodynamics
- medication adherence issues

RNA viral load testing at designated time points is used in the follow-up of infants born to mothers known to be HIV positive. The infants will also be followed by HIV antibodies testing at 12 - 18 months to demonstrate either sero-conversion (loss of maternal antibodies) or persistence of a positive antibody test.

Management guidelines are updated regularly on the web site of the HIV/AIDS Treatment Information Service **<http://www.hivatis.org>**



Appendix 4

On-Line Resources for Health Professionals

Regularly Updated HIV Management Guidelines:

British Columbia Centre for Excellence in HIV/AIDS: Therapeutic Guidelines for HIV/AIDS and Related Conditions

www.hivnet.ubc.ca

The HIV/AIDS Treatment Information Service (Canada)

<http://www.hivatis.org>

The British HIV Association

www.bhiva.org/guidelines.htm

The International AIDS Society - USA:

www.iasusa.org/pub/index.html

Other:

Canadian Association of Nurses in AIDS Care

www.canac.org

Canadian Aids Treatment Information Exchange (CATIE)/Canadian Association of Nurses in AIDS Care (CANAC): Resources for Nurses

www.catie.ca/e/nurses/index/htm

Canadian HIV/AIDS Care Giving Professional (CHAP)

Health Canada Division of HIV/AIDS

www.hc-sc.gc.ca/dc-ma/aids-sida

Public Health Agency of Canada

www.phac-aspc.gc.ca/new_e.html

Canadian Working Group on HIV and Rehabilitation

www.hivandrehab.ca

Canadian HIV Trials Network

www.hivnet.ubc.ca/e/home/



Appendix 5

HIV and the Incarcerated

The Corrections Service of Canada and the NWT Department of Justice Corrections Services are guided by public health principles in the management of HIV infection. Issues specific to the context of a correctional institution include the higher rate of HIV infection, strategies for prevention of transmission, and continuity of care for those infected. It is important to consider those issues when counseling, testing or treating a patient who is, or who has been, incarcerated.

Reporting HIV infection

Cases of HIV are reportable as per territorial regulations (see Section II, HIV Testing and Counseling).

Confidentiality

Particular attention must be paid to confidentiality for all health services provided to the patient. In the closed and controlled environment of the correctional facility, inmates are highly vulnerable to stigma and discrimination. Lack of confidentiality, real or perceived, can be detrimental to further voluntary testing and counseling.

The infection status of an inmate is confidential, and must not be released outside of the established health care team without patient consent. Disclosure of HIV status to corrections staff, inmates, friends or family members is at the discretion of the patient. (see Section IV, Support for Those Living With HIV).

Risk of Transmission

The rate of HIV infection within federal and provincial/territorial correctional facilities is higher than that of the general population; in some locations up to 10 times higher. Increased incidence of HIV indicates increased risk of transmission.

Prevention strategies include the following:

- Active promotion of voluntary testing and counseling for all inmates.
- Screening and treatment of STIs.
- Education and promotion for the prevention of HIV infection.
- Access to condoms, in accordance with the NWT Department of Justice Correction Services Directive 12.08 ("AIDS"). "Condoms should be readily and discreetly accessible so that no inmate is required to make a request to staff." The CSC Commissioners Directive 821 suggests placement of condoms at a minimum of three locations, as well as in all private family visiting units.

Harm reduction for the practice of shared needles is not currently available in NWT correctional facilities

Upon Intake

The following should occur at intake of all inmates:

- Take sexual history and assess for risk behaviours (See Appendix 1)
- Encourage voluntary testing for HIV. Mandatory testing is not indicated, however testing and counseling should be offered, and strongly encouraged at intake and throughout incarceration.
Testing requires informed consent and assurance of confidentiality.



- Discuss risk behaviours and prevention strategies.
- Describe the availability of condoms.

Case Management

Management and Treatment of HIV for the incarcerated does not differ from that of the general population (See Section III, Management of HIV). However, attention must be paid to continuity of care, which can be affected by the following:

- Time of arrest and initial incarceration
- Transfer between institutions
- Disciplinary action within the facility, including lock downs and segregation
- Court appearances
- Early release date and parole
- Release to the community

Patients on HAART must adhere to the prescribed regimen. The health care professional should ensure that medications are available at all times, and should plan for any disruptions in the normal routine of the inmate.

Tattooing or body piercing that has occurred in the correctional facility should be noted on the inmate's medical file.

Patients should have access to ongoing counseling and support services. Services not available within the institution should be accessed from the community. (See Section IV, Support for Those Living With HIV).

Inmates infected with HIV should remain housed with the general inmate population. Exceptions include:

- Medical condition requiring special care
- Behaviour which puts others at risk
- Reaction of others which puts the HIV infected inmate at risk

The decision to isolate a patient is made in accordance with the NWT Public Health Act.

Prior to Release

Preparation for release includes the following:

- Plan with community health professionals and refer to the full range of health care and social services.
- Make appointments and give written notice of appointments to the patient.
- Provide the patient with a written summary of his/her related health care information, for the benefit of community health care providers.
- Provide sufficient medication to last until the patient procures follow-up prescriptions.
- Provide the patient with information on support services available in the destination community. Encourage contact.
- Review risk of transmission and counsel on safer sex and injection drug use practices (See Section II: HIV Testing and Counseling).



Education for Staff and Inmates

Individual counseling for inmates should be paired with institutional-wide education and promotion efforts. Information can be given in a variety of ways, including:

- Large group discussions
- Staff meeting presentations
- Memorandums or newsletter publications
- Bulletin board displays
- Information tables

Topics include:

- Standard precautions to prevent and control transmission of infections (See Appendix 3).
- Protective measure for Corrections Staff, including the handling and clean-up of blood and body fluids.
- Available services, including counseling and testing for HIV.
- Prevention of HIV infections, including safer sex, risk reduction, testing and treatment of STIs, testing for HIV.
- Misconceptions about HIV and AIDS.
- Discrimination and stigma associated with HIV/AIDS.

On-Line Resources for Inmates and Staff

Corrections Service of Canada Infectious Disease Prevention and Control

www.csc-scc.gc.ca/text/publct/infectiousdiseases

Corrections Service of Canada: Commissioners Directive "The Management of Infectious Diseases"

www.csc-scc.gc.ca/text/plcy/cdshtm/821-cde_e.shtml

Canadian HIV/AIDS Legal Network

www.aidslaw.ca

Prisoners' HIV/AIDS Support Action Network

www.pasan.org



Appendix 6

Collecting and Handling Specimens

Adherence to universal standard precautions minimizes the risk of occupational exposure to HIV.

Specimens for Molecular Testing (Viral Load)

- Specimens must be handled with care. Introduction of any foreign materials can contaminate as well as inhibit the reaction and thus give inconclusive results.
- Draw the specimen as close to transport time as possible.
- Submit an untampered, dedicated specimen to Stanton Hospital Laboratory. The specimen must reach the **Alberta Provincial Laboratory within 24 hours of collection.**

TEST NAME	CONTAINER / AMOUNT	TRANSPORT
HIV viral load	TWO EDTA lavender top tubes (94ML tube)	Do not spin. Do not ship on ice packs or cold packs. Must be received within 6 - 8 hours of collection.
	TWO PPT (Plasma Preparation Tubes) (5mL tube)	Centrifuge, do not pour off, refrigerate until transport. Transport on ice packs or cold pack. Must be received within 24 hours of collection
	For Pediatric collection: at least one Pediatric Microtainers mauve top EDTA (2 mL minimum)	Do not spin. Do not ship on ice packs or cold pack. Must be received within 6 - 8 hours of collection.

Transportation of Specimens

Packaging for transport must include:

- watertight primary receptacle (ie. vacucontainer tube)
- watertight secondary packaging (ie. sealed bag)
- absorbent material placed between the primary receptacle and secondary packaging
- certified outer packaging

All specimens are sent to Stanton Territorial Hospital, and then forwarded to the Provincial Laboratory. For further information contact the Alberta Provincial Laboratory for Public Health, virology department at 780-407-7121. For information on transportation call 780-407-7703.

APPENDIX-12-Post Exposure Management and Prophylaxis

These guidelines address the assessment of risk and the management of persons exposed to blood and body fluid exposures (BBFE) in a health care setting. However, it is recognized that the management protocols and recommendations for occupational setting do not differ from the recommendations in non-occupational situations.

Purpose:

- To prevent and/or reduce possible exposures at the worksite or other settings.
- To provide a guideline in the monitoring and protection of individuals who have occupational or accidental exposure to Hepatitis B (HBV), Hepatitis C (HCV), and Human Immunodeficiency Virus (HIV), through exposure to blood and body fluids.

Policy:

The OCPHO or a Communicable Disease Consultant must be consulted when managing exposures and/or recommending chemoprophylaxis.

- Any employee having significant exposure to human blood or body fluids shall report the incident to their immediate supervisor who will arrange a clinical assessment and follow-up.
- A client reporting direct exposure to human blood and body fluids can be directed to the Public/Community Health Unit, or the emergency room of a hospital.
- All employees must follow "Routine Precautions" as outlined in attached "Appendix A".
- All known exposures to HBV, HCV or HIV contaminated blood or body fluids must be reported to the OCPHO.

