Blood and Body Fluid Exposure Management
Yukon Communicable Disease Control (YCDC)
4 Hospital Rd., Whitehorse, YT Y1A 3H8
Phone: (867) 667-8323 Fax: (867) 667-8349
July 2018

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Unless otherwise stated the content of this guideline has been adapted from BCCDC Communicable Disease Control Blood and Body Fluid Exposure Management (October 2017)

1.0 INTRODUCTION

This document focuses on providing guidance for health care providers (HCPs) on the assessment of risk and management of persons potentially exposed to hepatitis B virus (HBV), hepatitis C virus (HCV) and human immunodeficiency virus (HIV), through contact with blood and body fluids (BBF) in a healthcare or community setting.

Practitioner Alert!

These BBF management guidelines are applicable to exposures involving health care providers, community acquired exposures, including needlesticks, and situations of sexual assault. They are not applicable to:

- Consensual sex including Pre-exposure Prophylaxis (PrEP)
- Non-publically funded treatments or interventions

For additional information on managing BBF exposure in survivors of sexual assault, and other considerations including STI screening and emergency contraception, refer to:

- The Yukon Treatment Guidelines for Sexually Transmitted Infections (STI) in Adolescents and Adults 2015 (www.hss.gov.yk.ca/pdf/stitreatmentguidelines.pdf) and,
- BC Women's Hospital Sexual Service: Guidelines for Emergency Contraception (www.bcwomens.ca/Professional-Resources-site/Documents/Medication%20Guideline%20Emergency%20contraception%202017.pdf)

1.1 Goals

To support HCPs with information to reduce the transmission of bloodborne viruses by providing appropriate risk assessment and clinical management recommendations in persons exposed to BBF in a healthcare or community setting. Using principles of health equity (i.e., trauma informed practice and cultural safety), to:

1. Assess the risk of exposure
2. Test the exposed and source person
3. Administer PEP treatment when appropriate to prevent the development of HIV and/or HBV infection
4. Counsel the exposed person to address anxiety, encourage follow-up testing and prevent further transmission

Post-exposure management must be undertaken when the following conditions are present:

- Exposure is through a needlestick/scratch, permucosal contact or contact with compromised (damaged) skin
- Exposure is to blood or high-risk body fluids from a source that is either known to be infectious or might be potentially infectious (high-risk source or in settings where individuals engage in high-risk activities)
- The exposed person is known or considered to be at risk for HBV, HCV or HIV

2.0 DEFINITIONS

Antiretroviral therapy (ART) – A combination of antiretroviral medications used to treat HIV and achieve viral suppression (CATIE, 2017).

Bloodborne pathogen – Any pathogen that can be transmitted from one person to another via blood. These pathogens may also be transmitted by other body fluids. This varies depending on the pathogen, the type of body fluid and the nature of the exposure.

Blood or body fluid (BBF) exposure – An event where a person is exposed to potentially infectious blood or bodily fluids through one of the following:

- **Percutaneous** exposure through puncture of skin by needlestick or another sharp object
- **Permucosal** exposure through contact with mucous membranes
- **Non-intact skin** exposure through eczema, scratches and damaged skin
- **Sexual Assault** exposure including anal, vaginal and/or oral

Hepatitis B Immune Globulin (HBIg) – Passive immunoprophylaxis used in combination with hepatitis B vaccine to prevent mother-to-infant transmission and in certain other post-exposure scenarios. Prepared as a solution of hepatitis B Ig for intra-muscular administration. Waning anti-HBs levels can be detected up to 6 months later. Most effective if given within 48 hours, up to 7 days following percutaneous exposure and 14 days following permucosal exposure.

High Risk Setting – Settings or communities with an established high prevalence of HBV, HCV and HIV. This includes needle distribution program sites and acute care drug and alcohol treatment clinics.

Negligible – In relationship to BBF exposure, negligible is a risk of transmission so insignificant that the risk of administering PEP outweighs the benefit. So small or unimportant as to be not worth considering; insignificant (Canadian English Oxford Dictionary, 2018).

Post-exposure prophylaxis (PEP) –

- **HBV** - hepatitis B vaccine and HBIg can provide susceptible individuals with protection from HBV infection after exposure to HBV in certain scenarios, when given within a certain time frame. An assessment of the type of transmission event, and if available, the immunization histories and post-vaccination serologic testing of the source and exposed persons, will help guide the decision as to whether or not PEP is indicated
- **HCV** – there is currently no PEP available. A 3 week RNA RCR is recommended in high risk exposures
- **HIV** – the use of antiretroviral drugs after a single high-risk event to prevent HIV seroconversion. They are most effective if started within 72 hours of exposure, ideally within 2 hours

Susceptibility – a person is considered susceptible to:

- HBV if they have no history of a protective antibody level following administration of a complete hepatitis B vaccine series (i.e., anti-HBs levels less than 10 IU/L upon completion of vaccine series) OR no history of a test result indicating immunity from prior HBV infection (i.e., HBsAg nonreactive, anti-HBc Total reactive and anti-HBs > 10 IU/L)
- HCV if they have no history of prior anti-HCV infection (i.e., anti-HCV reactive or HCV RNA detectable)
- HIV if they have no history of a prior anti-HIV infection (i.e., anti-Ag/Ab reactive or HIV RNA detectable)

Window period – duration of time between infection and laboratory detection of infection

3.0 MANAGEMENT OF A PERSON WITH A BBF EXPOSURE

3.1 Initial follow-up care

Needlestick/wound: Allow the wound to bleed freely

- Do not promote bleeding by squeezing the wound. This may damage the tissues and increase uptake of any pathogen(s)
- Wash well with soap and water

Mucous membrane or eye: Irrigate with water or normal saline

Skin: Wash well with soap and water

- Do not apply bleach to wound or mucosa

3.2 Risk Assessment

A risk assessment should be performed on the exposed person as soon as possible. If indicated, certain types of PEP may need to be given within 48 hours, some preferably within 2 hours. This can be done at hospital emergency departments, Yukon Communicable Disease Control (YCDC) or community health centers for exposures outside of Whitehorse.

The risk assessment should include:

- Assessment of the exposed person
- Assessment of the event and nature of exposure
- Assessment of the source person

> ***Practitioner Alert!***
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> Level of risk must be considered within the context of each specific exposure, and in relation to the risk of transmission and the specific infection/s of concern. It is recommended to assess the risk of HBV, HCV and HIV independently of one another.

3.2.1 Risk Factors

Assessment of the exposed person includes hepatitis B vaccine history and immune status, and personal risks for HCV and HIV.

Common Risk Factors for HBV, HCV and HIV

- Riskier sexual activity (i.e., unprotected sex with multiple partners, sex trade work, anal sex and rough sex causing mucosal tearing)
- History of injection drug use
- Immigration from an endemic country
- Acupuncture, piercing, tattoos and scarification where basic infection control practices may not have been used
- History of hemodialysis

For a complete list of risk factors and to determine a high risk source, see Appendix 1.

HBV

Since the introduction of school-based and infant hepatitis B immunization programs beginning in 1994, many of Yukon's population under the age of 35 has been vaccinated. Hepatitis B vaccine is provided free to all children 19 years of age and younger as well as those who are deemed high risk, immunocompromised and/or meet other pre-exposure indications as outlined by the Yukon Immunization Manual (www.hss.gov.yk.ca/yipm.php). It is recommended that HCPs have HBV immunization, testing and a documented titre. For those who are not fully immunized, effective post-exposure treatment can be achieved by administering hepatitis B vaccine, and if indicated, HBIg.

HBV can be spread through percutaneous and permucosal exposure, including sexual and non-intact skin contact.

If the exposed person has received a full course of hepatitis B vaccine and has a documented, protective titre post vaccination (anti-HBs ≥ 10 IU/L done more than 1 month after last dose of hepatitis B vaccine, and HBsAg and anti-HBc Total nonreactive), the risk of HBV from a bloodborne exposure is virtually zero.

For estimated risk of HBV transmission by exposure type, see Appendix 2.

