

Subject/Title: POST EXPOSURE MANAGEMENT OF OCCUPATIONAL EXPOSURE TO BLOOD & BODY FLUIDS	Revised: 2001/12/07
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APPENDIX I

DEFINITIONS:

1. **Employee** means, for the purpose of these guidelines, the following:
 - all staff paid on Calgary Health Region payroll system
 - members of the Calgary Health Region Medical Staff while working in a Calgary Health Region facility/service
 - volunteers
 - contract staff with whom the Calgary Health Region Occupational Health & Safety Service (OH&S) has a service agreement (e.g., Initial Security, Marriott)
 - Calgary Laboratory Services (CLS) employees
 - students (source patient testing and initial student testing will be done. Results will be forwarded to student health at the appropriate educational institution for follow up.)

2. **Body Fluids**
 - Group A - Any blood or bloody body fluid/tissue, vaginal secretions, seminal secretions, cerebrospinal fluid, synovial fluid, pleural fluids, peritoneal fluid, pericardial fluid, amniotic fluid.
 - Group B - Non-bloody saliva.
 - Group C -Tears, nasal secretions, sputum, sweat, vomitus, urine and feces (unless fluid contains visible blood in which case it would be considered to be Group A).

3. **Follow-up Testing on Source Patient Post Exposure**
 - Group A Body Fluids – HIV serology, HBsAg, Anti HCV
 - Group B Body Fluids - HBsAg
 - Group C Body Fluids - none (if they contain visible blood, refer to Group A).

4. **Exposure**
 - Parenteral (puncture, needlestick, bite, laceration).
 - Contact with mucosal membrane (eye, mouth or lining of nose).
 - Contact with non-intact skin (chapped or abraded skin, skin with dermatitis or eczema).

5. **Anti HBs** - Hepatitis B Surface Antibody
6. **HBsAg** - Hepatitis B Surface Antigen
7. **HBIG** - Hepatitis B Immune Globulin
8. **HBV** - Hepatitis B Virus
9. **HIV** - Human Immunodeficiency Virus
10. **HCV** - Hepatitis C Virus

11. **Non-responder to Hepatitis B Vaccine** refers to individuals that fail to develop serological immunity after a **second** immunization series (eg. Anti HBs <10 IU/L).

12. **Significant Occupation Exposure** refers to high risk HIV exposure determined by utilizing the "*Exposure to Blood and Body Fluid Risk Assessment*" tool as developed by Infection Prevention and Control. The "*HIV Risk Matrix for Blood Exposure*" is then utilized to determine if the exposure risk is high, low or unknown. Follow up is based on the determination of the exposure risk.

Basic Responsibilities and Outline of Procedures:

1. All incidents of exposure to blood and body fluids must be reported to OH&S by contacting the 24 hour OH&S Call Line 234-7799. Employees shall activate the Accident Reporting System using the "Employee Accident/Incident Investigation Report" form (#00169). Post exposure follow up will be offered to all employees.
2. Physician/delegate/nurses will do a risk assessment, obtain the necessary consent and order appropriate lab testing on the source patient.
3. When the source patient is "high risk" for HIV, Point Of Care (POC) Simple Rapid Testing for HIV will be performed. See Appendix D.
4. When source patients refuse to consent or when blood work results cannot be obtained, the source patient will be classified as "unknown status." A risk assessment will be done by the physician/delegate/nurse, and the employee follow up will be based on the information obtained.
5. OH&S will consult with Infection Prevention & Control or Communicable Disease Services (as appropriate) to provide expertise in the follow up care of an employee when there has been a "high risk" exposure that requires further investigation (e.g., source patient history review).
6. OH&S will co-ordinate the confidential post exposure follow-up care and counseling of an employee.
7. Employees who are the source of a patient's exposure to blood and body fluids will be asked to consent to testing for: Hepatitis B (HBV), Hepatitis C (HCV) and Human Immunodeficiency Virus (HIV).
8. OH&S will provide annual statistical reports regarding the types and precipitating causes of exposures to blood and body fluids to Infection Prevention & Control via the committee structure in an effort to determine prevention strategies.