Procedure:

1. **Treat the exposed area immediately** (if not previously done by client):
 - a) Rinse the eye or mucous membrane thoroughly with water and/or normal saline for 15 minutes.
 - b) Allow cuts, punctures, scratches or bites to bleed freely by lowering the extremity below the level of the heart, if possible.
 - c) Avoid squeezing the site as this contributes to inflammation.
 - d) Wash the wound with soap and tap water for 10 minutes. Rinses with water.
2. Do not use bleach or disinfectant solution to clean the wound.
3. For occupational exposure, notify the supervisor or designate if not already done.
4. Assess the risk of significant exposure using the attached Appendix B Exposure to Blood and Body Fluids Accident Report form.
 - a) Significant exposure is defined as an injury, during which one person's blood or other high risk body fluid comes in contact with someone else's blood, through exposure to subcutaneous tissue, non-intact chapped or abraded skin or mucous membrane. Body

fluids at risk of transmitting HBV, HCV and HIV from an infected individual in a community setting include:

- i) Blood,
 - ii) Semen,
 - iii) Vaginal secretions,
 - iv) Breast milk (HIV only),
 - v) Saliva (for HBV, unless blood-stained then at risk for HIV and HCV), and;
 - vi) Any body fluids visibly contaminated with blood, tears, nasal secretions, sputum, vomit, urine or feces.
- b) Exposure to body fluids, such as cerebrospinal, synovial, pleural or amniotic is usually confined to a hospital setting. Injuries of concern include the following:
- i) Parenteral injection (needle-stick or cut with potentially contaminated sharps),
 - ii) Splash to mucous membrane of eyes, nose or mouth, and/or;
 - iii) Human bites in which case both the *Source* and *Exposed* are considered at risk.
5. Use Appendix B, Appendix D, Appendix E and the HBV Flowchart on Page 201 to guide the management of exposure to blood and body fluids.
6. Obtain verbal consent and do pre-test counseling if recommending lab work for HBV, HCV and HIV. Document same in chart.
- a) Testing is voluntary both for the person *exposed (Exposed)* and the person who is potentially the *source* of infection (*Source*). Both the *Exposed* and the *Source* have the right to refuse testing. If the *Exposed* refuses to be tested, testing the *Source* is usually not done.
 - b) If the *Source* is known, attempt to get his/her consent to have blood tested for HIV, HBV and HCV. HBV testing may be eliminated if the *Source* is known to be HbsAg positive or have protective levels of anti-HBs or the *Exposed* has evidence of immunity. Otherwise, request anti-HBs, HbsAg, anti-HCV, and HIV antibodies. For the *Source*, consent should include permission to make the test results known to the *Exposed*.
 - c) Exposure to body fluids will not be followed for HIV, HBV, or HCV, unless these fluids contain visible blood including tears, nasal secretions, sputum, sweat, vomitus, urine or feces
 - d) Laboratory specimens should be labeled as a possible exposure, so rapid turn-around can be achieved. A phone call to the lab is also appropriate to notify them of occupational/accidental exposures.

*** Stat samples are to be sent in a green biohazard bag not the orange biohazard bag.**

7. If Hep B Immune Globulin is recommended:
 - a) Consult with the OPHO or Communicable Disease Consultant and, if necessary, obtain medical order for HBIG.
8. HIV antiretroviral chemoprophylaxis is recommended in the following circumstances:
 - a) Significant exposures where the *Source* is known to be HIV-positive; or;
 - b) Significant exposures where the *Source* is known, but the HIV status is unknown at the time of exposure, and **both** of the following conditions exist;
 - i) High risk exposure which is defined by at **least one** of the following:
 - (1) Deep percutaneous injury,
 - (2) Visible blood present on device,
 - (3) Exposure from a needle placed directly into the *Source's* vein or artery,

And
 - ii) Risk factors for HIV are known for the *Source* and may include
 - (1) Injection drug use,
 - (2) Men who have sex with other men, unprotected anal intercourse,
 - (3) Recipient of multiple transfusions of blood or blood products prior to 1985,
 - (4) Sexual partner of persons known to be HIV positive,
 - (5) History of residence in a country or area with high HIV prevalence,
 - (6) History of recurrent STIs, or Hepatitis B or C infection.

If the *Source* is doubtful, prophylaxis is not warranted but will not be refused to an exposed staff member or client requesting it.

- In such cases the 2-drug protocol will be followed. This includes exposures to sharps where the *Source* is unknown.

There have been no documented HIV seroconversions after exposure to abandoned sharps. In contrast to HBV, the HIV virus is quite fragile and does not survive long on exposed surfaces.

Consult with OCPHO or Communicable Disease Consultant for all clients where anti-retrovirals are being considered.

- Obtain a medical order for the 28 day Starter Kit (3 drug or 2 drug). (Starter kits are obtained at Stanton and Inuvik Hospital Pharmacies).
- Complete baseline labwork (See Appendix E PEP Protocol)

- **Initiate prophylaxis as soon as possible, ideally within 1 - 4 hours of the exposure and no longer than 72 hours, as efficacy declines rapidly with time.** PEP should not be provided if over 72 hours have elapsed since exposure (Martin, 1993). It is extremely unlikely that PEP started after 72 hours will be effective. Refer to a family physician or to doctor on call, if PEP is initiated, for follow-up and monitoring.
- Do follow-up PEP labwork at 2 weeks and 1 month (See Appendix E PEP Protocol).
- Historically, antiretroviral drugs have been toxic and sometimes difficult to take. The majority of clients (70%) felt ill while taking the drugs and many (30%) were unable to work during prophylaxis. The 28-day course of tenofovir-emtricitabine is now the preferred regime (Landovitz, 2009) in adults. This is due to substantially less toxicity and improved adherence, as compared with previous combinations (Gallant, 2006; Mayer, 2008).

Discontinuing PEP: When HIV results of the *Source* are available, therapy should be re-evaluated. If the *Source* is HIV negative, discontinue chemoprophylaxis. Follow-up testing of the *Exposed* is generally not necessary. If the *Source* refuses testing and the exposure is considered "high risk" or if there is concern that the *Source* client is in the "window period", then PEP and or follow-up HIV testing may be recommended.

9. Offer Counseling:

- a) Counseling is to be offered regardless if PEP is received or not. Advise of local resources as needed. i.e. Employee Assistance Program, family counseling etc.
- b) Advises the client/employee about the following until the 12 week follow-up period post-exposure has ended. Counseling may need to be repeated at a later time if the client/employee is extremely anxious at the time of the critical incident:
 - i) HIV is the least infective, followed by HCV. HBV is the most infectious. HBV can live for one week in dried blood. PEP is not 100% fail proof.
 - ii) The average risk of infection after an accidental percutaneous exposure to HIV-infected blood is 0.3% and 0.1% following a mucocutaneous exposure. Antiretroviral drug therapy can reduce the risk of HIV transmission by 81% if implemented immediately.
 - iii) The average risk of HCV infection from a single needle stick injury with HCV-infected blood is 1.8%.
 - iv) The risk of acquiring HBV from percutaneous injury ranges from 23% (HBeAg negative *Source*) to 63% (HBeAg positive *Source*).
 - v) Talk about experience with colleagues and partner.
 - vi) Explore the need for counseling with a health care professional knowledgeable about HIV/HBV/HCV.

- vii) Use condoms with lubricant and/or dental dams with your partner every time.
 - viii) Discontinue breastfeeding. The risk of transmission of HIV through breastfeeding is high for women who seroconvert while breastfeeding.
 - ix) Do not donate blood, sperm, ova, bone marrow.
 - x) Delay pregnancy, or if pregnant consult a physician about the need for prophylactic therapies.
 - xi) Do not share razors or toothbrushes.
- c) Has the client/employee signed the attached Refusal of Treatment form if she/he chooses not to follow the care as recommended? (Appendix C).
- d) Complete the following reports:
- i) Exposure to Blood and Body Fluids Accident Report Form (Appendix B) – kept on the client's record
 - ii) Workers' Safety and Compensation Commission (WSCC) Report Forms
 - (1) The client must complete the "Worker's Report of the Injury" found at <http://www.wcb.nt.ca/Workers/Forms/Pages/default.aspx> and fax it to the WSCC office.
 - (2) The acting supervisor or occupational health & safety/infection control coordinator will complete the "Employer's Report of Injury" <http://www.wcb.nt.ca/Employers/Forms/Pages/default.aspx> and fax it to the WSCC office within 72 hours of the incident. Fax number is at the bottom of each of the forms.
 - e) Post-Exposure Surveillance Record for Exposed (Appendix D) – kept on the client's chart and supplemented with progress notes as applicable.
10. If the client's lab reports come back as positive for HBV, HCV or HIV, then the following reports must be completed and faxed to the Communicable Disease Control Unit, Department of Health & Social Services. Report forms can be found on the HSS website at <http://www.hss.gov.nt.ca/information-health-professionals/forms-health-professionals> or refer to the CDC Manual.
- a) Communicable Disease Report Form.
 - b) Enhanced Hepatitis B & C Case Investigation Form (usually completed by the physician to whom the client is referred, but a nurse can complete any known information)
 - c) NWT HIV Case Investigation Form
- i) Interpretation of Lab Reports:
- *immune to HBV* - a client/employee who has known documentation of an anti-HBs level ≥ 12 IU/L when tested following the complete HB immunization series, or has an anti-HBs level ≥ 12 IU/L or is anti-HBc+ or HBsAg+ from HBV infection.

- *susceptible to HBV* - a client/employee who after HBV immunization has an inadequate anti-HBs level (< 12IU/L) when done 4-8 weeks after completing the series, or when there is no history of HB immunization, and tests for anti-HBs, anti-HBc and HBsAg are negative.
- *non-responder* - a client/employee who has had 2 complete series of HB vaccine and has tested anti-HBs negative (< 12IU/L) post-HB immunization after each series.

Attachments:

- Routine Precautions – Appendix A.
- Exposure to Blood and Body Fluids Accident Report Form – Appendix B.
- Refusal of Treatment Form – Appendix C.
- Post-Exposure Surveillance Record for Exposed – Appendix D.
- PEP Protocol – Appendix E.