HCV

Immunization against HCV is not available; however, if an exposure leads to HCV infection, approximately 25% of infections clear spontaneously and > 95% of people can be cured on treatment. HCV is mainly spread by percutaneous contact with infected blood. Sexual transmission is rare although the risk increases with activities where blood is present (i.e., anal and/or rough sex causing mucosal tearing).

For estimated risk of HCV transmission by exposure type, see Appendix 2.

HIV

Individuals living with HIV who are receiving anti-retroviral therapy (ART) and have an undetectable viral load likely have a negligible risk of transmission to others from bloodborne or sexual exposures. Viral loads are highest early in HIV infection (acute stage) or in later stages of advanced HIV disease or AIDS. Prompt administration of PEP in the exposed person can significantly reduce the risk of infection if the source person has a detectable viral load.

HIV can be spread through contact with infected blood and body fluids. For estimated risk of HIV transmission by exposure type, see Appendix 3.

Table 3-1: Fluids and Tissues Capable of Transmitting Bloodborne Pathogens

Fluid	HBV	HCV	HIV
Blood and body fluids **visibly** contaminated with blood	Yes	Yes	Yes
Semen	Yes	Yes, if blood present	Yes
Vaginal/rectal secretions	Yes	Yes, if blood present	Yes
Pleural, amniotic, pericardial, peritoneal, synovial and cerebrospinal fluids and inflammatory exudates (i.e., wound)	Yes	Yes	Yes
Saliva	Yes*	No, unless contaminated with blood	No, unless contaminated with blood
Transplanted tissue or organs	Yes	Yes	Yes
Breast milk	Plausible, if nipples are cracked or bleeding. Neonates given HBIg and hepatitis B vaccine are not at risk.	Plausible, if nipples are cracked or bleeding but the risk of transmission is very low. Breastfeeding is still recommended by HCV infected mothers	Yes, breastfeeding is **not** recommended
Faeces, nasal secretions, sputum, sweat, tears, urine vomitus	No, unless they contain **visible** blood		

* HBV transmission via **casual** mucosal contact to saliva that is not **visibly** contaminated with blood is uncommon. Although HBV has been detected in saliva, reports involving HBV transmission when a HBV-infected person bites (i.e., percutaneous) another person have involved bloody saliva. Blood was more likely the means of transmission, not the saliva.

3.2.2 Needlestick injuries in a healthcare setting

The risk will vary depending on the site, the type and the source of exposure. Transmission risk is increased with:

- Deep punctures
- Large, hollow bore needles containing blood
- High viral load of the source patient

Refer to Appendix 2 and 3 for details on probability of transmission of HBV, HCV and HIV in needlestick exposures versus other exposure types.

3.2.3 Consent

Informed consent for HBV, HCV and HIV testing refers to the process of obtaining voluntary agreement for proposed care or treatment. Conditions for consent include the client being adequately informed and capable of giving or refusing consent, and that consent is given voluntarily without coercion, fraud or misrepresentation. In Yukon, informed consent for HIV testing is the same as for any other diagnostic test. There is no requirement for written consent for HIV testing in Yukon.

If a client is unable to provide consent and HIV testing is clinically indicated, usual clinical practices for ordering all necessary testing, including the use of substitute decision-makers, should be applied. See Yukon Care Consent Act (www.gov.yk.ca/legislation/legislation/page_c.html).

Refusal to provide consent

There is no legislation to support mandatory source testing in Yukon. If the source person refuses to provide consent for testing, carefully consider the reasons for refusal. If there is no reason to suspect the source is in a high risk group for HBV, HCV or HIV, and refusal is based on factors other than fear of disclosure, then consider this a low risk source. It is not appropriate to automatically consider persons who refuse testing to be at high risk of infection. The following alternatives may also be helpful:

- The source person's health care provider may be able to provide information, if the source person is at high-risk for infection
- YCDC may be able to provide information, if the source person is at high-risk for infection

Do not delay the management of an exposed person if the source refuses testing or source information is unavailable.

3.2.4 Assessment of exposed person

Obtain verbal informed consent for HBsAg, anti-HBs, anti-HBc Total, anti-HCV and HIV testing. Assessment of the exposed person includes hepatitis B vaccine history and immune status, and personal risks for HCV and/or HIV. If risk factors are present, explain how past high risk behavior could affect baseline results which may not necessarily be related to the current exposure of concern. Also obtain consent for disclosure of the individual's results to their follow-up physician and, if applicable, Yukon Workers' Compensation Health and Safety Board. For recommended follow-up blood tests for the exposed person, refer to Table 3-3 and Appendices 4, 5 and 6.

Complete the **Blood and Body Fluid (BBF) Exposure Form** (www.hss.gov.yk.ca/exposure_management.php). This form includes information related to the exposure, post-exposure treatment and laboratory testing.

Arrange follow-up with the exposed person's health care provider using the Management of **Blood and Body Fluid Exposure: Letter to follow-up health care provider** (www.hss.gov.yk.ca/exposure_management.php).

3.2.5 Assessment of source person

Obtain verbal informed consent for HBsAg, anti-HBs, anti-HBc Total, anti-HCV and HIV testing.

Assessment of the source person includes hepatitis B vaccine history and immune status, and personal risks for HCV and/or HIV. If risk factors are present and/or they are infected with one or more of these viruses, post-exposure management for the exposed person should be considered.

Establish how the source individual will be contacted if any of their test results are positive. Encourage follow-up for results of baseline tests. If the facility is unable to provide HBV vaccine, encourage follow-up, if indicated, for client to obtain HBV vaccine.

Refer to Appendix 1 and Section_3.2.1 for further information on transmission risk.

3.2.6 Source person is unknown

Assess the nature of the exposure to determine the risk of transmission. Refer to Table 3-1.

3.2.7 Laboratory testing

Baseline blood should be collected from the exposed and source persons as soon as possible:

HBsAg, anti-HBs, anti-HBc Total, anti-HCV and HIV Ag/Ab

Recommend pregnancy testing for women childbearing age where appropriate.

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> The use of HIV PEP, HBIg, hepatitis B vaccine, or a positive (reactive or detectable) result, will alter timelines for testing. Contact YCDC with any questions.

Table 3-3: Summary of recommended lab testing if the exposed testing negative at baseline

Time since exposure	Exposed person at risk for			Rationale for testing
	HBV	HCV	HIV	
Baseline (ASAP) usually in Emergency Rooms	Refer to Appendix 4 for follow-up testing recommendations	Anti-HCV	HIV Ag/Ab	To check baseline status. Non-reactive test results suggest no prior infection
3 weeks after exposure		HCV RNA*	HIV Ag/Ab	Early identification can prevent further transmission and encourage engagement into care
6 weeks after exposure			HIV Ag/Ab	
3 months after exposure	Refer to Appendix 4 for follow-up testing recommendations	Anti-HCV	HIV Ag/Ab	Non-reactive test results 3 months after exposure suggests no current infection
6 months after exposure	Refer to Appendix 4 for follow-up testing recommendations	Anti-HCV	HIV Ag/Ab	Non-reactive test results 6 months after exposure suggest no current infection

* Only test for HCV RNA at 3 weeks when source is in a high risk category for HCV or is anti-HCV positive. If HCV RNA is detectable (positive), repeat HCV RNA 6 months after exposure to establish chronic infection.

Refer to Table 3-3 for a summary of baseline lab testing and recommended lab tests if the **exposed person** tests negative (non-reactive) at baseline. If the **exposed person** tests positive (reactive), refer to appropriate sections of the YCDC Guidelines for further guidance. Refer to Appendices 4, 5 and 6 for recommended sequence of laboratory testing based on risk.

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If source blood has been collected, is negative, and does not fall into a high risk category (no reported or suspected high risk behaviour that falls into the window period), the exposed does not require further testing.

Point-of-care anti-HIV Testing

A point-of-care anti-HIV (rapid test) test can be used to obtain preliminary results and may be more appropriate in some situations. This can include testing persons who are at high risk for HIV infection and have not been tested within the prior 3 months.