PROCESS:**A. EMPLOYEE EXPOSURE TO BLOOD AND BODY FLUID OF PATIENT:**

1. **Employee Immediate Responsibilities:**
 - 1.1 Allow exposure site to bleed.
 - 1.2 Cleanse exposure site with soap and water (if not available use waterless hand cleansers).
 - 1.3 Flush mucous membrane exposure sites with water or saline.
2. **Reporting and Testing Responsibilities:**
 - 2.1 Employee
 - 2.1.1 Report exposure by activating the Employee Accident Reporting System immediately.
 - 2.1.2 Report the exposure to your supervisor/manager immediately.
 - 2.1.3 Complete "Employee Incident/Accident Investigation Report" form (#00169) and forward all copies to your supervisor/manager.

- 2.2 Supervisor/Manager
2.2.1 Ensure employee reports the accident to OH&S.
- 2.3 Physician/Delegate/Nurse
2.3.1 Document on the source patient's health record that an occupational exposure to the source patient's blood and/or body fluids has occurred.
2.3.2 Counsel, request and obtain informed written consent for HIV, HBV and HCV testing (refer to Consent for Treatment policy #1414).
2.3.3 Write an order for Anti HCV, HbsAg and HIV testing of source patient (refer to Consent for Treatment policy #1414).
2.3.4 Assess patient risk for HIV, HBV and HCV utilizing "Exposure to Blood and Body Fluid Patient Risk Assessment" form (#00305R). Notify OH&S immediately if any high risk factors are identified (See Appendix D). Forward the completed risk assessment form (#00305R) to OH&S.
2.3.5 Issue laboratory requisitions stating: occupational exposure to blood and body fluids "source patient." Request:
 - HbsAg
 - Anti HCV
 - HIV Serology} *Prov Lab Req. #19134 (R00/01)*
2.3.6 Inform OH&S if unable to obtain consent and/or blood for testing.
- 2.4 Source Patient's Physician
2.4.1 Sign the above orders.
2.4.2 Notify the source patient's physician of test results and provide counseling as necessary.
- 2.5 OH&S
2.5.1 Give appropriate pre test and post exposure counseling. Request and obtain informed written consent for post exposure testing (refer to Consent for Treatment policy #1414). Complete "Consent for Procedure" form (#01-01-00001).
2.5.2 Follow exposure protocol in Appendices A, B, C, (and D if indicated).
2.5.3 Issue laboratory requisitions. Request: (if unknown)
 - Anti HBs
 - Anti HCV
 - HIV Serology} *Prov Lab Req. #19134 (R00/01)*
2.5.4 Document appropriate information on OH&S record.
2.5.5 Assess each exposure to determine prevention strategies.
- 2.6 Laboratory (Provincial)
2.6.1 Perform tests as ordered.
2.6.2 Send employee results to OH&S.
2.6.3 Send a copy of "source" patient's HBV, HCV, and HIV lab results to OH&S and a copy to the patient's health record at the acute care sites and to ordering physician for community patients.

B. PATIENT EXPOSURE TO BLOOD AND BODY FLUID OF EMPLOYEE:

1. Reporting and Testing Responsibilities :

1.1 Employee

- 1.1.1 Report exposure to Supervisor/Manager and OH&S.
- 1.1.2 Activate the Employee Accident Reporting system.
- 1.1.3 Complete "Employee Incident/Accident Investigation Report" form (#00169) and forward it to Supervisor/Manager.
- 1.1.4 Document necessary information for patient health record.

1.2 Supervisor/Manager

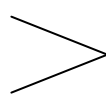
- 1.2.1 Ensure employee has reported exposure promptly to OH&S.
- 1.2.2 Complete and forward the accident report form (#00169) to OH&S.

1.3 Physician/Delegate/Nurse

- 1.3.1 Document incident on patient health record.