References:

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- Prophylaxis Guidelines Post HIV Exposure (Epi North, November 1996).
- Landovitz R, Currier J. Postexposure Prophylaxis for HIV infection. N. Engl J Med 2009; 361:1768-75
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- Mayer K, Mimiaga M, Cohen D, et al. Tenofovir DF plus lamivudine or emtricitabine for nonoccupational postexposure prophylaxis (NPEP) in a Boston community health centre. J Acquir Immune Defic Syndr 2008; 47:494-9.
- Branson B, Stekler J. Detection of acute HIV infection: we can't close the window. J Infect Dis. 2012 Feb 15;205(4):521-4.
- Alberta Guidelines for Non-Occupational, Occupational and Mandatory Testing and Disclosure Act Post-Exposure Management and Prophylaxis 2013
- Vertesi, L. Risk Assessment Stratification Protocol (RASP) to help patients decide on the use of postexposure prophylaxis for HIV exposure. Canadian Journal of Emergency Medicine 2003; 5(1): 46-48

APPENDIX A

Routine Precautions

All staff are encouraged to take the following precautions in clinical situations and at work where applicable:

Wear protective gloves when performing any procedure which may bring you into contact with blood or body fluids

- i.e. venipuncture, swabs, pap smears etc.

Discard used needles and sleeves into puncture-resistant containers.

- Do not recap used needles. Fill “sharps” containers only as far as the “fill” line and dispose of same according to Biohazardous Waste Policy.
- Do not force sharps into a full container

Dispose of all needles, syringes, vials, ampoules, and clinical glass (glass contaminated with blood, body fluids or chemicals) and any other clinical item that could cause a cut, puncture or abrasion, in an approved “sharps” container.

Wash hands immediately and thoroughly with soap and water:

- if they become contaminated with blood or body fluids,
- after removing gloves and before leaving the exam room, and/or;
- before and after any client contact.

Wear a mask and/or protective eye wear where splashing or aerosolization of body fluids is anticipated.

Wear a gown or lab coat when specimens are likely to soil clothing.

Transport all specimens in clean, secure containers.

Wear gloves to clean the outside of a soiled specimen container with a disinfectant.

Transport slides and blood tubes in non-breakable metal containers.

Avoid pelvic exams if you have significant burns or cuts on your hands and double glove when drawing blood and doing male exams.

Between clients, clean equipment, counter tops or examination table with a disinfectant especially when there is obvious contamination with body fluids.

Immediately clean up all spills of blood or body fluids with appropriate disinfectant. Gloves are to be worn and paper towels discarded in the garbage.

Refer to page 41 of the manual for **Laboratory Transportation** protocol.

APPENDIX B

Exposure to Blood and Body Fluids Accident Report

SECTION I: Demographic Information

<u>Exposed</u>	
Name:	
Address:	
Date of Birth: (y/m/d)	HCP#
Date of Exposure:	Location of Exposure:

<u>Source</u>	
Name:	
Address:	
Date of Birth: (y/m/d)	HCP#

SECTION II HBV, HCV, HIV Status at time of exposure

1. The status of the *Source* client is:

- ☐ known HBV-positive
- ☐ known HBV-negative
- ☐ known HBV-negative with risk behaviors
- ☐ unknown HBV status
- ☐ known anti-HBs status
- ☐ unknown anti-HBs status
- ☐ known HCV-positive
- ☐ known HCV-negative
- ☐ known HCV-negative with risk behaviours
- ☐ unknown HCV status
- ☐ known HIV-positive
- ☐ known HIV-negative
- ☐ known HIV-negative with risk behaviours
- ☐ unknown HIV status

The *Exposed* immune status with respect to Hepatitis B is:

- ☐ immune
- ☐ completion of Hepatitis B series: Date (y/m/d) _____
- ☐ most recent HBsAg: Date (y/m/d) _____ result: ____
- ☐ susceptible
- ☐ non-responder
- ☐ unknown

SECTION III: Risk Assessment

Risk Assessment Stratification Protocol (RASP) for possible HIV exposure

Step A. Identify source population (choose one):

	<u>Score</u>
Known HIV carrier:	
Acute AIDS illness*	1
Asymptomatic	10
Unknown HIV status:	
High-risk situation†	100
Low-risk situation (other)	1000
A value = _____	

Step B. Identify Inoculum Type (choose one):

Fresh blood	1
Body fluids at risk (e.g., semen)	10
Dried old blood	100
Low-risk secretions (tears, saliva, urine)	1000
B value = _____	

Step C. Identify method of transmission (choose one):

Intravenous	1
Deep intravenous	10
Deep transcutaneous with visible bleeding at site	100
Superficial transcutaneous with no visible bleeding	200
Mucosal contact only	500
Intact skin	1000
C value = _____	

Total score (Z) = A x B x C = _____ AND Basic risk = 1 / Z = _____

The NWT Infection Prevention and Control Manual 2012

Step D. Estimate volume of inoculum (choose one):

Modifier

Massive (e.g., transfusion)	100
Measurable (>1 mL)	10
Moderate (large-bore hollow needle > 22 g)	5
Small (small-bore hollow needle < 22 g)	3
Trace surface only (e.g., suture needle)	1

TOTAL RISK = Basic risk X Modifier (D) = _____

Risk level and treatment recommendation	
< 1/1000	Definitely indicated
1/1000 – 1/10 000	Recommended but optional
1/10 001 – 1/100 000	Optional but not recommended
>1/100 000	Not indicated

*End-stage AIDS, hospitalized, known high-viral load

†Suspected HIV, injection drug user, unknown needle with high local prevalence of HIV

SECTION IV: Intervention

The exposed has received the following interventions:

- ☐ no treatment
- ☐ first aid
- ☐ blood work for Hepatitis B
- ☐ HBIG
- ☐ Hepatitis B booster
- ☐ Hepatitis B series started
- ☐ blood work for Hepatitis C
- ☐ pre-test counseling for HIV antibody test
- ☐ blood work for HIV antibody test
- ☐ PEP started and reported to Medical Health Officer
- ☐ The Worker's Report of Injury has been faxed to WSCC
- ☐ The Employer's Report of Injury has been faxed to WSCC

(print name and sign)

(date)

**Supervisor, Health care provider or Occupational Health
& Safety/Infection Control Coordinator**

APPENDIX C

Refusal of Treatment/Treatment when Not Indicated

This is to certify that I, _____, refuse the care judged necessary by the attending health care provider and/or the Public Health Officer.

Or

This is to certify that I, _____ request to be placed on Post-Exposure Prophylaxis (PEP). I understand that the attending health care provider or the Public Health Officer does not recommend this at this time.

I make this decision freely, in full knowledge of the situation. I acknowledge I have been informed of the consequences related to my decision, and hereby release the Health and Social Services Authority and its professionals from any untoward consequences which may or will result from my decision.

Name: _____ Date: _____

Signature of Client: _____

Signature of Witness: _____

APPENDIX D

Post-Exposure Surveillance for Exposed - Whether or Not on PEP

TIME SINCE EXPOSURE	TESTING FOR EXPOSED					
	Anti-HIV	Anti-HCV and ALT	HCV-RNA	HbsAg**	Anti-HBs	DATE
						RESULTS ATTACHED AND REPORTED
Baseline immediately post exposure:						
Source is low risk or negative*						
Source is high risk or positive	X	X		X	X	
4-6 weeks post exposure: (if source is high risk or positive)	X			Follow-up as indicated in Flowchart #1: Hepatitis B		
6 weeks post exposure: (if source is high risk or positive)			X			
12 weeks post exposure: (if source is high risk or positive)	X					

Adapted from the Alberta Health, Alberta Post-Exposure Management and Prophylaxis Guidelines 2013

*Generally, if the Source tests negative, no further testing is required in the Source or Exposed. However, if the Source is believed to be in the "window period" for HIV and is at high risk for HIV, additional testing may be performed after consultation with an infectious disease specialist. **If the Exposed is known to be immune to HBV (anti-HBs ≥ 12 IU/L) or is HBsAg positive, testing the Source and Exposed is unnecessary.

If the Exposed develops an illness consistent with acute seroconversion (e.g. nausea, vomiting, abdominal pain, jaundice) to HCV within 4 to 10 weeks of exposure, further testing may be considered after consultation with an infectious disease specialist

There is no longer a requirement for an HIV test at 6-month (24 weeks) (Branson, 2012). However a 6-month follow-up test should be considered: 1) where PEP has been extended significantly past 28 days, 2) patients with HCV infection, or 3) where there is an indication of potential exposure to HIV-2.

APPENDIX E

PEP PROTOCOL

Regimen	Baseline PEP lab work	Two week follow-up	One month follow-up
Two-drug regimen	CBC with differential (CBCD), Creatinine (Cr)	CBCD, Cr	CBCD, Cr
Three-drug regimen	CBCD, Cr, ALT	CBCD, Cr, ALT	CBCD, Cr, ALT

Adapted from the Alberta Post-Exposure Management and Prophylaxis Guidelines – Follow up ©2013 Government of Alberta

Starter Kit (2 drug/28 day protocol) contains: Truvada

Truvada:

Emtricitabine 200 mg + Tenofovir 300mg in a single tablet. The dose is 1 tablet po OD

Starter Kit (3 drug/28 day protocol) contains: Truvada + Kaletra

Truvada:

The dose is 1 tablet po OD PLUS

Kaletra:

Lopinavir 200mg + Ritonavir 50mg in a single tablet. The dose is 2 tabs po BID

Kaletra is also a combination drug

Recommended Regimens:

- **The basic 2 drug regimen is recommended in the vast majority of cases.** For possible risk exposure (but not high risk) use Truvada one tablet po OD (Emtricitabine 200mg and Tenofovir 300mg in a single tablet)
- **The 3 drug regimen will be required only in a small minority of cases.** For clients who have been exposed to a known HIV infected *Source* and have had a High Risk Exposure, consider adding a third agent, a Protease inhibitor such as Kaletra (Lopinavir 200 mg + Ritonavir 50mg) 2 tabs po BID. If the *Source* is already on anti-retroviral therapy and drug resistance is a possibility, consult the OCPHO for the optimal regimen.
- In Canada, tenofovir-emtricitabine is recommended for use in pregnant women only when the potential benefits outweigh the potential risk to the fetus (Gilead Sciences Canada, Inc. Pr-Truvada PM, 2009).
- Determine if the client is taking any other medications so as to prevent drug interactions.