- In a high-risk exposure, even if the point-of-care anti-HIV test is negative, PEP should be given to the exposed person until confirmatory testing is complete
- If the point-of-care anti-HIV result for the source person is negative and not within a window period, PEP is not required
- If the point-of-care anti-HIV result for the source person is positive, PEP should be provided until confirmatory testing is done
- Positive point-of-care anti-HIV test results are considered preliminary positive results and should be reported to YCDC. A blood sample by venipuncture on the source person is required for confirmation.

In Yukon, point-of-care anti-HIV tests are available for use at Whitehorse General Hospital. See internal facility guidance document for interpretation and parameters for use.

3.2.8 Documentation

Risk assessment and management documentation should be recorded in the exposed person's chart and/or the emergency record.

Fax the completed **Blood and Body Fluid Exposure Form** to YCDC at (867) 667-8349 (www.hss.gov.yk.ca/exposure_management.php).

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It is the responsibility of the attending health care provider to ensure this form is completed and appropriate follow-up is planned. The Management of Blood and Body Fluid Exposure: Letter to Follow-up Health Care Provider may be used to organize follow-up.

If the exposure is occupational, Yukon Workers' Compensation Health and Safety Board forms are the responsibility of the employer. Do not send copies to YCDC.

4.0 POST EXPOSURE TREATMENT

4.1 HBV

There are many variables to consider when determining whether HBV PEP is indicated, including prior hepatitis B immunization history and related serology results, the immune status of the exposed person and the infection status of the source person. Refer to Appendix 4. The following information applies to the immune competent individual. To manage immunocompromised individuals, consult YCDC and/or Yukon's Medical Officer of Health (MOH).

HBIg is indicated in the case of sexual assault, or if the source person is HBsAg positive or tests positive within 48 hours of exposure. HBIg is preferably given **within 48hrs**, but may be given up to **7 days** after **percutaneous exposures** and up to **14 days** after **permucosal exposures**. If HBIg is indicated, contact your hospital emergency department or YCDC to arrange for administration.

Oral-genital and oral-anal contact are not considered a risk for hepatitis B.

Consensual sex with a known sex trade worker or person who injects drugs (PWID) and community acquired needlestick injuries are **not** indications for HBIg.

If the individual tests HBsAg or anti-HBc Total reactive (positive) at any point, refer to YCDC.

- If HBIg is indicated in Whitehorse, a Yukon licensed physician can authorize release from the WGH laboratory.
- If HBIg is indicated in rural Yukon, arrangements for the timely administration of HBIg will be made on a case-by-case basis via YCDC (during business hours) or the MOH (after hours). Should HBIg not be stocked in the community requesting it, arrangements will be made by YCDC to have it provided from/to the most feasible location.

  The following rural facilities each have a supply of HBIg:

  Dawson City Hospital Watson Lake Hospital Old Crow Health Centre

Refer to the Yukon Immunization Program manual (www.hss.gov.yk.ca/yipm.php) for specific information on administration of HBIg and hepatitis B vaccine, including individuals who meet criteria for the **Hepatitis B Vaccine Higher Dose** schedule.

4.2 HCV

PEP for HCV does not currently exist. Determine the HCV baseline status of the exposed person immediately after exposure:

- If source baseline is *negative* and not in a high risk category, complete an anti-HCV at 3 and 6 months
- If source baseline is *positive* and/or in a *high risk* category, complete a ***HCV RNA*** at 3 weeks
  - If HCV RNA is positive, repeat at 6 months to establish chronic infection

If chronically infected, the exposed person should be engaged into follow-up care for treatment consideration. Refer to Appendix 4 for further information.

In the case of sexual assault, a HCV RNA is indicated at 3 weeks.

4.3 HIV

For high risk exposures to HIV, PEP should be initiated **within 72 hours** of exposure, preferably within **2 hours**, to be most effective. Refer to Appendix 7.

In the case of sexual assault, *high risk* exposures include:

- Known HIV positive source or
- Known high-risk source (see Appendix 1) or
- Known or potential multiple assailants or
- Sexual assault occurring in a setting considered to be *high risk* for HIV
  AND
- Vaginal or anal penetration or
- Nature of the exposure is unknown

Negligible risk, in the case of sexual assault, occurs when the source is known to be *negative* (or there no reason to believe that the source is positive or in a high risk group) AND the setting in which the assault took place is not considered high risk.

Oral exposure alone is considered to be a negligible risk regardless of HIV status of the source. HIV PEP is *not* recommended where negligible risk is identified.

The Risk Assessment Stratification Protocol (RASP) www.mdcalc.com/hiv-needle-stick-risk-assessment-stratification-protocol-rasp is an interactive decision-making support tool which may be used to assist the HCP's assessment related to HIV PEP initiation.

Consult YCDC Monday-Friday, 0830-1630 and/or Yukon's MOH on-call after hours or during weekends. In addition, consultation services are available from BC-CfE (BC Center for Excellence in HIV/AIDS). See Section 6.0.

- **YCDC 1-867-667-8323**
- **BC-CfE** Monday-Friday (0800-1630) Tel: **(604) 806-8429**
  - Afterhours and weekends Tel: **(604) 341-1410**

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Approval by a Yukon physician is required to dispense a 5 day HIV PEP kit, even after consultation with BC-CfE. The issuing HCP must notify YCDC for further follow-up and assessment related to the provision and continuation of the full 28-day course of ART.

A 28-day course of ART is recommended for significant exposure to blood, or other potentially infectious body fluids of a person known to be HIV positive, or at high risk for HIV, when that exposure represents a substantial risk for transmission, and when the person seeks care within 72 hours of exposure.

- PEP may reduce the impact of the disease if administered up to **72 hours** post-exposure by decreasing the viral load, reducing the risk of transmission to others and potentially decreasing the risk of developing advanced disease in the long-term
- 5 day starter kits are available at:
  - hospital emergency departments (Whitehorse, Watson Lake and Dawson City),

  - YCDC
  - rural community health centers throughout Yukon where there is no hospital
- The PEP starter kit consists of a 5 day supply of:
  - Tenofovir DF one tablet (300 mg) once a day
  - Lamivudine one tablet (150 mg) twice a day
  - Raltegravir one tablet (400 mg) twice a day
- Arrange follow-up assessment of the exposed person **within 3 days** with their routine health care provider, or YCDC, to review results so an assessment can be made of the need for a full month of ART
- The remaining 23-days must be obtained from YCDC and approved by the MOH
- Serology is required at two and four weeks duration HIV PEP therapy:

Interval During Antiretroviral Therapy	**Required Tests**
Baseline	HIV Ag/Ab
Two weeks of therapy	CBC and Diff, AST, ALT, Phosphorus, Creatinine, Urinalysis
Four weeks of therapy	

- No laboratory evaluation except HIV testing is required prior to initiation of the antiretroviral therapy starter kit, unless the exposed person is suspected of having ***significant haematological hepatic*** *or* ***renal disease***
- Important considerations
  - Do not delay treatment until laboratory test results are obtained, unless the test result (point-of-care anti–HIV or routine laboratory HIV Ag/Ab test) is available within **2 hours**
  - A careful medication history (including prescription and non-prescription medications, supplements and alternative therapy) should be obtained and questions regarding drug interactions should be directed to the BC-CfE Pharmacy (1-604-806-8429)
  - The BC-CfE physician/CMOH may recommend modification of the regimen in the situations where there is significant toxicity or intolerance or the source is on antiretroviral therapy and/or has history of known or suspected resistance to any agents in the PEP regimen
  - ART is not provided free to persons exposed to HIV as part of their personal lives (i.e., consensual sex or sharing drug injection equipment).
  - Prophylaxis is not recommended for needlesticks from abandoned needles when they are outside the healthcare setting or when there is no history of the needle or the time of abandonment.

Health professional and client information on ARVs can be located at cfenet.ubc.ca/drug-treatment-program/information-sheets.

4.3.1 Children, pregnant women or when the source individual has a HIV resistant virus

Consult with BC-CfE as soon as possible:

- **Call 1-604-806-8429**

PEP will vary for children, pregnant women and for those exposed to a source known to have been on ART or a source whose HIV infection is known to be drug resistant.

Health professional and client information on ARVs can be located at cfenet.ubc.ca/drug-treatment-program/information-sheets.

4.4 Other interventions

Tetanus vaccine should be considered with a percutaneous injury.

