

Section 1: **Healthy Workplace**

Policy number: **1.3**

Subject: **Health Care Provider  
Occupational Exposure to Blood and  
Body Fluids**

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## **1 PURPOSE**

- 1.1 FNIHB Health Care Providers (HCPs) who have potential contact with blood and/or body fluids have an occupational risk of acquiring infection with hepatitis B virus (HBV), hepatitis C virus (HCV) and/or human immunodeficiency virus (HIV), the causative agent of acquired immunodeficiency syndrome (AIDS). The purpose of this policy is to provide guidelines on interventions that prevent or minimize the transmission of these and other infectious diseases when caring for clients and/or handling blood and body fluids.

## **2 POLICY**

- 2.1 In order to limit exposures and to reduce the transmission of blood borne disease in the workplace, HCPs must treat all blood and body fluids as potentially infectious and utilize Routine Practices and Additional Precautions at all times.
- 2.1.1 Routine Practices are based on the premise that all blood, body fluids, excretions and secretions are potentially infectious, even when the client is asymptomatic. Routine practices requires that a risk assessment be performed prior to each client contact and intervention, and that personal protective equipment be applied **routinely** with **all** clients encounters where it is anticipated the HCP may be exposed to, or may contact blood, body fluids, secretions, excretions, mucous membranes, non-intact skin or soiled items and to prevent the spread of microorganisms. Hand hygiene, and routine cleaning of equipment after use by one client before and use by the next client are also important components of Routine practices. (Refer to Section 3.0: Routine Practices and Section 4.0: Additional Precautions).
- 2.2 FNIHB HCPs may be at risk of exposure to bloodborne illnesses due to the nature of their activities. Exposure to blood borne pathogens may occur as a result of injuries from sharps (such as needles, syringes, blades, lancets, clinical glass and any other clinical items that may be contaminated with blood or body fluids that could cause a cut, puncture or abrasion), human bites that break the skin, or splashing of blood and body fluids onto a mucous membrane. Exposure may also extend to personnel handling waste, garbage, linens or sharps where inadvertently a sharp may not have been disposed of in a sharps container.
- 2.3 Blood and body fluids refer to blood, semen, vaginal secretions, pleural, amniotic, pericardial, peritoneal, synovial, cerebrospinal fluids, and saliva. Feces, nasal secretions, sputum, tears, urine, and vomitus are not implicated in the transmission of HBV, HCV, or HIV unless visibly contaminated with blood.

- 2.4 An exposed staff member refers to any person carrying on activities in the workplace who has been exposed to blood-borne pathogens; this exposure may be through exposure to the blood or body fluids of clients through injury from a contaminated needle or other sharp object, a splash onto a mucous membrane or non-intact skin, or a human bite that breaks the skin. Such an injury together with blood or a body fluid capable of transmitting HBV, HCV and/or HIV must be present for a HCP to be exposed. (Adapted from OHA/OMA Communicable Disease Surveillance protocols Blood-Borne Diseases p. 19 and APIC Infection Control in Ambulatory Care p.148)
- 2.5 Pre-exposure hepatitis B immunization is the most effective step in preventing transmission of HBV. All FNIHB HCPs are expected to meet current immunization recommendations and to maintain up-to-date immunization status as outlined in the current edition of the Health Canada Occupational Health Assessment Guidelines (Refer to Appendix 1 OHAG Annex O-1 July 2012) and as recommended by the National Advisory Committee on Immunization (NACI) Canadian Immunization Guide, current edition available at <http://www.phac-aspc.gc.ca/publicat/cig-gci/p04-eng.php>
- 2.5.1 Hepatitis B immunization is strongly recommended pre-placement for all FNIHB HCPs who may be at risk for exposure to blood or blood products, including but not limited to those HCPs who may be administering or performing injectable medications, venipuncture, STI testing, wound care, foot care, mouth care, and/or handling blood and body fluid specimens, sharps or instruments. FNIHB will reimburse costs of hepatitis B vaccination for those FNIHB HCPs who are at increased risk of exposure.
- 2.5.2 As per NACI recommendations, individuals who are immunized with hepatitis B vaccine for work-related purposes should have a blood test one to six months after the series to establish antibody response. (Refer to Appendix 1 OHAG Annex O-1 July 2012). If an antibody titer has not been completed in the past, it should still be assessed and, if antibody levels are insufficient, the individual should be boosted once and retested. (Refer to Appendix 1 OHAG Annex O-1 July 2012 and the online chapter of the Canadian Immunization Guide Part 4 Active Vaccines, Hepatitis B vaccine)
- 2.6 Blood work to be performed as soon as possible post exposure for the exposed person may include the following, depending on risk factors:
- 2.6.1 Immunity and antibody testing for Hepatitis B, C, and HIV; and ALT.