Appendix E Antiretroviral Drug Protocol				
Kaletra® (lopinavir/ ritonavir)	Adult or adolescent (>12 years): 2 tabs po BID	Tablets: (use the tablet information) Lopinavir 200 mg + Ritonavir 50mg	Diarrhea, nausea, perioral tingling, headache, rash, elevated cholesterol and triglycerides, hyperglycemia (long-term use) • Pancreatitis • Hepatitis	The tablets may be taken with or without food and can be stored at room temperature. Numerous drug interactions: (potent CYP3A4 inhibitor): Avoid concurrent use with: fluticasone (i.e. Advair®, Flovent®, simvastatin, lovastatin, rifampin, astemizole, terfenadine, cisapride, midazolam, triazolam, pimozone, ergot derivatives, St. John's wort.
	Pediatric: consult pediatric infectious disease specialist			Caution with oral contraceptives and phenytoin, phenobarbital and carbamazepine

Appendix E Antiretroviral Drug Protocol

Truvada® (emtricitabine/ tenofovir)	Adult or adolescent (>12 years): 1 tab po OD Pediatric: consult pediatric infectious disease specialist	Tablets: (use the tablet information) Emtricitabine 200 mg + Tenofovir 300 mg Renal excretion 86% Dosage adjustment in renal insufficiency recommended	Emtricitabine: <ul style="list-style-type: none">Minimal toxicityHyperpigmentation/skin discolorationSevere acute exacerbations of hepatitis may occur in HBV co-infected patients who discontinue FTC Tenofovir: <ul style="list-style-type: none">Renal insufficiency, Fanconi syndrome, osteomalaciaPotential decrease in bone mineral densitySevere acute exacerbation of hepatitis may occur in HBV co-infected patients who discontinue TDFAsthenia, headache, diarrhea, nausea, vomiting, flatulence	<ul style="list-style-type: none">May take with or without food
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Adapted from the Government of Alberta PEP Guidelines 2013

References:

DHHS: Guidelines for the use of Antiretroviral Agents in HIV- 1 Infected Adults and Adolescents. January 10, 2011; 1-166 (Updated guidelines available at <http://aidsinfo.nih.gov/contentfiles/vguidelines/AdultandAdolescentGL.pdf>)
 Abbott: http://www.abott.ca/static/cms_workspace/en_CA/content/document/Kaletra_Tablet_Press_Release.pdf
 Alberta Guidelines for Non-Occupational, Occupational and Mandatory Testing and Disclosure Act Post-Exposure Management and Prophylaxis 2013
<http://www.health.alberta.ca/documents/PEP-Guidelines-2013.pdf>

Revised March 2014

Flowchart # 1: Hepatitis B

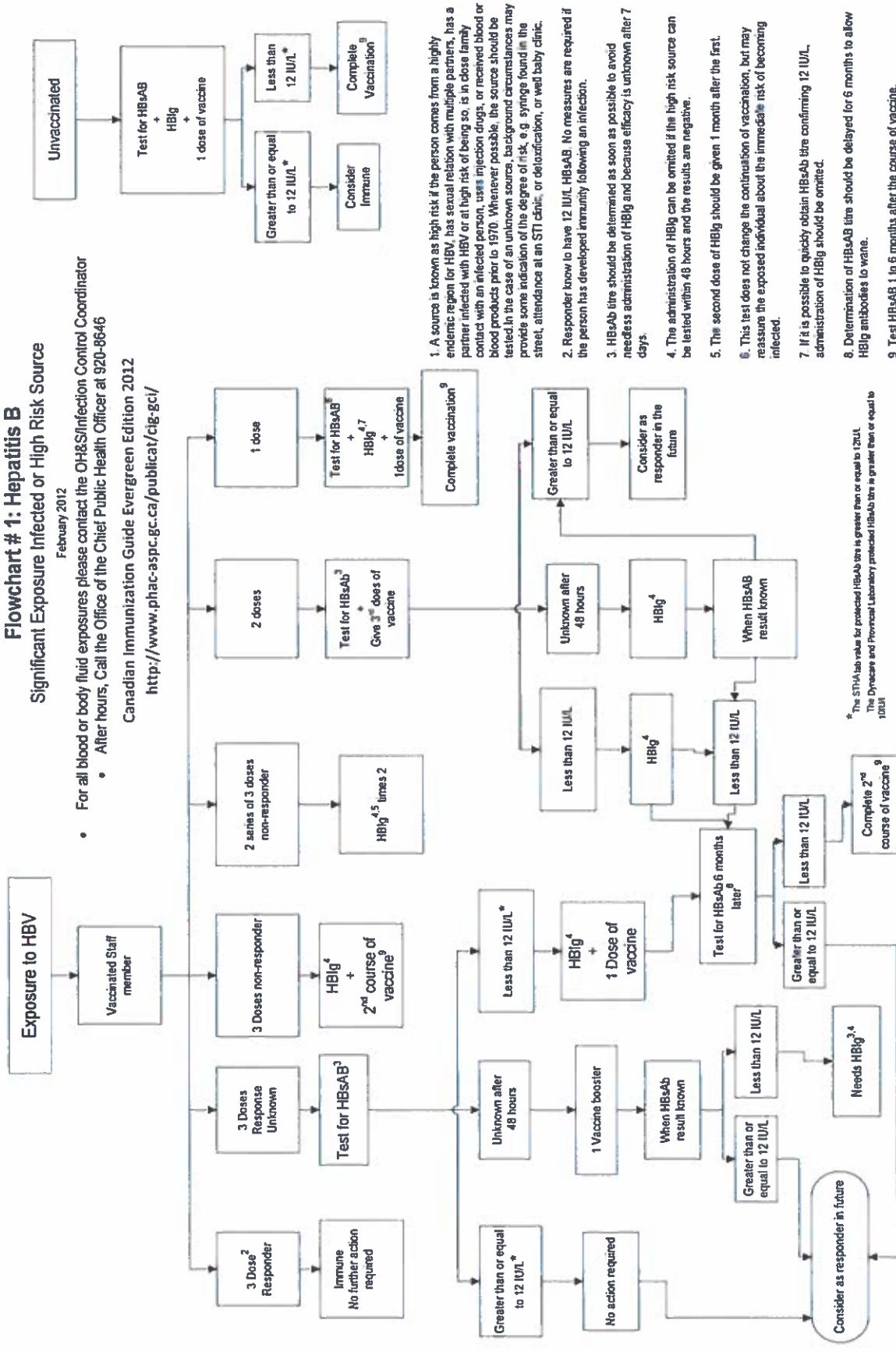
February 2012

Significant Exposure Infected or High Risk Source

- For all blood or body fluid exposures please contact the OH&S/Infection Control Coordinator
- After hours: Call the Office of the Chief Public Health Officer at 920-8646

Canadian Immunization Guide Evergreen Edition 2012

<http://www.phac-aspc.gc.ca/publicat/cig-gci/>



* The STHA₁₀₀ value for protected Hib-AD tire is greater than or equal to 1.20x10¹¹.
The Dynacore and Provincial Laboratory protected Hib-AD tire is greater than or equal to 1.20x10¹¹.

9 Test HR:AR 1 in 6 months after the course of vaccine

Adapted from PIDAC

Acute Respiratory Infection (ARI): Any new onset acute respiratory infection that could potentially be spread by the droplet route (either upper or lower respiratory tract), which presents with symptoms of a fever greater than 38C and a new or worsening cough or shortness of breath (also known as febrile respiratory illness, or FRI). It should be noted that elderly people and people who are immunocompromised may not have a febrile response to a respiratory infection.

Additional Precautions (AP): Additional Precautions (i.e., Contact Precautions, Droplet Precautions and Airborne Precautions) are necessary in addition to Routine Practices for certain pathogens or clinical presentations. These precautions are based on the method of transmission (e.g., contact, droplet, airborne).

Aerosol: Small droplet of moisture that may carry microorganisms. Aerosols may be light enough to remain suspended in the air for short periods of time, allowing inhalation of the microorganism.

Airborne Precautions: Airborne precautions prevent transmission of infectious agents that remain infectious over long distances when suspended in the air. Airborne Precautions are used in addition to Routine Practices for patients known or suspected of having an illness transmitted by the airborne route (i.e., by small droplet nuclei that remain suspended in the air and may be inhaled by others).

Alcohol-Based Hand Rub (ABHR): A liquid, gel or foam formulation of alcohol (e.g., ethanol, isopropanol) which is used to reduce the number of microorganisms on hands in clinical situations when the hands are not visibly soiled. ABHRs contain emollients to reduce skin irritation and are less time-consuming to use than washing with soap and water.

Antibiotic-Resistant Organism (ARO): A microorganism that has developed resistance to the action of several antimicrobial agents and that is of special clinical or epidemiological significance.

Biomedical Waste: Contaminated, infectious waste from a health care setting that requires incineration or treatment prior to disposal in landfill sites or sanitary sewer systems. Biomedical waste includes human anatomical waste; human and animal cultures or specimens (excluding urine and faeces); human liquid blood and blood products; items contaminated with blood or blood products that would release liquid or semi-liquid blood if compressed; body fluids visibly contaminated with blood; body fluids removed in the course of surgery, treatment or for diagnosis (excluding urine and faeces); sharps; and broken glass which has come into contact with blood or body fluid.

Carbapenem-Resistant *Enterobacteriaceae* (CRE): For the purposes of this document, these are *Enterobacteriaceae* that are resistant to carbapenem antimicrobials (e.g., imipenem, meropenem, ertapenem) through the production of carbapenemase.