Refer to the Yukon Immunization Program manual (www.hss.gov.yk.ca/yipm.php).

5.0 COUNSELLING GUIDELINES

Initial post-exposure counselling should be provided at time of the assessment. However as this is often overwhelming for the client, it is important that follow-up care be arranged and additional counselling be provided at follow-up visits.

> ***Practitioner Alert!***
>
> It is important to counsel the exposed regarding the specific infection(s) deemed a risk based on the exposure history and details.

5.1 Reduce potential transmission to contacts

Exposed persons may be anxious when initially assessed and may not remember all the information provided in initial counselling. It is important to repeat and follow-up with detailed counselling.

While awaiting test results the exposed person should be advised:

- To use latex condoms during intercourse
- Not to donate blood
- Not to share toothbrushes, razors, needles or other items potentially contaminated with body fluids
- Keep cuts and abrasions covered until fully healed
- Package any blood containing items separately before disposal
- Clean any blood contamination with a 9 parts water to 1 part bleach
- Avoid sharing recreational drug paraphernalia
- Defer pregnancy. If pregnant, consult your health care provider as soon as possible.

5.2 Breastfeeding

HBV:

If the exposure is to a high-risk HBV source, breastfeeding can continue in circumstances where:

- the mother is immune to HBV
- the mother and infant are vaccinated and treated with HBIg immediately post-exposure

Mothers that suspend breastfeeding can preserve breast milk by pumping and freezing the milk until they are cleared of infection risk.

HCV:

If the exposure is to an anti-HCV positive source, breastfeeding is recommended. If the nipples become cracked or bleed, mothers are to abstain from breastfeeding until they are healed. To prevent cessation of milk supply if breastfeeding is temporarily stopped, consider expressing and discarding breast milk until the nipples are healed

HIV:

If the source is infected with HIV, breastfeeding is **not** recommended irrespective of HIV viral load and use of ART. If the HIV status of the source is unknown, breastfeeding should be temporarily discontinued. During this time, the mother may pump and freeze breast milk while awaiting source test results. If a source person has baseline HIV-negative test results and has no recent high-risk behavior, then breastfeeding can be resumed and the frozen milk used.

Breastfeeding is contraindicated if the mother is receiving PEP due to a high-risk exposure. Breastfeeding can be resumed when PEP has been stopped.

5.3 Health care providers

Exposed health care providers are strongly encouraged to:

- Complete recommended follow-up testing
- Practice routine precautions to prevent transmission
- Seek immediate assessment if signs or symptoms of infection develop

Refer to Section 3.2.8 for information on documentation. Follow facility occupational health and safety guidelines.

5.4 Counselling

A BBF exposure can cause a significant amount of anxiety, fear, embarrassment or anger. Providing reassurance around confidentiality and the follow-up process, and accurate information and resources in a nonjudgmental way, can help to alleviate some of this.

If appropriate, when providing counselling around risk reduction and prevention of transmission, an approach should be taken that does not stigmatize or negatively judge individuals' lifestyle choices. Gender identity, sexual orientation and sexual/drug-use behaviours should be respected following principles of equity, cultural safety and trauma informed practice.

Consideration for professional counselling may be appropriate.

Resources

Mental Wellness and Substance Use Services
- www.hss.gov.yk.ca/ads_resourceinfo.php

BC Center for Excellence in HIV and AIDS
- cfenet.ubc.ca/post-exposure-prophylaxis

BC Center for Excellence in HIV/AIDS HIV Medication Information Sheets
- cfenet.ubc.ca/drug-treatment-program/information-sheets

Blood Ties Four Directions
- bloodties.ca

Health Link BC
- www.healthlinkbc.ca

HIV Needle Stick Risk Assessment Stratification Protocol (RASP)
- www.mdcalc.com/hiv-needle-stick-risk-assessment-stratification-protocol-rasp

Kaushee's Place
- yukontransitionhome.ca

Many Rivers
- www.manyrivers.yk.ca

Outreach Van
- www.manyrivers.yk.ca/services/outreach-van

Transgender Health Information Program
- transhealth.phsa.ca/for-service-providers-2/health-professionals/primary-care-toolkit

VictimlinkBC
- www2.gov.bc.ca/gov/content/justice/criminal-justice/victims-of-crime/victimlinkbc

Victim Services
- www.justice.gov.yk.ca/prog/cor/vs/

Victoria Faulkner Women's Center
- www.vfwomenscentre.com

Yukon Sexual Health Clinic
- www.facebook.com/YSHCwhitehorse

6.0 CONTACT INFORMATION

Yukon Communicable Disease Control Hours:
Monday- Friday (0830 to 1630)
#4 Hospital Road, Whitehorse, YT Y1A 3H8
Telephone: Local (867) 667-8323
Within Yukon 1-800-661-0408, ext. 8323
Fax: (867) 667-8349

Whitehorse General Hospital
(Ambulatory Care)
#5 Hospital Road, Whitehorse, YT Y1A 3H7
Telephone: (867) 393-8700
Fax: (867)393-8707
WGH Laboratory telephone: (867) 393-8739

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APPENDIX 1: Determining a High Risk Source

Establish the date of last testing specific to HBV, HCV and HIV in the source. Although past risk may exist, determine whether *high risk/high risk behaviours* are ongoing and whether window periods exist. Where the source is identified as *high risk*, the exposed should be considered for PEP and/or appropriate follow-up. Where the source is identified as having *other risks*, the exposed is unlikely to require PEP but follow-up may still be required.

HIV	HBV	HCV
High Risk	**High Risk**	**High Risk**
injection drug use	injection drug use and/or inhalational drug use ❸	injection drug use and/or inhalational drug use ❸
high-risk sexual behaviour (i.e., sex trade work, anal sex, rough sex causing mucosal tearing)	high-risk sexual behavior (i.e., sex trade work, anal sex, rough sex causing mucosal tearing)	high-risk sexual behaviour (i.e. sex trade work, anal sex, rough sex causing mucosal tearing)
sexual partner who is a PWID (person with injects drugs), or who is HIV+❶	a sexual partner who is a PWID, or who has acute or chronic HBV ❶	a sexual partner who is a PWID, or who is HCV+ ❶
blood contact with a known case of HIV infection	blood contact with a known case of HBV infection for which there was no provision of post-exposure prophylaxis	blood contact with a known case of HCV infection
emigration from or a resident of a country where HIV is endemic www.phac-aspc.gc.ca/aids-sida/publication/survreport/2013/dec/assets/pdf/hiv-aids-surveillence-eng.pdf (Appendix 4, p. 87)	emigration from or a resident of a country where HBV is endemic (defined as high and high intermediate prevalence) https://wwwnc.cdc.gov/travel/yellowbook/2018/infectious-diseases-related-to-travel/hepatitis-b	emigration from or a resident of a country where HCV is endemic (defined as high and high moderate prevalence) https://wwwnc.cdc.gov/travel/yellowbook/2018/infectious-diseases-related-to-travel/hepatitis-c
acupuncture, piercing, tattoos and scarification where basic infection control practices have not been used (including while incarcerated)	acupuncture, piercing, tattoos and scarification where basic infection control practices have not been used (including while incarcerated)	acupuncture, piercing, tattoos and scarification where basic infection control practices have not been used (including while incarcerated)
Other Risks	**Other Risks**	**Other Risks**
diagnosis of a sexually transmitted infection	diagnosis of a sexually transmitted infection	diagnosis of a sexually transmitted infection
multiple transfusions of blood or blood products prior to Nov. 1985 ❶ OR a history of receipt of blood-derived coagulation products before July 1988❷	multiple transfusions of blood or blood products prior to Jan. 1972 ❶ OR a history of receipt of blood-derived coagulation products before January 1972	multiple transfusions of blood or blood products prior to May 1992 ❶ OR a history of receipt of blood-derived coagulation products before July 1988 or a history of receipt of IV immunoglobulin products prior to 1997❷
	hemodialysis	hemodialysis

❶ In Canada, testing of donated blood for anti-HIV began in November 1985; for HBsAg in January 1972; and for anti-HCV first generation in June 1990 and anti-HCV second generation in May 1992.