### **3 PROCEDURE**

- 3.1 Immediate First Aid:
- 3.1.1 When a HCP is exposed to blood or body fluids from a known or unknown source, the HCP should initiate immediate first aid that should include:
- 3.1.1.1 Allow the wound to bleed freely.
- 3.1.1.2 Cleanse the wound thoroughly with soap and water.
- 3.1.1.3 If contact is with mucous membranes (eyes, nose, or mouth), flush well with water.

3.1.1.4 Remove clothing that is contaminated by blood/body fluids.

3.1.1.5 Assess immunization and immunity status of HCP including tetanus and hepatitis B status.

**NOTE:** While not considered an exposure requiring Post Exposure Prophylaxis (PEP), splashes and spills of blood/body fluids onto **intact** skin should be washed well with soap and water. The larger the area of skin exposed and the longer the time of contact, the more important it is to verify that all of the relevant skin area is intact.

### 3.2 Risk Assessment of Exposure Incident:

3.2.1 The exposed worker will be assessed by a physician to determine the need for prophylaxis and follow-up. When a community physician is not available in remote and isolated areas, the employee may contact the Regional Community Medicine Specialist for advice. It may be necessary for the worker to obtain further assessment outside of the community. Refer to Appendix 3: Table 1: Recommended HIV postexposure prophylaxis (PEP) for percutaneous injuries and Table 2: Recommended HIV postexposure prophylaxis (PEP) for mucous membrane exposures and non-intact skin exposures

3.2.2 The risk assessment will determine the significance of the injury by considering the following:

3.2.2.1 Type of vehicles capable of transmitting HBV, HCV, or HIV from an infected individual, including:

3.2.2.1.1 Needles, sharps, razors, etc. that have been in contact with the fluids listed below

3.2.2.1.2 Laboratory specimens containing HBV, HCV, or HIV

3.2.2.1.3 Infected organ donations

3.2.3 Types of body fluids capable of transmitting HIV, HBV and HCV

**Table 1: Types of body fluids capable of transmitting HIV, HBV and HCV**

Body Fluid	HIV	HBV	HCV
Blood and other fluids visibly contaminated with blood	Yes	Yes	Yes
Pleural, amniotic, pericardial, peritoneal, synovial, cerebrospinal and inflammatory exudates	Yes	Yes	Yes
Semen and vaginal secretions	Yes	Yes	Yes – if blood is present
Saliva	No – unless contaminated with blood	Yes	No – unless contaminated with blood
Organ and tissue transplants	Yes	Yes	Yes

Breast milk	Yes	Plausible – particularly if nipples are cracked or bleeding. Neonates given hepatitis B immune globulin or HBV vaccine are not at risk	Plausible – particularly if nipples are cracked or bleeding but the risk of transmission is very low. Breastfeeding is recommended for HCV infected mothers.
Feces, nasal secretions, sputum, sweat, tears, urine, vomitus	No, unless contains visible blood	No, unless contains visible blood	No, unless contains visible blood

Adapted from Blood & Body Fluid Exposure Management Tool August 2016, BC Centre for Disease Control

**Table 2: Average per Act Occupational Risk of Transmission for HIV, HBV and HCV from an Infected Source Based on Exposure Route\***

Exposure Route	HIV	HBV	HCV
Percutaneous Injury	0.3% (3 in 1000)	6-30% (6-30 in 100)	1.8% (18 in 1000)
Mucous Membrane Exposure	0.09% (9 in 10,000)	Not quantified	Not quantified
Non-intact Skin Exposure	Not quantified, estimated at < 0.09%	Not quantified	Not quantified

\*Average percent per exposure event

Adapted from: Manitoba Communicable Disease Branch. (2009) Communicable Disease Management Protocol – Integrated Post-exposure Protocol for HIV, HBV and HCV: Guidelines for Managing Exposures to Blood and Body Fluids. Table 2 page 10.