Chain of Transmission: A model used to understand the infection process.

Cleaning: The physical removal of foreign material (e.g., dust, soil) and organic material (e.g., blood, secretions, excretions, microorganisms). Cleaning physically removes rather than kills microorganisms. It is accomplished with water, detergents and mechanical action.

Cohorting: The assignment of a geographic area such as a room or a patient care area to two or more patients who are either colonized or infected with the same microorganism, with staffing assignments restricted to the cohorted group of patients. See also, *Staff Cohorting*.

Colonization: The presence and growth of a microorganism in or on a body with growth and multiplication but without tissue invasion or cellular injury or symptoms.

Contact Precautions: Contact Precautions are intended to prevent transmission of infectious agents, including epidemiologically important microorganisms, which are spread by direct or indirect contact with the patient or the patient's environment. Contact Precautions are used in addition to Routine Practices to reduce the risk of transmitting infectious agents via contact with an infectious person.

Contamination: The presence of an infectious agent on hands or on a surface, such as clothing, gowns, gloves, bedding, toys, surgical instruments, patient care equipment, dressings or other inanimate objects.

Cytotoxic Waste: Cytotoxic waste is any material that may have come into contact with a cytotoxic drug (substances used as chemotherapeutic agents in the treatment of cancers and other diseases). Cytotoxic waste has the potential for causing carcinogenic, mutagenic or teratogenic effects. Waste can include leftover or unused cytotoxic drugs and tubing, tissues, needles, gloves and any other items which have come into contact with a cytotoxic drug.

Detergent: A synthetic cleansing agent that can emulsify oil and suspend soil. A detergent contains surfactants that do not precipitate in hard water and may also contain protease enzymes (see *Enzymatic Cleaner*) and whitening agents.

Direct Care: Providing hands-on care (e.g., bathing, washing, turning patient, changing clothes, continence care, dressing changes, care of open wounds/lesions, toileting).

Disinfectant: A product that is used on medical equipment/devices which results in disinfection of the equipment/device.

Disinfection: The inactivation of disease-producing microorganisms. Disinfection does not destroy bacterial spores. Medical equipment/devices must be cleaned thoroughly before effective disinfection can take place.

Double Cleaning: Repeating a cleaning regimen immediately after it has been done once. Double cleaning is not the same as cleaning twice per day.

Droplet Precautions: Droplet Precautions are used in addition to Routine Practices for patients known or suspected of having an infection that can be transmitted by large infectious droplets.

Environment of the Patient: The immediate space around a patient that may be touched by the patient and may also be touched by the health care provider when providing care. The patient environment includes equipment, medical devices, furniture (e.g., bed, chair, bedside table),

telephone, privacy curtains, personal belongings (e.g., clothes, books) and the bathroom that the patient uses. In a multi-bed room, the patient environment is the area inside the individual's curtain. In an ambulatory setting, the patient environment is the area that may come into contact with the patient within their cubicle. In a nursery/neonatal setting, the patient environment is the isolette or bassinet and equipment outside the isolette/bassinet that is used for the infant. See also, *Health Care Environment*.

Enzymatic Cleaner: A pre-cleaning agent that contains protease enzymes that break down proteins such as blood, body fluids, secretions and excretions from surfaces and equipment. Most enzymatic cleaners also contain a detergent. Enzymatic cleaners are used to loosen and dissolve organic substances prior to cleaning.

Extended Spectrum Beta-Lactamase (ESBL): Extended-spectrum beta-lactamases are enzymes that may be produced by some strains of *Enterobacteriaceae* that hydrolyse all cephalosporins, including third-generation cephalosporins such as cefotaxime, ceftriaxone and ceftazidime, as well as aztreonam.

Eye Protection: A device that covers the eyes and is used by health care providers to protect the eyes when it is anticipated that a procedure or care activity is likely to generate splashes or sprays of blood, body fluids, secretions or excretions, or within two metres of a coughing patient. Eye protection includes safety glasses, safety goggles, face shields and visors.

Facial Protection: Personal protective equipment that protect the mucous membranes of the eyes, nose and mouth from splashes or sprays of blood, body fluids, secretions or excretions. Facial protection may include a mask or respirator in conjunction with eye protection, or a face shield that covers eyes, nose and mouth.

Fit-Test: A qualitative or quantitative method to evaluate the fit of a specific make, model and size of respirator on an individual. Fit-testing is to be done periodically, at least every two years or if there is a change in respirator face piece or the user's physical condition which could affect the respirator fit.

Fomites: Objects in the inanimate environment that may become contaminated with microorganisms and serve as vehicles of transmission.

Hand Care Program: A hand care program for staff is a key component of hand hygiene and includes hand care assessment, staff education, Occupational Health assessment if skin integrity is an issue, provision of hand moisturizing products and provision of alcohol-based hand rub that contains an emollient.

Hand Hygiene: A general term referring to any action of hand cleaning. Hand hygiene relates to the removal of visible soil and removal or killing of transient microorganisms from the hands. Hand hygiene may be accomplished using soap and running water or an alcohol-based hand rub. Hand hygiene also includes surgical hand antisepsis.

Hand Washing: The physical removal of microorganisms from the hands using soap (plain or antimicrobial) and running water.

Health Care-Associated Infection (HAI): A term relating to an infection that is acquired during the delivery of health care (also known as *nosocomial infection*).

Health Care Environment: People and items which make up the care environment (e.g., objects, medical equipment, staff, patients) of a hospital, clinic or ambulatory setting, outside the immediate environment of the patient.

Health Care Facility: Under the *Hospital and Health Care Facility Standards Regulation, 2009* a health care facility is defined as a facility:

- a) That provides medical or nursing services, treatment services, or services in respect of rehabilitative or preventative health care, to outpatients only, and
- b) That is listed in Schedule A to the *Hospital Insurance Regulations* made under the Act or listed in the Schedule to these regulations

Health Care Provider: Any person delivering care to a patient. This includes, but is not limited to, the following: paramedics, firefighters, physicians, dentists, nurses, nurse practitioners, respiratory therapists and other health professionals, community health workers, clinical instructors, students and home health care workers.

Health Care Setting: Any location where health care is provided, including settings where emergency care is provided, hospitals, complex continuing care, rehabilitation hospitals, long-term care homes, mental health facilities, outpatient clinics, community health centres and clinics, physician offices, dental offices, offices of other health professionals and home health care.

HEPA Filter: High efficiency particulate air filter with an efficiency of 99.97% in the removal of airborne particles 0.3 microns or larger in diameter.⁶

High-Touch Surfaces: High-touch surfaces are those that have frequent contact with hands. Examples include doorknobs, call bells, bedrails, light switches, wall areas around the toilet and edges of privacy curtains.

Hospital-Grade Disinfectant: A disinfectant that has a drug identification number (DIN) from Health Canada indicating its approval for use in Canadian hospitals. (Common bleach that does not have a DIN may be used for some disinfection practices).

Infection: The entry and multiplication of an infectious agent in the tissues of the host. Asymptomatic or sub-clinical infection is an infectious process running a course similar to that of clinical disease but below the threshold of clinical symptoms. Symptomatic or clinical infection is one resulting in clinical signs and symptoms (disease).

Infection Prevention and Control: Evidence-based practices and procedures that, when applied consistently in health care settings, can prevent or reduce the risk of transmission of microorganisms to health care providers, other patients and visitors.

Infection Prevention and Control Professional(s) (ICPs): Trained individual(s) responsible for a health care setting's infection prevention and control activities. In NWT, most IPC practitioners have a nursing or other medical background. An ICP shall be acquiring or maintaining their Certification in Infection Control (CIC).

Infectious Agent: A microorganism, i.e., a bacterium, fungus, parasite, virus or prion, which is capable of invading body tissues and multiplying.

Long-Term Care (LTC): A broad range of personal care, support and health services provided to people who have limitations that prevent them from full participation in the activities of daily living. The people who use long-term care services are usually the elderly, people with disabilities and people who have a chronic or prolonged illness.

Low-Level Disinfection (LLD): Level of disinfection required when processing non-invasive medical equipment (i.e., non-critical equipment) and some environmental surfaces. Equipment and surfaces must be thoroughly cleaned prior to low-level disinfection.

Low-Touch Surfaces: Surfaces that have minimal contact with hands. Examples include walls, ceilings, mirrors and window sills.

Mask: A device that covers the nose and mouth, is secured in the back and is used by health care providers to protect the mucous membranes of the nose and mouth.

Material Safety Data Sheet (MSDS): A document that contains information on the potential hazards (health, fire, reactivity and environmental) and how to work safely with a chemical product. It also contains information on the use, storage, handling and emergency procedures all related to the hazards of the material. MSDSs are prepared by the supplier or manufacturer of the material.

N95 Respirator: A personal protective device that is worn on the face and covers the nose and mouth to reduce the wearer's risk of inhaling airborne particles. A NIOSH-certified N95 respirator filters particles one micron in size, has 95% filter efficiency and provides a tight facial seal with less than 10% leak.

Noncritical Medical Equipment/Device: Equipment/device that either touches only intact skin (but not mucous membranes) or does not directly touch the patient. Reprocessing of noncritical equipment/devices involves cleaning and may also require low-level disinfection (e.g., blood pressure cuffs, stethoscopes).

Nosocomial Infections: See *Hospital-care Acquired Infections*

Workplace Health and Safety: Health services in the workplace provided by trained occupational health nurses and physicians.

Patient: Any person receiving care within a health care setting.

Personal Protective Equipment (PPE): Clothing or equipment worn by staff for personal protection against hazards and to prevent contamination of skin, mucous membranes or clothing of staff in order to prevent transmission from patient-to-patient.

Point-of-Care: The place where three elements occur together: the patient, the health care provider and care or treatment involving patient contact.

Reprocessing: The steps performed to prepare used medical equipment for use (e.g., cleaning, disinfection, sterilization).