❷ All factor concentrates distributed in Canada were heat treated after July 1988. IV immunoglobulin products were either PCR tested for HCV or had solvent detergent virucidal treatment after 1997

❸ High-risk examples include snorting and sniffing of cocaine and smoking crack pipes.

APPENDIX 2: Probability of Transmission of HBV and HCV

Table 1: Probability of HBV Transmission	
Exposure (positive source)	***Per episode probability of transmission***
Sexual exposure	*Not quantified; however:* - *receptive anal intercourse > insertive anal intercourse > vaginal intercourse > oral-anal contact* - *oral-genital and oral-oral contact do not appear to be significant modes of transmission* - *estimated to be transmitted 8.6 fold more efficiently than HIV* - *increased risk of transmission if source more infectious (i.e., higher HBV DNA &/or HBeAg positive)*
Needlestick: Source: *HBsAg positive & HBeAg positive*	*37-62% (Mast, 1993)*
Needlestick: Source: *HBsAg positive & HBeAg negative*	*23-27%*
Table 2: Probability of HCV Transmission	
Exposure	***Per episode probability of transmission***
Sexual exposure	*Not quantified; however:* *long-term discordant monogamous partnerships are at lower risk of acquisition (0 to 0.6% per year) as compared to persons with multiple partners or those at risk for sexually transmitted diseases (0.4 to 1.8% per year)* *risk of transmission increased if source HIV co-infected*
Needlestick	*1.8% (range 0 to 7%) (Alter, 1997; Lanphear, 1994; Puro, 1995; Mitsui, 1992)*

Adapted from Alberta Post-Exposure Management and Prophylaxis Guidelines, February 2015

APPENDIX 3: Estimated Probability of HIV Following a Single Exposure in British Columbia

	Source Person in Major Risk Group			Source Person Not Known to be in a Major Risk Group		
	Known HIV+	PWID	MSM	Man	Woman	Gender Unknown
Estimated probability of being HIV+[1]	100%	13%	23%	0.009%	0.002%	0.006%
Estimated probability of seroconversion after sexual exposure[2]						
Penile-vaginal intercourse (risk to insertive partner)	0.04%	0.005%	0.01%	0.000004%	0.000001%	0.000002%
Penile-vaginal intercourse (risk to receptive partner)	0.08%	0.01%	0.02%	0.000007%	0.000002%	0.000005%
Insertive anal intercourse	0.11%	0.01%	0.025%	0.00001%	0.000002%	0.000007%
Receptive anal intercourse	1.38%	0.2%	0.3%	0.0001%	0.00003%	0.00008%
Oral sex[3]	0.01%	0.001%	0.002%	0.0000009%	0.0000002%	0.0000006%
Estimated probability of seroconversion after parenteral exposure[2]						
Percutaneous needle stick[4]	0.23%	0.03%	0.05%	0.00002%	0.000009%	0.00001%
Needle-sharing injection drug use	0.63%	0.08%	0.14%	0.00006%	0.00001%	0.00004%
Occupational mucous membrane exposures[5]	0.09%	0.01%	0.02%	0.00001%	0.000002%	0.000005%

PWID, person who injects drugs; MSM, men who have sex with men

1. Based on PHAC data 2014; Moore D et al., JAIDS 2016; I-Track 2013
2. Based on estimates for each exposure type from Patel et al., AIDS 2014 [7] and Ippolito G et al., Arch Int Med 1993
3. Low risk for both receptive and insertive oral sex; 95% confidence interval around the estimate is 0-4 per 10,000 exposures [7]
4. Risk probably lower with solid object [Ippolito et al.]
5. E.g. splashes to eyes, nose, mouth; risk probably lower with exposure to non-intact skin [Ippolito et al.]

Adapted from British Columbia Center for Excellence in HIV/AIDS (BC-CfE), HIV Post Exposure Prophylaxis (PEP) Guidelines, May 2017

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APPENDIX 4: Hepatitis B Post-Exposure Prophylaxis

Vaccination history of exposed person	**Test exposed person for: HBsAg, anti-HBc & anti-HBs.**	**If source is known HBsAg positive or high risk or tests positive within 48 hours of exposure ❷**	**If source is unknown or Not tested or low risk or Tests HBsAg negative within 48 hours of exposure❷** (e.g. Abandoned needle)	**Post-exposure re-testing**
Documented anti-HBs level (≥10 IU/L) on prior testing	No action required.	No action required.	No action required.	No action required.
Unvaccinated	Test for all 3 markers	Give Hepatitis B Immune Globulin (HBIg) ❸and Hepatitis B vaccine series ❹	Give Hep B vaccine series	Re-test for HBsAg at 3 months & for all 3 markers at 6 months ❺
Known non-responder❶ to one Hep B series	Test for all 3 markers		Give 2nd Hep B vaccine series	
Received 1 dose of Hep B vaccine, anti-HBs status unknown	Test for all 3 markers	Give HBIg & complete Hep B vaccine series.	Complete Hep B vaccine series.	Re-test for HBsAg at 3 months & for all 3 markers at 6 months ❺
Received 2 doses of a 3 dose Hep B series, anti-HBs status unknown	Test for all 3 markers. If anti-HBs is <10 IU/L, then →	Give HBIg & 3rd dose of Hep B vaccine. Repeat 3rd dose if given too early in series.	Give 1 dose of Hep B vaccine & retest for anti-HBs in 4 wks; if <10 IU/L repeat series.	Re-test for HBsAg at 3 months & for all 3 markers at 6 months ❺
	Test for all 3 markers. If anti-HBs is ≥ 10 U/L, then→	Do not give HBIg. Complete Hep B vaccine series.	Do not give HBIg. Complete Hep B vaccine series.	No re-testing required.
Complete Hep B vaccination (2 or 3 dose series) and anti-HBs status unknown or anti-HBs < 10 when tested > 6 months post-series	Test for all 3 markers. If anti-HBs is <10 IU/L, then →	Give HBIg and 1 dose of vaccine.	1 dose Hep B vaccine & retest for anti-HBs in 4wks; if <10 IU/L complete second series.	Re-test for HBsAg at 3 months & for all 3 markers at 6 months ❺
Known non-responder❶ after two courses of Hep B vaccine	Test for HBsAg & anti-HBc. Do not test for anti-HBs.	Give HBIg only & give another dose of HBIg in 1 mo.	No action required.	Re-test for HBsAg at 3 months & for HBsAg & anti-HBc at 6 months.

❶ A non-responder to a series of Hepatitis B vaccine is someone who demonstrates an anti-HBs level of < 10 UI/L, when measured 1 to 6 months post-vaccination. Repeat serology should be completed at least 1 month after the last hepatitis B vaccine dose or 6 months after HBIg, whichever is longer.

❷ Consensual adult sex with known Sex Trade Worker or PWID is **not an indication for HBIg, nor is a community acquired needlestick** injury: the risk of transmission is low and the number needed to treat to prevent infection is extremely high. HBIg is indicated in the case of sexual assault or if one of the individuals is known to have acute or chronic Hepatitis B infection.

❸ HBIg dose for all clients ≥ 8.3kg is 0.06ml/kg. Give HBIg as soon as possible, preferably within 48 hours of the exposure. For a percutaneous exposure, HBIg may be given up to 7days following the exposure. If the client presents > 7 days following a percutaneous exposure, give Hepatitis B vaccine only. For permucosal or sexual exposures, HBIg may be given up to 14 days following the last exposure. If the client presents > 14 days following a permucosal or sexual exposure, give Hepatitis B vaccine only.