1.4 OH&S

- 1.4.1 Notify Infection Prevention & Control or Communicable Disease Services (as appropriate) of patient exposure to initiate appropriate care and follow-up of exposed patient.
- 1.4.2 Counsel employee. Request and obtain informed written consent for HBV, HCV, and HIV serology (refer to Consent for Treatment policy #1414). Complete "Consent for Procedure" form (#01-01-00001).
- 1.4.3 If consent is obtained, issue requisition for:
 - HbsAg
 - Anti HCV
 - HIV Serology
- 1.4.4 Request that employee sign "Employee Consent for Release of Information" form (#00004).
- 1.4.5 Inform employee of their test results.
- 1.4.6 Remove identifiers (e.g., name, ID number) from employee test results and send copy to Infection Prevention & Control or Communicable Disease Services (as appropriate) and/or family doctor.
- 1.4.7 Refer employee to OH&S physician if test results are positive.
- 1.4.8 Arrange for appropriate follow up for employee.


Prov Lab Req. #19134 (R00/01)

1.5 Laboratory

- 1.5.1 Perform tests as ordered.
- 1.5.2 Send employee results to OH&S.

References:

- Consent for Treatment and Special Procedures policy (#1414)
- Management of Occupational Accidents including WCB claims policy (#1333)
- An Integrated Protocol To Manage Healthcare Workers Exposed to Blood borne Pathogens, Health Canada, CCDR (1997) Vol. 23S2
- Canadian Immunization Guide – Fifth Edition (1998)

ACTION FOLLOWING EXPOSURE TO HEPATITIS B

EMPLOYEE		SOURCE	
VACCINE STATUS	ANTI HBs STATUS	POSITIVE OR HIGH RISK	UNKNOWN RISK OR LOW RISK
Vaccinated	Unknown	Test Anti HBs	Test Anti HBs
	≥ 10 IU/L (known responder) Known non-responder <10 IU/L after one series	Encourage <i>Standard Practice</i> guidelines Offer HBIG* Offer HBIG* and 1 booster Hep B. 1 month – test Anti HBs If ≥ 10 IU/L, no further action, encourage <i>Standard Practice</i> guidelines If <10 IU/L, complete second schedule – test Anti HBs	Encourage <i>Standard Practice</i> guidelines Encourage <i>Standard Practice</i> guidelines Offer 1 booster Hep B. 1month – test Anti HBs If ≥ 10 IU/L, no further action, encourage <i>Standard Practice</i> guidelines If ≤ 10 IU/L, complete second schedule – test Anti HBs
Partially vaccinated	Unknown ≥ 10 IU/L <10 IU/L	Test Anti HBs Continue vaccine schedule Offer HBIG* and finish vaccine schedule 1 month – test Anti HBs If ≥ 10 IU/L, complete vaccine schedule If <10 IU/L, complete second Schedule	Continue vaccine Schedule
Not vaccinated	Unknown ≥ 10 IU/L <10 IU/L	Test Anti HBs Encourage <i>Standard Practice</i> guidelines Offer HBIG and full Hep B vaccine schedule	Encourage <i>Standard Practice</i> guidelines Offer HBIG and full Hep B vaccine schedule

*Hepatitis B Immune Globulin 0.06 mls/kg within 48 hours of exposure.

Efficacy decreases with time and is unknown after seven days.

APPENDIX 'B'

ACTION FOLLOWING EXPOSURE TO HEPATITIS C

EMPLOYEE	SOURCE	
Anti HCV status	Positive or High risk	Unknown Risk or Low Risk
<p>Negative or Unknown</p>	<p>Baseline: Test employee: -Anti HCV -Serum alanine Aminotransferase (ALT)</p> <p>8 weeks post exposure: Test employee: -HCV RNA</p> <p>If positive, refer to Hepatologist for follow up.</p> <p>6 months post exposure: Repeat Anti HCV. Repeat Serum alanine Aminotransferase (ALT).</p> <p>12 months post exposure: Repeat Anti HCV.</p>	<p>Baseline: Test employee: -Anti HCV</p> <p>6 months post exposure: Repeat Anti HCV.</p>
<p>Anti HCV positive</p>	<p>No action.</p>	<p>No action.</p>