### 3.2.4 Significance of the Exposure

3.2.4.1 To be considered a **SIGNIFICANT EXPOSURE** the exposure must come in contact with body fluids capable of transmitting HBV, HCV, or HIV by way of:

- 3.2.4.1.1 Deep percutaneous injury
- 3.2.4.1.2 Visible blood present on the device associated with the exposure
- 3.2.4.1.3 Exposure from a procedure which involved a needle placed directly into the source's vein or artery
- 3.2.4.1.4 Large-bore hollow needle, scalpel, other sharp device or razor
- 3.2.4.1.5 Non-intact skin, i.e. chapped skin or other open dermatological conditions
- 3.2.4.1.6 Mucous membrane, i.e. splash into eyes, nose, mouth (See Appendix 2: Health Canada, OHAG Document Annex Q)

- 3.2.4.2 Exposure to blood or body fluids (capable of transmitting HBV, HIV or HCV) on **INTACT SKIN** is not considered a significant exposure.

**NOTE:** If the exposure incident did not involve a body fluid capable of transmitting HIV, HBV or HCV, further evaluation for PEP is not indicated.

### 3.3 Prophylaxis for a SIGNIFICANT EXPOSURE:

- 3.3.1 If the treating physician feels there was **significant exposure** then s/he recommends prophylaxis. If uncertain whether exposure was significant, s/he will contact an Infectious Disease Specialist for further advice and up to date information regarding prophylaxis. Prophylaxis should be started within two hours to offer the best chance of preventing HIV transmission, but can be started later with lesser chance of success. (Refer to Appendix 2 OHAG Document ANNEX Q)
- 3.3.2 Testing of Source (Refer to Appendix 2: OHAG Document ANNEX Q) Every reasonable effort should be made to obtain permission to test the source for HBV, HCV, or HIV. Obtaining informed consent is a mandatory component of pre and post-testing for the source person.
- 3.3.3 When consent is given to draw blood for testing for all three viruses, the appropriate pre and post-test counseling for all three blood borne pathogens must be given. Information re HIV pre-test counseling is available at [http://www.ohsutp.ca/uploads/Ontario\\_HIV\\_Testing\\_guidelines.pdf](http://www.ohsutp.ca/uploads/Ontario_HIV_Testing_guidelines.pdf) Information re Hep C counselling is available at <http://www.hepcinfo.ca/en/detail/testing/counselling-information>
- 3.3.4 Maintenance of strict confidentiality and protection of privacy of all information for all clients and employees involved is absolutely essential.
- 3.3.5 If results of the patient's test(s) are negative, no further follow up is usually required. However, if the patient is at high clinical or epidemiological risk for HBV, HCV or HIV infection, ensure that the exposed person receives counselling about the possible risk of infection and prevention of transmission of blood-borne diseases.
- 3.3.6 Label all requisitions **NEEDLESTICK** or **EXPOSURE TO BLOOD/BODY FLUIDS** to ensure priority testing, and indicate **SOURCE**.

**Table 3: Source Risk Factors of Blood Borne Pathogens**

Blood Borne Pathogen	Risk Factor
HBV	Consider high-risk if the source: <ul style="list-style-type: none"><li>• Practices high-risk sexual behaviour (i.e. men who have sex with men, sexual partner who is an injection drug user (IDU), multiple sexual partners)</li><li>• Is a sexual partner of HBV infected persons or persons practicing high-risk behaviour</li><li>• Has a history of injection drug use</li><li>• Comes from a highly endemic region</li></ul>

HCV	<p>Consider high-risk if lifetime risk factors of source include:</p> <ul style="list-style-type: none"> <li>• High-risk sexual behaviour (i.e. a sexual partner who is an IDU, long term sexual partner who is HCV infected)</li> <li>• Injection drug use</li> <li>• Receipt of blood or blood products before 1990</li> <li>• Receipt of blood-derived coagulation products before 1985</li> </ul>
HIV	<p>Consider high-risk if source:</p> <ul style="list-style-type: none"> <li>• Practices high-risk sexual behaviour (i.e. men who have sex with men, sexual partner who is an IDU, multiple sexual partners)</li> <li>• Has a history of injection drug use</li> <li>• Has received a blood transfusion, blood products or organ transplant between 1978 and 1985</li> <li>• Is involved with a sexual partner from any of the above groups</li> <li>• Is an infant born to a HIV infected mother</li> </ul>

Source: Leeds Grenville and Lennox District Health Unit Retrieved from:  
[http://www.healthunit.org/professionals/exposure\\_blood/Managing-Exposures-Blood-Borne-Pathogens.pdf](http://www.healthunit.org/professionals/exposure_blood/Managing-Exposures-Blood-Borne-Pathogens.pdf)