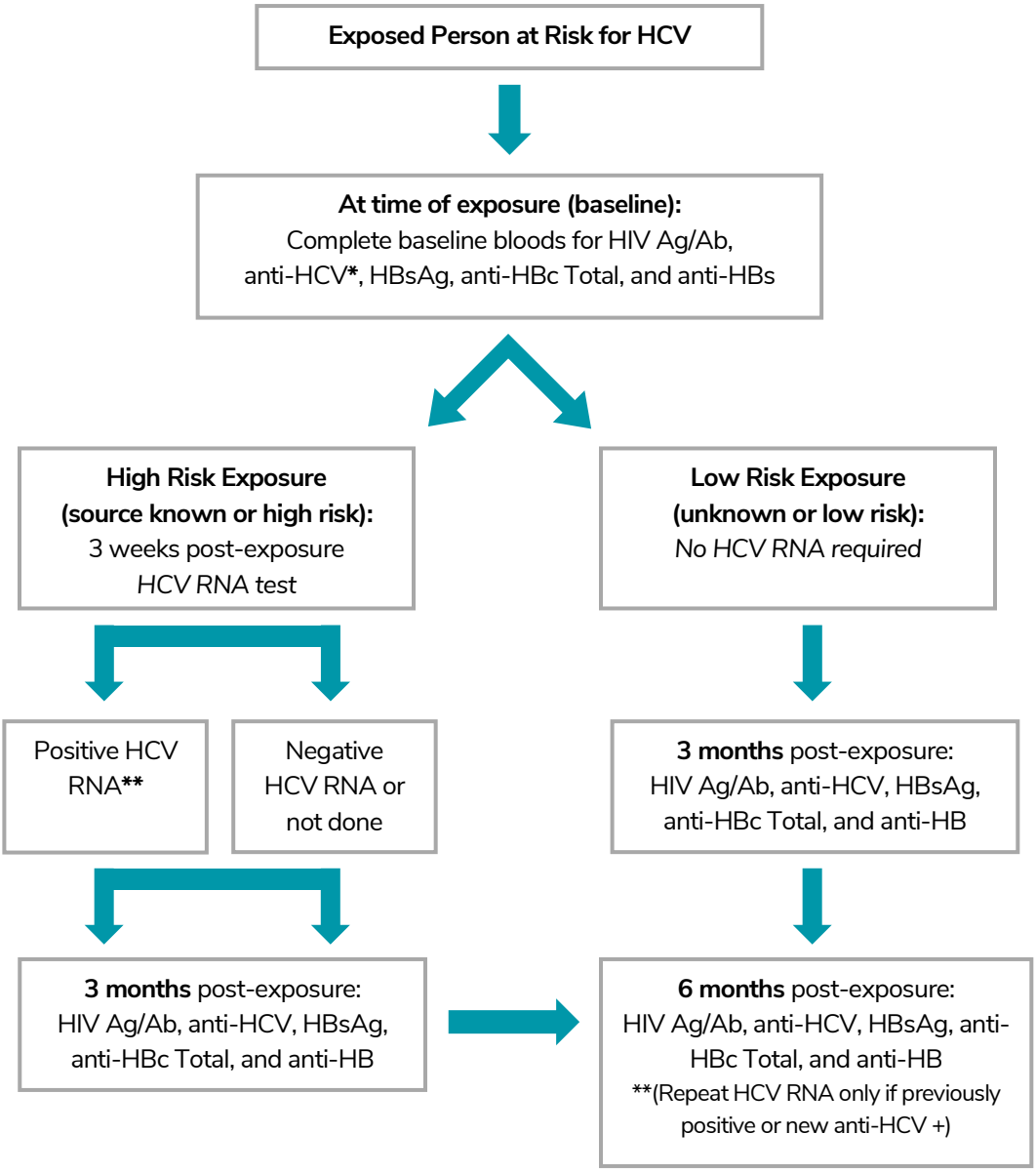
❹ Hepatitis B vaccine schedule is 0, 1 and 6 months for post-exposure prophylaxis.

❺ A second series of Hepatitis B vaccine should be offered to non-responders

Note: This table does not apply to post-exposure management of immunocompromised persons. This group requires consultation with a physician specializing in infectious diseases.

Adapted from BC Center for Disease Control, Blood and Body Fluid Management, March 2010, p. 21

APPENDIX 5: Exposed person at risk for HCV infection



* Anti-HCV does not distinguish between past or present HCV infection. If anti-HCV positive at baseline, test for HCV RNA immediately to clarify.

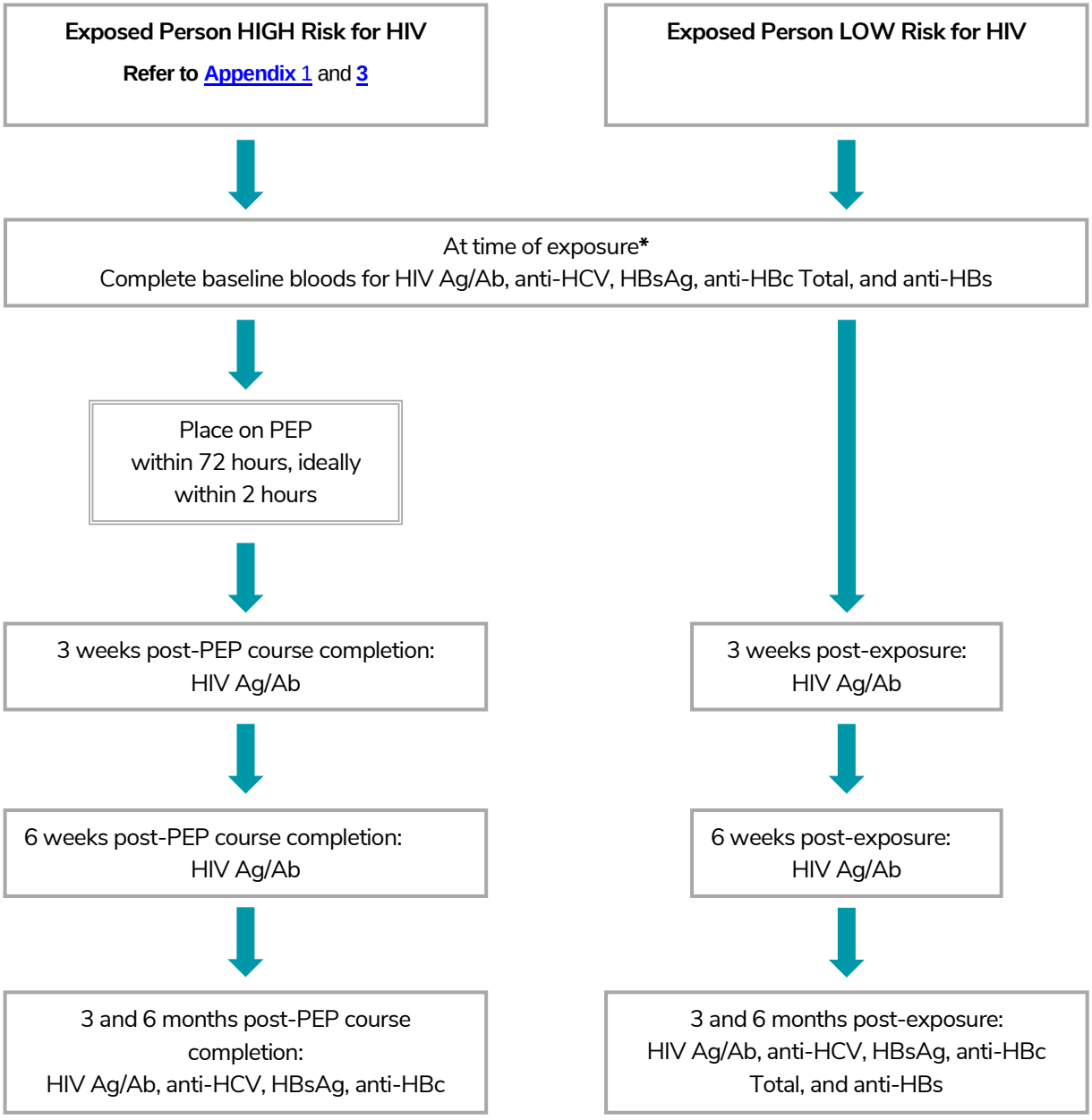
** To assess for spontaneous clearance or chronic infection, repeat HCV RNA in **6 months**. Consider referral to a liver specialist for curative treatment.

Note: After exposure, anti-HCV usually remains present for life even if an individual has cleared the HCV infection. Refer to the Yukon Communicable Disease Control Hepatitis C Guidelines for further information if testing anti-HCV reactive or HCV RNA detectable.