Respiratory Etiquette: Personal practices that help prevent the spread of bacteria and viruses that cause acute respiratory infections (e.g., covering the mouth when coughing, care when disposing of tissues).

Risk Assessment: An evaluation of the interaction of the health care provider, the patient and the patient environment to assess and analyze the potential for exposure to infectious disease.

Routine Practices (RP): The system of infection prevention and control practices recommended by the Public Health Agency of Canada to be used with all patients during all care to prevent and control transmission of microorganisms in health care settings.

Safety Engineered Medical Device: A non-needle sharp or a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces exposure incident risk. Safety engineered devices shall be licensed by Health Canada.

Seal-Check: A procedure that the health care provider must perform each time an N95 respirator is worn to ensure it fits the wearer's face correctly to provide adequate respiratory protection. The health care provider is to receive training on how to perform a seal-check correctly.⁴

Sharps: Objects capable of causing punctures or cuts (e.g., needles, syringes, blades, clinical glass).

Staff: Anyone conducting activities in settings where health care is provided, including but not limited to, health care providers. See also, *Health Care Providers*.

Staff Cohorting: The practice of assigning specified health care providers to care only for patients known to be colonized or infected with the same microorganism. These health care providers would not participate in the care of patients who are not colonized or infected with that microorganism. See also, *Cohorting*.

TB: Tuberculosis, an infection caused by *Mycobacterium tuberculosis* complex. Patients with suspected TB or known infectious TB of the lungs require Airborne Precautions.

Terminal Cleaning: The cleaning of a patient room or bed space following discharge or transfer of the patient, in order to remove contaminating microorganisms that might be acquired by subsequent occupants. In some instances, terminal cleaning might be used once some types of Additional Precautions have been discontinued. Terminal cleaning methods vary, but usually include removing all detachable objects in the room, cleaning lighting and air duct surfaces in the ceiling, and cleaning everything downward to the floor. Items removed from the room are disinfected before being returned to the room.

Workplace Hazardous Materials Information System (WHMIS): The Workplace Hazardous Materials Information System (WHMIS) is Canada's national hazard communication standard. The key elements of the system are cautionary labelling of containers of WHMIS 'controlled products', the provision of Material Safety Data Sheets (MSDSs) and staff education and training programs.



Section IV

Support for the Person Infected With HIV

Rationale

The World Health Organization defines health as a state of complete physical, mental and social well-being. A comprehensive program of care, treatment and support, including information, education and counseling can enhance HIV prevention efforts, reduce the stigma associated with HIV/AIDS, and contribute to the overall physical, sexual, emotional, psychosocial, and spiritual well-being of a person living with HIV. The Primary Community Care approach is best suited to the management of HIV.

Disclosure of HIV status is a significant issue for those infected. Disclosure can lead to discrimination and rejection by family, friends, co-workers and the larger community. It may lead to discussions about sex, sexual orientation, sexual acts, drug use, disease and death. The decision to disclose carries public health, criminal and civil legal implications. Counseling for disclosure is outlined in this section.



Primary Community Care Management of HIV

Primary Community Care is an integrated approach to case management. Health care and mental health professionals work as a team, providing assessment, support, treatment and referrals to the individual living with HIV. Collaboration and communication among team members ensures the medical, social and mental health needs of the patient are met.

The Primary Community Care (PCC) Team

The composition of the PCC team is individualized according to the needs of the patient, the availability of services within the community, and referrals to the regional and territorial level.

PCC team members may include:

- Specialist physician
- Family physician
- Community Clinic Nurse, Nurse Practitioner
- Medical Social Worker
- Mental Health and Addictions Counselor
- Pharmacist
- Nutritionist

Clinics should establish a list of local **complementary health care providers**, including but not limited to:

- Aboriginal Healers
- Registered Massage Therapists
- Home care workers
- Naturopaths
- Homeopaths
- Tele-health, HIV Info Line (Canadian Mental Health Assoc, NWT division)

Clinics should establish a list of local **pastoral care providers**, including but not limited to:

- Elders
- Clergy
- NGOs, such as Native Women's Association, Tree of Peace, etc.
- Shelters
- Transportation assistance

Table 1 Roles and Responsibilities of Health Professionals In the Management of HIV

Health Services

- Coordination of treatment, including antiretroviral drug therapy.
- Management of HIV related illnesses and side effects related to antiretroviral therapy
- Assessment and referral to medical specialist services
- Primary health care
- Health promotion, education and counseling

Mental Health and Addictions Services

- Community based mental health and addictions counseling services
- Mental health prevention, treatment and aftercare services
- Assessment and referral to psychological or psychiatric services
- Coordinated Discharge Service
- Medical detox
- Residential treatment for persons with addictions, mental health and concurrent disorders.



Case Management using PCC

The PCC Team is initiated upon confirmed diagnosis of HIV. The point of access is the family physician or community health nurse, who is responsible for directing and tracking the patient within the system. The team is compiled in collaboration with the patient, whose consent is required for the sharing of information. Wherever possible, the patient and selected family will be team members. All PCC team members work together to provide assessment, planning, treatment and monitoring. Team meetings, case conferencing, information sharing, and decision making may occur, with the expressed consent of the patient.

Information Sharing and Confidentiality

Health care professionals routinely share patient information when managing and referring within the health system. **However, the PCC model requires no assumptions of consent be made when providing care.**

The patient should agree to the composition of the PCC team, and should provide explicit consent for the release of health information to team members. Consent may be given in verbal, written or electronic form, provided the health care professional is able to identify the patient as the source. The patient should be aware of the right to withhold or withdraw consent to the sharing of personal information with other members of the PCC team.

Steps to ensure the security of shared information:

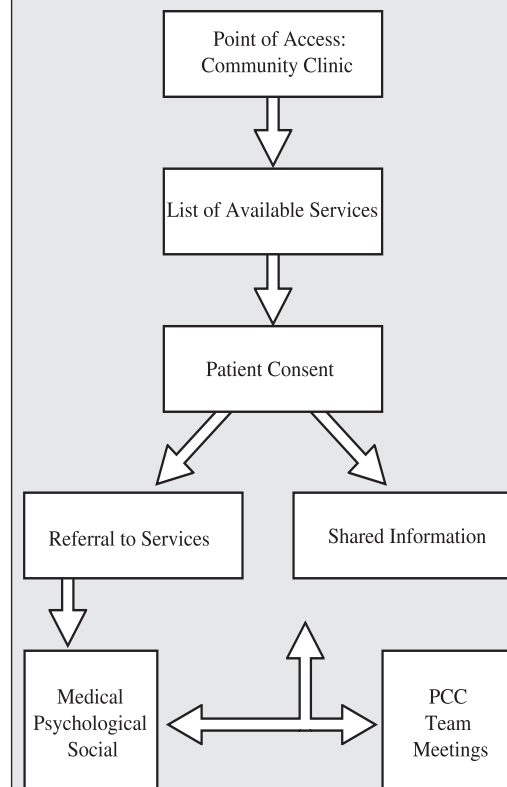
- Safeguard computer correspondence between team members.
- Use confidentiality warnings on facsimile cover sheets, envelopes, and e-mail messages.
- Never discuss patient information in a non-secure setting, including hallways, open offices, public spaces, etc.
- Safeguard discarded correspondence among team members, including telephone messages, letters, etc.
- Notify the patient if a breach of confidentiality has occurred.

Coordinated Discharge From Hospital

Upon admission the medical social worker can conduct a psycho-social assessment, meet with patient and family members, and make referrals to community and regional services. Follow-up appointments with the medical social worker can be scheduled to coincide with appointments with the specialist physician.

When referral to community based counseling services is not possible, due to unavailability or concerns over confidentiality, counseling services may be provided by the medical social worker. Referral may also be made to the Stanton Territorial Hospital Mental Health Clinic.

Table 2
PCC Team Approach Upon Positive HIV Result





Disclosure

Disclosure is Not Contact Tracing. Contact tracing is a public health measure designed to prevent HIV transmission and to encourage people who have been exposed to HIV to seek testing. The health care professional must not reveal the infected individual's name or any other information that could identify him/her.

Disclosure is the act of telling or revealing HIV status, and advising someone exposed to seek medical care. It is the act of informing others of a person's HIV status. It may occur in the following contexts:

- Personal relationships: sexual partners, spouses, children, family, friends
- Health and social service providers: physicians, nurses, emergency services, dentists, social workers, insurers, etc.
- Institutional settings: correctional institutions, detox centres, schools, etc.

Table 3 UNAIDS and WHO Guidance on Disclosure

UNAIDS and WHO encourage beneficial disclosure. This is disclosure that is:

- voluntary
- respects the autonomy and dignity of the affected individuals,
- maintains confidentiality as appropriate
- leads to beneficial results for those individuals, and for their families, and sexual and drug injecting partners
- leads to greater openness in the community about HIV/AIDS
- meets the ethical imperatives of the situation where there is a need to prevent onward transmission of HIV

Opening up the HIV/AIDS Epidemic: Guidance on encouraging beneficial disclosure, ethical partner counseling and appropriate use of HIV case reporting (Geneva: UNAIDS, 2000)

Beneficial disclosure describes situations where an HIV-positive person tells a sexual or injecting drug partner about his or her HIV status for prevention purposes, or discloses to family, community members or health care workers for support. **Harmful disclosure** involves cases where disclosure is made without the consent of the person who is HIV-positive. The disclosure may have adverse consequences, such as discrimination, abandonment or physical violence.

Counseling for Disclosure

The patient is entitled to control the decision to disclose. The role of the health professional is to counsel the patient on issues surrounding disclosure.