3.4 Testing employee: Post-Exposure Testing and Prophylaxis for Hepatitis B (Refer to Appendix 2 OHAG document ANNEX Q)

- 3.4.1 Obtaining informed consent is a mandatory component of pre and post-testing for the exposed employee
- 3.4.2 If the employee refuses to be tested, the source will not be tested.
- 3.4.3 If the exposed employee has been immunized against hepatitis B and has sufficient immunity, (i.e. Anti-HBs results greater than or equal to 10 IU/ml), there is no need to screen the source or the exposed individual for HBs and anti-HBs.
- 3.4.4 If the individual has never been immunized against hepatitis B, test both the source (after obtaining consent) and the exposed person for HBsAg and anti-HBsAg at the time of injury.
- 3.4.5 If the exposed employee has been immunized against Hepatitis B but shows no immunity, Hepatitis B Vaccine, and Hepatitis B immune globulin (HBIG) should be given within 48 hours of exposure to the unimmunized exposed person (employee) Efficacy of HBIG decreases with time and is unknown after 7 days. Complete the rest of the hepatitis B vaccine as per usual schedule.
- 3.4.6 If the exposed person has been immunized against HBV and his/her serologic response is unknown, test for anti-HBsAg, provide HBV vaccine booster as required. If the serologic test comes back immune, no further action is required.

- 3.5 Testing Exposed Employee: Post-Exposure Testing HCV and HIV (Refer to Appendix 2: OHAG Document ANNEX Q)
- 3.5.1 Obtaining informed consent is a mandatory component of pre and post-testing for the exposed employee
  - 3.5.2 If the employee refuses to be tested, the source will not be tested.
  - 3.5.3 Label all requisitions NEEDLESTICK or EXPOSURE TO BLOOD/BODY FLUIDS to ensure priority testing. Any lab requisitions must indicate EXPOSED individual, and Source individual. The exposed person's name will not be documented on the requisition of the source.
  - 3.5.4 If results of the Source (client's) test(s) are negative, NO further follow up is usually required
  - 3.5.5 If the Source (client) is at high clinical or epidemiological risk for HBV, HCV or HIV infection, ensure that the exposed person receives counselling about the possible risk of infection and prevention of transmission of blood-borne diseases.
  - 3.5.6 If the source is not known, the exposed employee (after his/her informed consent is obtained) should be tested for HCV and HIV at the time of the injury, at 6 weeks, 3 months, and 6 months following injury
  - 3.5.7 It is recommended that the test be repeated at one year post-injury in the case of HIV if antiretrovirals are used.
  - 3.5.8 Other references recommend testing again one year post injury for all cases of possible accidental exposure to HCV or HIV.
- 3.6 HIV Post-Exposure Chemoprophylaxis Protocol for Possible Exposure
- 3.6.1 HIV post exposure prophylaxis medications are stored at nursing stations and health centres with treatment, in the medication room.
  - 3.6.2 Each of these facilities has a three day PEP starter kit intended for use as an initial supply of medication. The balance of the course of treatment should come via prescription by a licensed physician.
  - 3.6.3 The prescription for HIV PEP must be written by the physician and filled as soon as possible after the HCP starts the HIV PEP starter kit stocked at the health facility.
  - 3.6.4 For additional information regarding HIV post-exposure prophylaxis refer to Appendix 3: Table 1: Recommended HIV post-exposure prophylaxis (PEP) for percutaneous injuries and Table 2: Recommended HIV post-exposure prophylaxis (PEP) for mucous membrane exposures and non-intact skin exposures.