APPENDIX 6: Exposed person at risk for HIV infection

For reactive HIV Ag/Ab test results the BCCDC Public Health Laboratory will automatically do an immunoblot test to provide confirmation of HIV diagnosis. HIV RNA may also be done to rule out acute infection or to resolve indeterminate results.

If the individual tests positive at any point, refer to YCDC for follow up.



* Refer to Section 3.2.7 if Point-of-care testing (POC) is used for baseline testing. HIV infection can be detected by POC 3-4 weeks after infection. HIV infection can be detected after a HIV Ag/Ab blood test 2-3 weeks after infection.

APPENDIX 7: HIV Post-Exposure Prophylaxis (PEP)

Significant risk of HIV transmission

Material to which exposure has occurred is blood or a potentially infectious body fluid capable of transmitting HIV (semen, vaginal secretions or any body fluid that is visibly contaminated with blood)

↓

Percutaneous exposure, **or**
Mucous membrane **or** non-intact skin exposure, **or**
Sexual assault (vaginal or anal)

↓

Source is *known* to be HIV positive **or** *known* to be at a *high risk* for HIV infection **or** sexual assault occured in a setting considered *high risk* for HIV

↓

Initiate PEP 5-day starter kit within 72 hours:
Tenofovir DF 300 mg once a day
Lamivudine 150 mg twice a day
Raltegravir 400mg twice a day

↓

Arrange for follow-up with primary care provider who will consult with YCDC to evaluate need for full 28-day course of PEP

Negligible Risk of HIV transmission

Material to which exposure has occurred is a body fluid not known to transmit HIV (urine, nasal secretions, saliva, sweat, or tears if not visibly bloody) **OR**

↓

An event not known to transmit HIV (e.g. contact with intact skin; superficial scratches that do not bleed; bites unless there is blood in the mouth of the biter) **OR**

↓

Source known to be HIV negative or at low risk of HIV infection

↓

PEP NOT recommended.
Consult with YCDC and/or the CMOH if an unusual exposure has occurred.
If uncertain whether to initiate PEP, BC-CfE Pharmacy (604-806-8429) is available for consultation services

Adapted from BC Center for Excellence in HIV and AIDS, PEP Guidelines May 2017

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APPENDIX 8: A Fact Sheet for Exposed Individuals

Blood & Body Fluid Contact

I think I have been exposed to blood and body fluids. What should I do?

This fact sheet provides answers to common questions that people have regarding three viruses that can be spread by exposure to blood and/or body fluids:

- Hepatitis B virus (HBV),
- Hepatitis C virus (HCV) and
- Human immunodeficiency virus (HIV)

If you are a health care worker and have had contact with blood or body fluids in a healthcare setting, review and follow the protocol at your own agency for follow-up care. Go to your local emergency department, health unit or occupational health clinic as soon as possible (preferably **within 48-72 hours**).

Hepatitis B Virus (HBV)

I have been exposed to blood and body fluids infected with hepatitis B virus. What should I do?

If you have been previously vaccinated for hepatitis B and have blood work to confirm protection, you are likely protected against hepatitis B, however, it is recommended that you get assessed to determine your risk of other infections.

Go immediately to your local emergency department, health unit or occupational health clinic. If available, it is helpful to bring any prior hepatitis B immunization records or blood test results. They will assess your risk and may give you immunizations to protect against infection. This needs to be given as soon as possible after the exposure, sometimes within 48 hours.

What is hepatitis B virus and how can it affect me?

Hepatitis B is a virus that attacks the liver and can cause progressive liver damage and liver cancer. Many people who get hepatitis B show no symptoms and may not know they have the disease. Hepatitis B is spread from one infected person to another by contact with blood or body fluids. Whether there are signs of illness or not, you can still pass the virus on to others. Symptoms may include fever, fatigue, jaundice (yellow skin or eyes), abdominal pain, dark urine, loss of appetite and nausea.

I think I have been exposed to blood and body fluids infected with hepatitis B virus. What are the chances that I have been infected?

If you have been vaccinated against hepatitis B, your risk of infection is very low. For those who are unvaccinated, treatment with hepatitis B immune globulin (HBIg) and/or vaccine is highly effective at preventing infection.

Is there a vaccination for hepatitis B?

Yes. Yukon has a universal childhood hepatitis B immunization program. Most people born in 1980 or later in Yukon have been immunized against hepatitis B. In addition, most healthcare workers and first responders have been vaccinated.

How can hepatitis B be treated?

The treatments for hepatitis B can suppress the infection but cannot cure it. The goal of treatment is to reduce the risk of serious complications such as cirrhosis and liver cancer.

Can I receive treatment for hepatits B after an exposure?

Depending on your prior hepatitis B vaccine history and testing results, you may be given a hepatitis B vaccine booster and HBIg (immediate, short-term protection) to help protect you from being infected.

Where do I get tested?

Immediately following exposure (**within 2 hours**), it is recommended to go to your local emergency department, community health center or infection control (with your employer or YCDC) to receive a risk assessment and have a baseline blood test. This timeframe for having a risk assessment is especially relevant for a high-risk HIV exposure.

If you are a healthcare worker who has acquired a needlstick injury in a healthcare setting, review and follow the protocol at your own agency for follow-up care.

What are the tests and when will I need to have them completed?

If you have contact with blood or body fluids, there are certain blood tests that will need to be done over the next three months. Your health care provider will let you know when to return for testing. The testing schedule allows for the time between when a person has become infected and when the blood test can reliably detect that infection is in the person's blood, referred to as the "window period". The window period is important because during this time, an infected person cannot be detected as infected but may still be able to infect others.

Hepatitis C Virus (HCV)

I think I have been exposed to blood and body fluids infected with hepatitis C. What should I do?

There is no recommended post-exposure treatment for HCV, however, it is recommended that you go immediately (**within 2 hours** of exposure), to the nearest emergency department, community health center or infection control (with your employer or YCDC) to have a baseline blood test.

What is hepatitis C virus and how can it affect me?

Hepatitis C is a disease that attacks the liver and can cause progressive liver damage and liver cancer. Many people who get hepatitis C show no symptoms and may not know they have the disease. People can live for 20-30 years without symptoms; however, the hepatitis virus can damage their liver and result in cirrhosis, liver cancer or end stage liver disease.

Hepatitis C is spread when the blood of an individual with hepatitis C infection enters the body of someone who is not infected. Sexual transmission is very rare. People can be completely symptom-free or display fever, fatigue, jaundice (yellow skin or eyes), abdominal pain, dark urine, loss of appetite and nausea (sick to your stomach).

I think I have been exposed to blood and body fluids infected with hepatitis C virus. What are the chances that I have been infected?

The risk of getting hepatitis C after an exposure depends on the amount of blood or body fluid at the time and the type of exposure. During your assessment, your health professional will be able to tell you whether exposure has put you at risk of infection. The risk of hepatitis C transmission is around 1.8% (range is 0 to 7%) after a needlestick injury acquired in a healthcare setting.

Is there a vaccination for hepatitis C?

No.

Can I receive treatment for hepatitis C after an exposure? Can hepatitis C be treated?

There is no vaccine or medications to prevent infection with hepatitis C after an exposure. If your blood test done 3 weeks after exposure is positive, the test is repeated in another 6 months to determine if you have become infected.

Approximately 25% of infections will clear on their own. Current treatments can cure more than 95% of infections.

Where do I get tested?

Immediately following exposure (**within 2 hours**), it is recommended to go to your local emergency department, community health center or infection control (with your employer or YCDC) to receive a risk assessment and have a baseline blood test. This timeframe for having a risk assessment is especially relevant for a high-risk HIV exposure.

If you are a healthcare worker who has acquired a needlstick injury in a healthcare setting, review and follow the protocol at your own agency for follow-up care.

What are the tests and when will I need to have them completed?

If you have contact with blood or body fluids, there are certain blood tests that will need to be done over the next three months. The testing schedule allows for the time between when a person has become infected and when the blood test can reliably detect that infection is in the person's blood, referred to as the "window period". The window period is important during this time, because an infected person cannot be detected as infected, but may still be able to infect others.