Goals of Counseling for Disclosure

The goals of counseling for disclosure of HIV-positive status are:

- To help clients integrate awareness of their HIV infection as a permanent factor of life
- To help clients resolve emotional and psychological issues in their lives
- To provide clients with information about the legal consequences of non-disclosure
- To help reduce the stigma associated with living with HIV
- To prevent the further transmission of HIV

Table 4 Psychosocial factors that influence the patient's decision to disclose

- Coming to terms with the diagnosis
- Need to reveal behaviours of sex and drug use
- Fear of response, including emotional and/or physical violence
- Fear of losing a partner and/or children
- Fear of rejection
- Fear of illness
- Fear of death from AIDS
- Fear of loss of financial security
- Stigma and discrimination



Counseling Detail for Disclosure

Adapted from Disclosure of HIV Status After Cues: Resources for Community Based AIDS Organizations. Canadian AIDS Society 2004

1. Review Prevention of HIV Transmission

- Assess potential mental or emotional health issues that may prevent the patient from fully understanding the principles of HIV transmission.
- Assess the patient's HIV risk reduction knowledge and skills.
- Acknowledge and accept the specific sexual and drug-injecting culture of the client.
- Explain, as necessary, the principles of HIV transmission.
- Provide information, as necessary, on safer sex, safer injecting practices and other measures to reduce the risk of HIV transmission.

2. Acknowledge the Patient's Perspective

- Acknowledge that some patients may have difficulty communicating openly and honestly in their personal relationships about issues related to HIV disclosure, sex, and drug use.
- Recognize the real and potential physical and psychological dangers of disclosure facing a patient, which may include rejection, discrimination, violence and other challenges.
- Acknowledge that disclosure can be extremely difficult during moments of sexual arousal, while anticipating the experience of injecting drugs, or while under the influence of alcohol or drugs.
- Encourage the patient to address disclosure with potential sexual partners and/or injects drug partners prior to sexual or injection drug activity that has a risk of transmitting HIV.
- Acknowledge the patient's right to control disclosure, while emphasizing the responsibility for the safety of others.

3. Explore the Benefits of Disclosure or Non-Disclosure

- Explore the real and potential benefits of disclosure to the patient, including enhanced communication, support and acceptance by family, friends and community.
- Examine with the patient any potential benefits of disclosing his or her HIV status, particularly to the patient's support network, including a spouse, a partner, a family member, or friends and other people involved in the patient's life.
- Recognize any potential obstacles to disclosure that may require specific interventions, such as addictions and mental health issues.
- Discuss attitudinal and behavioural barriers that may require longer-term or specialized counselling.
- Refer to other social or medical services as necessary and appropriate

Table 5

Outline for Counseling for Disclosure

Review Prevention of HIV Transmission

1. Assess patient knowledge and skills
2. Provide information on risk reduction



Acknowledge the Patient's Perspective

1. Fears and anxieties
2. Challenges in honest and open communication
3. Rights and responsibilities in the decision to disclose



Examine the benefits of disclosure or non-disclosure

1. Support from family, friends and community
2. Reduced risk of transmission
3. Challenges following disclosure
4. When disclosure is not necessary



4. Disclosure Where HIV Transmission is Not an Issue

- Acknowledge that disclosure of HIV status in all situations and to all people is not necessary.
- Affirm that the patient is entitled to control the disclosure of his or her HIV status.
- The decision of when and how to disclose are important, but sometimes difficult, steps for the patient in the disclosure process. Ongoing counseling may help.
- Acknowledge that disclosure is a series of events over a lifetime, which may or may not become easier.
- Acknowledge the potential for discrimination and other social harms associated with disclosure to certain individuals, such as employers, coworkers, landlords, etc.
- Include all other issues that may result from disclosure of HIV status. These could include coming out issues resulting from a change in sexual orientation, immigration status, drug use, and sexual violence. These issues require acknowledgement and respect.
- Refer to other sources of expertise

Failure to Disclose

If after counseling, it is suspected that a person infected with HIV continues to engage in risky behaviours, the Chief Medical Health Officer must be notified. A progressive public health intervention will then be initiated. Table 3 shows the continuum of public health responses and interventions for failure to disclose.

Table 6
Progressive Public Health Intervention
For Failure to Disclose HIV Status

Upon awareness of patient's failure or inability to disclose and risk behaviour:

1. Report to the Chief Medical Health Officer concerning a patient who is potentially unwilling or unable to prevent transmission of HIV.



2. Counsel and support patient to encourage disclosure and cessation of risk behaviour.
 - Assess patient knowledge and capacity to comply
 - Refer for treatment or services as necessary
 - Report assessment to CMHO



3. CMHO confirms details of report and HIV status of the patient, and issues a written order containing:
 - Conditions of HIV disclosure
 - Protection of partners
 - No sharing of needles or donation of blood/tissue
 - Regular meeting scheduled with health professional
 - Compliance with medical treatment and counseling



4. When risk behaviour persists, CMHO imposes a public health order, which places limits on the patient relevant to risk of transmission. Limits may include:
 - Movement within community
 - Participation in activities or events
 - Interaction with certain individuals



5. When risk behaviour persists, CMHO initiates an Apprehension Order.



6. In the event of extreme risk to others, the patient may be charged under the Public Health Act and/or the Criminal Code.

Resources for Those Living with HIV



HIV/AIDS Information Sheet

CAAN: Canadian Aboriginal AIDS Network
www.caan.ca

Canadian AIDS Society
www.cdn.aids.ca

Canadian HIV/AIDS Information Centre
www.adissida.cpha.ca

Health Canada, Division of HIV/AIDS
www.hc-sc.gc.ca/dc-ma/aids-sida

Canadian HIV/AIDS Legal Network
www.aidslaw.ca

Public Health Agency of Canada: Health Network
www.phac-aspc.gc.ca/new_e.html

Living Positive: Edmonton Persons Living With HIV Society
www.edmlivingpositive.ca

Global Network of People Living With HIV/AIDS
www.gnpplus.net/cms/index

Disclosing Your HIV Positive Status



HIV/AIDS Information Sheet

What does "disclosing my HIV-positive status" mean?

Disclosing your HIV-positive status means telling someone else that you are HIV-positive. Disclosing your HIV status to another person is often difficult, whether you're disclosing to a sexual partner, someone you inject drugs with, a friend, family member, employer or anyone else you decide to tell.

Can I still have sex if I have HIV or AIDS?

Yes. People living with HIV/AIDS are entitled to an active, healthy sex life. However, you cannot put your partner at risk of infection with HIV. Because of the high risk for transmitting HIV. The Supreme Court of Canada has ruled that you must tell your sexual partner that you are HIV positive

What if the person I am having sex with doesn't want to use condoms?

If your sexual partner does not want to use condoms, you are putting another person at risk of HIV infection. You are also putting yourself at risk for potential new infections.

Your partner must make his or her decision voluntarily, without coercion. He or she must also understand the risk of HIV transmission and not be under the influence of alcohol or drugs.

If I inject drugs, do I have to disclose my HIV status to the people I inject drugs with?

Sharing injecting equipment with another person is high risk for transmitting HIV. If you inject drugs, it is important that you use a clean needle, syringe and other injecting equipment (such as spoons) every time.

If you do share injecting equipment with another person, then you must first tell him or her that you are HIV-positive. The person you are going to inject drugs with must understand the risk of HIV transmission and must not be under the influence of alcohol or drugs.

What is the best way to disclose my HIV status before having sex or injecting drugs?

It is usually easier to tell someone you are HIV positive before getting ready to have sex or inject drugs. Think over what you want to say, why you want to say it, and how you want to say it so you will feel more prepared when you disclose your status.

Do I have to disclose my HIV status to people other than sexual partners or people I inject drugs with?

No. However, by disclosing your HIV status to friends or family, you can build a support network and feel less alone about being HIV-positive. Choosing the right time and place to disclose to others is important. You may feel vulnerable right after you disclose and you need to be prepared for both positive and negative reactions from the people you disclose to.

You will need to decide whether you can trust someone with the knowledge that you are HIV positive.

Telling others you are HIV-positive means you have less control over how that information is shared. Be clear with anyone you disclose to whether it is okay for them to tell other people that you are HIV-positive. Providing the people you disclose to with written information about HIV/AIDS can often be helpful.

Disclosure and Criminal Law



HIV/AIDS Information Sheet

The Canadian AIDS Society and the Canadian HIV/AIDS Legal Network list the following as key messages about HIV disclosure and criminal law.

Studies show that most people living with HIV tell their sexual partners about their HIV status and take steps to prevent HIV transmission (like using condoms during sexual intercourse). Criminal law cases, like all court cases, are brought when things have gone wrong. They do not indicate the way most people living with HIV behave in their sexual relationships.

It is unfair to stigmatize all people living with HIV because of the conduct of a few individuals. People living with HIV already face fear, stigma and discrimination. People living with HIV must not be treated as criminals simply because they are HIV-positive.

Everyone, not only people who know they are HIV-positive, has a responsibility to stop HIV transmission. HIV is a reality in Canada. There are approximately 50,000 people living with HIV in Canada - but 30% do not know that they are infected and so cannot tell their partners. So whenever and wherever possible, people should take personal responsibility by using condoms when engaging in sexual intercourse.

Some people living with HIV may not be able to disclose their HIV status to their sexual partners because they fear for their safety. HIV-positive people in abusive relationships may not be able to use a condom or insist that their partner use a condom. They may also fear the consequences of disclosing their HIV status to their partner.

Relying too heavily on the criminal law to prevent HIV transmission may be counterproductive. It is unlikely that the threat of criminal penalties will stop people from having risky sex or sharing injection equipment (needles and syringes).

- Instead, criminal penalties may deter those most at risk from getting tested for HIV. If someone does not get tested, they will not receive counseling about changing behaviours that risk HIV transmission. Nor will they find out if they are HIV-positive, or access medical treatment and support services.
- Criminalizing high risk sexual and drug injecting behaviours further stigmatizes people living with HIV and makes it even more difficult to provide effective education about preventing HIV infection (especially for socially marginalized communities most at risk).
- Finally, threatening people who expose someone else to HIV with criminal prosecution may create a false sense of security among HIV-negative people.