### 3.7 Reporting:

- 3.7.1 The employee must report the incident/injury/exposure to their manager or designate who will facilitate the affected employee to be immediately assessed at the local medical care facility (medical clinic, hospital emergency). If the injury occurs in a remote or isolated community, the employee will contact the community physician for assessment to determine if post-exposure prophylaxis or immunization is required. In the event that the community physician is not available, the employee may contact the Regional Community Medicine Specialist. It may be necessary for the worker to obtain further assessment outside of the community.
- 3.7.2 The manager must emphasize to the staff member the importance of follow-up, if indicated, as infection with HBV, HCV or HIV may be asymptomatic. The employee should be advised of the support available to them through the Employee Assistance Program (EAP).
- 3.7.3 The manager will implement the following reporting process (Refer to [http://www.esdc.gc.ca/en/reports/health\\_safety/hazardous\\_occurrence.page](http://www.esdc.gc.ca/en/reports/health_safety/hazardous_occurrence.page) )
- 3.7.3.1 **Minor Injury/Incident/Exposure with no medical follow-up:** Following a minor injury/incident/exposure that requires first-aid treatment only i.e. no professional medical attention sought and no time lost, the manager will complete a Hazardous Occurrence Investigation Report (HOIR) electronically using the Accident Incident Reporting System (AIRS) database within 14 days of the incident. It will automatically be submitted to Human Resources and Skills Development Canada (HRSDC). A copy is to be given to the employee.
- 3.7.3.2 **Minor Injury/Incident/Exposure with medical follow-up:** If an injury/exposure/incident requires professional medical treatment resulting in no time lost i.e. does not prevent an employee from reporting for work or from effectively performing all the duties connected with their regular work, the manager will complete:
- 3.7.3.2.1 A HOIR electronically using the Accident Incident Reporting System (AIRS) database within 14 days of the incident
- 3.7.3.2.2 The relevant provincial Workplace Safety Insurance Board (WSIB) Claim – Form 7 available at <http://www.wsib.on.ca/cs/groups/public/documents/staticfile/c2li/mdey/~edisp/wsib012386.pdf> and fax it within 3 days to the HRSDC – Injury Compensation Program at (819) 934-6590 and also fax one copy to the Corporate Occupational Health and Safety Unit, at 613-960-1528. Please note: Forms are not to be sent directly to WSIB. A copy of the form is to be given to the employee.
- Once the provincial Workplace Safety Insurance Board (WSIB) receives the Form 7 from HRSDC, they may contact the employee directly for more information and request the employee to complete a Workplace Safety and Insurance Board (WSIB) Worker's Report of Injury/Disease (Form 6) available at



<http://www.wsib.on.ca/cs/groups/public/documents/staticfile/c2li/mdex/~edisp/wsib011595.pdf>.

- NOTE: If a Form 7 was submitted, the employee has an option of voluntarily completing a Workplace Safety and Insurance Board (WSIB) Worker's Report of Injury/Disease (Form 6). The employee should contact WSIB as soon as possible for detailed instructions for submission. The employee will provide a copy of the completed form 6 to the employer/HR.

3.7.3.2.3 **Disabling Injury:** If an injury/incident/exposure requires medical attention, resulting in lost time (day of injury is not counted as day/time lost, even if the employee left work early) i.e. prevents an employee from reporting for work or from effectively performing all the duties connected with their regular work, the manager will complete a HOIR electronically using the Accident Incident Reporting System (AIRS) database within 14 days of the incident. The manager must also complete the relevant provincial Workplace Safety Insurance Board (WSIB) Claim – Form 7 available at <http://www.wsib.on.ca/cs/groups/public/documents/staticfile/c2li/mdex/~edisp/wsib012386.pdf> and fax it within 3 days to the HRSDC – Injury Compensation Program at (819) 934-6590 and also fax one copy to the Corporate Occupational Health and Safety Unit, at 613-960-1528. This must include the prior 4 weeks of earnings. Please note: Forms are not to be sent directly to the WSIB. A copy of the form 7 is to be given to the employee.

- Once the employee returns to work, a WSIB Form 9 must be sent to HRSDC.

3.7.3.2.4 The employee can voluntarily report an incident to WSIB through the “Program for Exposure Incident Reporting” (PEIR). In this voluntary program, an exposure incident is defined as “an unplanned exposure to a chemical, physical or biological hazard resulting from a leak, spill, escape, explosion or direct physical contact”. The purpose of the program is to collect information while it is readily available, in the event an illness occurs in the future. The employer can also report non-significant exposures to this program, but should discuss this first with the appropriate federal Labour Program regional injury compensation office.

**NOTE:** For assistance in completing reporting forms contact HRSDC – Injury Compensation Program.

3.7.4 All reports of the injury/incident/exposure are to be kept by the employer for a period of 10 years.

## 4 APPENDICES

**Appendix 1:** Health Canada Occupational Health Assessment Guide (OHAG) Annex O: Recommended Immunizations and Screening Tests Related to Occupational Exposure (July 2012)

**Appendix 2:** Health Canada Occupational Health Assessment Guide (OHAG) Annex Q: Protocol to Manage Federal Public Servants Accidentally Exposed to Blood Borne Pathogens (e.g. HBV, HCV, HIV) In the Course of Their Work (June 2010)

**Appendix 3:** Table 1: Recommended HIV post-exposure prophylaxis (PEP) for percutaneous injuries and Table 2: Recommended HIV post-exposure prophylaxis (PEP) for mucous membrane exposures and non-intact skin exposures. Retrieved from <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5409a1.htm>

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