Human Immunodeficiency Virus (HIV)

I think I have been exposed to blood and body fluids infected with HIV. What should I do?

Go immediately, preferably within 2 hours, to the nearest emergency department or community health center. They will assess your risk and may give you medications to protect against infection. This needs to be given as soon as possible after the exposure, **within 72 hours** to be most effective.

What is HIV and how can it affect me?

Human Immunodeficiency Virus (HIV) is a virus that attacks cells and results in damage to the immune system. It can be spread from an individual with HIV infection by contact with blood and/or body fluids. The most common types of contact are sexual exposure, needle sharing injection drug use, blood transfusion, perinatal (mother-to-child) and needlestick injuries in a healthcare setting.

I think I have been exposed to blood and body fluids infected with HIV. What are the chances that I have been infected?

The risk of becoming infected with HIV after an exposure depends on the amount of virus in the blood or body fluid of the source individual at the time and the type of exposure. During your assessment, your health professional will be able to tell you whether your exposure has put you at risk of infection.

Is there a vaccination for HIV?

No.

How can HIV be treated?

There is no cure for HIV, but medications can help people live to their normal expected lifespan. In BC, HIV treatment is provided at no cost to patients. The BC Center for Excellence in HIV/AIDS has shown that people who are living with HIV and are taking regular treatment can lower the amount of virus in their blood to an undetectable level.

Can I receive treatment for HIV after an exposure?

You may be given medication to protect you against HIV if you have come into contact with blood or body fluids. These medications are publically funded if the exposure is considered high-risk. These medications are most effective at preventing HIV infection if taken as soon as possible after exposure (up to 72 hours, preferably **within 2 hours**).

Where do I get tested?

Immediately following exposure (**within 2 hours**), it is recommended to go to your local emergency department, health unit or occupational health clinic to receive a risk assessment and have a blood test.

If you are a healthcare worker who has acquired a needlstick injury in a healthcare setting, review and follow the protocol at your own agency for follow-up care.

What are the tests and when will I need to have them completed?

If you have had an exposure, certain blood tests will need to be done over the next three months. The testing schedule allows for the time between when a person has become infected and when the blood test can reliably detect that infection is in the person's blood, referred to as the "window period". The window period is important because during this time, an infected person cannot be detected as infected but may still be able to infect others.

REFERENCES

Alberta Health (2015). Alberta Post-Exposure Management and Prophylaxis Guidelines: Probability of transmission of HIV, HBV and HCV.
Retrieved from: open.alberta.ca/dataset/58f4a061-4647-45a1-bd66-6c13c18c534e/resource/2700d179-daee-4ae8-bbef-c6f61087ee9c/download/6861344-2015-Alberta-Post-Exposure-Management-Prophylaxis-Guidelines-2015-02.pdf

BC Centre for Disease Control (2017). Communicable Disease Control: Chapter 1 – Management of Specific Diseases Hepatitis B.
Retrieved from: www.bccdc.ca/health-professionals/clinical-resources/communicable-disease-control-manual/communicable-disease-control

BC Centre for Disease Control (2016). Communicable Disease Control: Chapter 1 – Management of Specific Diseases Hepatitis C.
Retrieved from: www.bccdc.ca/health-professionals/clinical-resources/communicable-disease-control-manual/communicable-disease-control

BC Centre for Disease Control (2017). Communicable Disease Control: Chapter 2 – Immunization.
Retrieved from: www.bccdc.ca/health-professionals/clinical-resources/communicable-disease-control-manua

BC Centre for Disease Control (2016). Communicable Disease Control: Chapter 5 – Sexually Transmitted Infections, Section 2: HIV/AIDS, HIV Guidelines for Testing, Follow-up and Prevention.
Retrieved from: www.bccdc.ca/health-professionals/clinical-resources/communicable-disease-control-manual/sexually-transmitted-infections

BC Center for Disease Control (2017). Hepatitis B: Post-Exposure Prophylaxis.
Retrieved from: www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Epid/CD%20Manual/Chapter%201%20-%20CDC/HepB_Guidelines.pdf

BC Centre for Excellence in HIV/AIDS: HIV Medication Information Sheets.
Retrieved from: cfenet.ubc.ca/drug-treatment-program/information-sheets

BC Centre for Excellence in HIV/AIDS: HIV Monitoring Quarterly report for BC (First Quarter 2017).
Retrieved from: cfenet.ubc.ca/publications/centre-documents/stop-hivaids-monitoring-reports

BC Centre for Excellence in HIV/AIDS (2017). BC-CfE HIV Post-Exposure Prophylaxis (PEP) Guidelines.
Retrieved from: cfenet.ubc.ca/publications/centre-documents

BC Ministry of Health (2016). Management of Percutaneous or Permucosal Exposure to Blood and Body Fluid Laboratory Requisition.
Retrieved from: www2.gov.bc.ca/assets/gov/health/forms/2339fil.pdf

BC Ministry of Health (2016). Management of Percutaneous or Permucosal Exposure to Blood and Body Fluid Letter for Follow-Up Physician.
Retrieved from: www2.gov.bc.ca/assets/gov/health/forms/2340fil.pdf

BC Ministry of Health (February 21, 2017). More patients to benefit from hepatitis C treatments.
Retrieved from: news.gov.bc.ca/releases/2017HLTH0037-000374

BC Women's Hospital and Health Centre. 2018. Sexual Assault Service Resources.
Retrieved from: www.bcwomens.ca/health-professionals/professional-resources/sexual-assault-service-resource

Beekmann, S. E., & Henderson, D. K. (2005). Protection of healthcare workers from bloodborne pathogens. Current Opinion in Infectious Diseases, 18(4), 331-336.

Canadian AIDS Society. HIV Transmission: Guidelines for Assessing Risk (2004).
Retrieved from: www.cdnaids.ca/web/repguide.nsf/Pages/cas-rep-0307

Canadian Oxford Dictionary, 2018.
Retrieved from: en.oxforddictionaries.com

Community AIDS Treatment Information Exchange (CATIE). 2018.
Retrieved from: www.catie.ca/en/home

Centers for Disease Control and Prevention (CDC). CDC Guidance for Evaluating Health-Care Personnel for Hepatitis B Virus Protection and for Administering Postexposure Management. MMWR 2013; 62(RR-10):1-19.

Centers for Disease Control and Prevention (CDC). Immunization of Health-Care Personnel. MMWR 2011;60(RR-07):1-45.

Centers for Disease Control and Prevention (CDC). Updated U.S. public health service guidelines for the management of occupational exposures to HBV, HCV, and HIV and recommendations for post-exposure prophylaxis. MMWR 2001;50(RR-11):43-4.

FitzSimons, D., Francois, G., De Carli, G., Shouval, D., Pruss-Ustun, A., Puro, V., Williams, I., Lavanchy, D., De Schryver, A., Kopka, A., Ncube, F., Ippolito, G., & Van Damme, P. (2008) Hepatitis B virus, hepatitis C virus and other blood borne infections in healthcare workers: Guidelines for prevention and management in industrialized countries. Occup Environ Med, 65, 446-451.

Heathcote, J., & Main, J. (2005). Treatment of hepatitis C. Journal of Viral Hepatology, 12(3), 223-235.

Kuhar, D., Henderson, D., Struble, K., Heneine, W., Thomas, V., Cheever, L., Gomaa, A. & Panlilio, A. (2013). Updated U.S. Public health service guidelines for the management of occupational exposures to HIV and recommendations for postexposure prophylaxis. Atlanta: U.S. National Center for Emerging and Zoonotic Infectious Diseases.

Maheshwari, A., Ray, S., & Thuluvath, P. (2008). Acute hepatitis C. Lancet, 372,321-32 Taylor D, Durigon M, Davis H, Archibald C, Konrad B, Coombs D, Gilbert M, Cook D, Krajden M, Wong T, Ogilvie G (2014 In Press). Probability of a false negative HIV antibody test result during the window period: A tool for pre- and post-test counselling. International Journal of STD&AIDS

Wong, T., & Lee, S. S. (2006). Hepatitis C: A review for primary care physicians. CMAJ, 174(5), 649-659.