Section V

Health Promotion for the Prevention of HIV/AIDS

Rationale

Communities across the NWT are at significant risk for the increased transmission of HIV. Prevention strategies rely heavily on the health care professional. Proven interventions include voluntary HIV testing and counseling, access to condoms, treatments for STIs, HAART for the prevention of maternal to child transmission, and harm reduction programs for injection drug users.

Suggested strategies and promotion materials for the prevention of HIV transmission are outlined in this section.



Prevention Strategies

Strategies for the health care professional include:

- Test for sexually transmitted infections
- Counsel for the reduction of risk behaviours
- Make condoms easily available
- Post materials - create a display on sexual health
- Copy and distribute materials from this manual
- Give age-appropriate lessons to schools
- Speak to community groups

Resources for your Use

Information Sheets

All information sheets included in this manual can be reproduced for use in patient education, community presentations and clinic displays. They include:

- Basic Facts About HIV and AIDS (Section V)
- What You Need to Know About Condoms (Section V)
- HIV Stats at a Glance (Section I)
- HIV/AIDS Frequently Asked Questions (Section I)
- Should I Be Tested For HIV? (Section II)
- Pros and Cons of HIV Testing (Section II)
- On-Line Resources for Those Living with HIV (Section IV)
- Disclosing Your HIV Status (Section IV)
- Disclosure and Criminal Law (Section IV)

School and Youth Education

The following web sites have lesson plans, illustrations and materials which can be downloaded and used for teaching in schools and other youth forum. Most are categorized by age or grade level.

- Beyond the Basics: A Sourcebook on Sexual and Reproductive Health Education (Canadian Federation for Sexual Health) <http://www.ppfc.ca/ppfc/content>
- Sexuality and U (Society of Obstetrics and Gynecologists of Canada) www.sexualityandu.ca
- Sexuality Education Gateway (Canadian Association for School Health and Health Canada) www.safehealthyschools.org
- Teaching Sexual Health: Alberta Health and Wellness www.teachingsexualhealth.ca
- Discovery School (Discovery Communication Inc.) <http://school.discovery.com>

Presentations

Prepared presentations are available through:

- Yellowknife Health and Social Services Authority provides a presentation using power point or overheads http://www.hssa.org/resources/healthpromotion/other_resources.htm
- The Communicable Disease Consultant at GNWT HSS has a presentation for sharing.

Interactive Websites for Youth

- www.spiderbytes.ca
- www.youthco.com
- www.planetahead.ca
- <http://groups.msn.com/TeenTalkKlinik>

Basic Facts About HIV and AIDS



HIV/AIDS Information Sheet

HIV stands for **Human
Immunodeficiency
Virus**

AIDS stands for **Acquired
ImmunoDeficiency
Syndrome**

HIV is a virus that attacks your immune system. Once the virus gets inside your body:

- You may not feel or look sick for years, but you can still infect others
- Over time, your immune system may grow weak and you can become sick with different illnesses.
- If left untreated, your immune system will no longer be able to defend your body from infections, diseases or cancers which can kill you. This is called AIDS.

There is no cure for HIV infection.

- There are some drugs that can slow down the disease so the infected person can stay healthier for a longer time.
- Drugs cannot get rid of HIV or cure AIDS.
- Protecting yourself against infection is your only defense.

You can be infected by HIV if:

- The virus gets into your bloodstream. It can enter your body through contact with the semen, vaginal fluid, or blood of person infected with HIV.

The virus can get into your bloodstream if:

- You have vaginal or anal sex with someone who has HIV, without using a condom.
- You have oral sex with someone who has HIV, without using a condom or a dental dam. A dental dam is a piece of latex used to cover the anus or vagina.
- You share needles to inject drugs with someone who has HIV.
- You share needles to tattoo or pierce the skin with someone who has HIV.
- You share sex toys with someone who has HIV.

A mother with HIV can pass it to her baby:

- when she is pregnant
- at birth
- when she breastfeeds

You cannot get HIV from:

- casual everyday contact, such as talking or eating with someone who is infected with HIV.
- Handshakes, hugs or kisses.
- Coughs or sneezes.
- Making a blood donation.
- Swimming pools.
- Toilet seats or water fountains.
- Bed sheets.
- Forks, spoons, cups, food.
- Insects or animals.

You can protect yourself.

Safer Sex means making sure that semen, vaginal fluids, or blood do not get into your body.

To practice safer sex, use:

- A latex condom correctly, every time you have vaginal or anal sex.
- A condom or dental dam every time you have oral sex.
- Only water-based lubricants with latex condoms. Oil-based lubricants, like Vaseline, can weaken a latex condom and cause it to break.

Safer Needle Use means that if you inject drugs, or tattoo or pierce you use a new or sterilized needle every time.

- Sterilization requires soaking in bleach for at least 30 seconds, followed by rinsing with water.
- Soap and water alone do not sterilize needles.

If you think you may have been infected with HIV you should be tested.

- You can be tested at your community health clinic.
- Testing is private and confidential.
- You can get more information from the doctor or nurse in your community.
- You can get more information from the NWT HIV/AIDS Hotline

What You Need to Know About Condoms



HIV/AIDS Information Sheet

Condoms are available as:

- unlubricated (dry)
- lubricated (with nonoxynol-9 or water soluble lubricant)
- plain or reservoir tip
- smooth or textured
- natural or colored
- plain or flavored

What to buy

- Always buy latex or polyurethane
- Never use a condom after the expiry date on the package.
- Try other brands of condoms if the condom fits poorly (too snug or generous, slips off, uncomfortable).
- A snug-fitting condom may be identified as “form-fitting”.
- A more generous condom may be identified as “XXL comfort fit”, “contour-shaped”, “extra pleasure” (oversized reservoir tip), “ultra-fit” or “extra”.
- A thinner condom may be identified as “thin”, “sensi-thin”, “microthin”, “ultra sensitive” or “durathin”.
- Avoid novelty items, often sold through vending machines or specialty stores, which look like condoms. They are not subject to Health Canada’s Medical Devices Regulations. They are not reliable as a means of preventing pregnancy or STD’s.

Storage and Lubricants

- Keep packaged condoms dry and away from light and heat. Condoms deteriorate more quickly when exposed to temperatures over 38 degrees Celsius, high humidity and air pollution.
- Avoid oil-based lubricants such as, Vaseline (petroleum jelly), baby oil, vegetable and nut oils and hand lotions (even those which wash off with water). These products may weaken latex and lessen the effectiveness of a condom.
- Use extra water-based lubricant such as KY jelly, Astroglide, Juicy Lube (flavored) and Muko, if needed.

Protection and Use

- Among those using condoms for contraception, about 14% will have an unplanned pregnancy during the first year of typical use.
- The emergency contraceptive pill may be used as a back-up method against pregnancy if a condom breaks, falls off or is not used.
- Condoms do not protect against genital herpes, genital warts (HPV) and pubic lice as lesions can occur on skin surfaces not covered by a condom.
- If used repeatedly, spermicides on the condom may irritate and inflame the lining of the vagina and allow HIV infection to occur easier.
- Spermicides may increase the risk of bladder and vaginal infections in young women.
- Use a condom correctly. The most common reason for condom failure is improper or inconsistent use. See next page for instructions.

Condoms and Anal Intercourse

- Use thicker condoms identified as “extra strength” or “ultra extra strength”.
- Use lots of water-soluble lubricant.
- Don’t use condoms lubricated with nonoxynol-9 because the spermicide irritates the rectal lining.



What You Need to Know About Condoms

HIV/AIDS Information Sheet

Expiry Dates

Look for the expiry date on the condom box. Do not use condoms after that date.



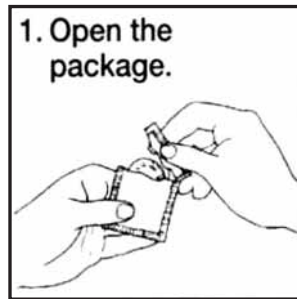
Exp. means expiry
1 means January
06 means 2006

Lubricants

You can use lubricants like K-Y Jelly or Lubafax.



Do not use vaseline, baby oil, mineral oil, vegetable oil or hand cream on the condom. These may make the condom break.



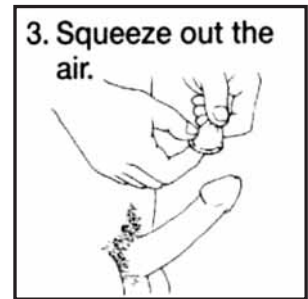
1. Open the package.

Open the package carefully. Do not use scissors.



2. Put a lubricant on the inside.

Put a drop of lubricant inside the condom.



3. Squeeze out the air.

Squeeze out the air in the tip of the condom. This tip holds the semen (white fluid). Put on the condom. Your penis must be hard.



4. Unroll the condom.

Hold the tip of the condom between your fingers. Unroll the condom to the base of the penis.



5. Put a lubricant on the outside.

You can put lubricant on the outside of the condom as well.

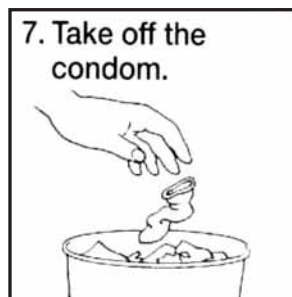


Some condoms do not have a tip. Leave a half inch at the end of these condoms. Then squeeze out the air in the end of the condom.



6. Hold the condom while you pull out.

Pull out the penis right after you come. Hold the base of the condom while you pull out.



7. Take off the condom.

Take off the condom right away. Throw it in the garbage. Do not use the condom again.

Storage

Do not store condoms where they can be damaged by heat, cold or sharp objects. Do not carry in pockets.