ACTION FOLLOWING EXPOSURE TO HIV

EMPLOYEE	SOURCE	
	Positive or high risk	Unknown risk or low risk
HIV negative or unknown	<p>Refer employee immediately to Emergency Department or 8th and 8th Medical Centre for chemoprophylaxis kit if Rapid Response HIV Testing indicated, see Appendix D.</p> <p>Ensure employee is referred to ID Physician.</p> <p>Offer employee HIV surveillance: Baseline, 6 weeks, 3 months, 6 months.</p>	<p>Offer employee HIV surveillance: Baseline, 6 weeks, 3 months, 6 months.</p>
HIV positive	No action.	No action.

APPENDIX 'D'

RAPID HIV TESTING - ACTION FOLLOWING HIGH RISK HIV EXPOSURE

Note: Effective March 1/01 Pilot Study conducted by Calgary Laboratory Services (CLS) on acute care sites only

1. Occupational Health & Safety (OH&S):

- 1.1. Advise physician/nurse/delegate that Rapid HIV Testing, HBsAg, and Anti HCV is to be ordered on the source patient via CLS Manual requisition #M16027. Advise physician/nurse/delegate this test cannot be ordered electronically.
- 1.2. Refer the employee to the Emergency Department for assessment. Advise the employee if the source patient's test is positive a STAT confirmation test on source patient is indicated if the employee is pregnant. Inquire if this STAT test is applicable.
- 1.3. Contact Emergency Triage Nurse and Clinician or Charge Nurse and advise that an employee is being sent for assessment for Post Exposure Prophylaxis (PEP), due to a high risk HIV exposure. Advise the Emergency Department Rapid Response HIV testing is being ordered on the source patient and OH&S will advise the Emergency Department physician of the test result. Obtain the name of the physician who is assessing the employee.
- 1.4. When the source patient's HIV results are received from CLS, notify the Emergency Department physician of the HIV test results.
- 1.5. If STAT source patient confirmation test is required (e.g., the employee is pregnant), notify the CLS Technologist doing the Rapid HIV Test.
- 1.6. Notify the Emergency Department physician of the STAT confirmatory HIV test result.
- 1.7. Advise the employee to go to the HPTP Clinic at FMC the following day and to phone at 0800 hours to arrange a time.
- 1.8. Notify the Emergency Department physician if consent for source patient HIV, HBV and HCV testing unable to be obtained.

2. Physician/Nurse/Delegate:

- 2.1. Document on the source patient's health record that an occupational exposure to the patient's blood and/or body fluids has occurred.
- 2.2. Advise patient (or legal guardian) of policy. Counsel, request and obtain informed written consent for HIV, HBV and HCV testing (Refer to Consent for Treatment policy #1414 available on Calgary Health Region website and Regional Policy Manual).
- 2.3. Contact OH&S if unable to obtain consent for source patient HIV, HBV and HCV testing.
- 2.4. Write an order for Rapid Response HIV testing and HBV and HCV testing.
- 2.5. Telephone Site Laboratory and request Rapid Response HIV testing or notify the site laboratory that a specimen is enroute STAT if the sample was Unit collected.
- 2.6. Complete the CLS requisition #M16027 for Rapid Response HIV testing indicating the name of the responsible physician for the source patient.
- 2.7. Indicate significant occupation exposure to HIV (Hepatitis B and Hepatitis C testing will be referred automatically to the Provincial Laboratory) on the CLS requisition.

3. Calgary Laboratory Services (CLS):

- 3.1. Obtain completed rapid HIV test requisition from the unit.
- 3.2. Contact OH&S immediately when results are available.
- 3.3. Contact responsible physician or nurse in charge of the patient care unit when results are available. Forwards hard copy of results to source patient's attending physician.
- 3.4. Contact Provincial Lab if STAT confirmatory test is required on the source patient.

4. Provincial Laboratory:

- 4.1. Contact OH&S by phone immediately when STAT confirmatory results are available.
- 4.2. Forward copy of CLS Rapid HIV test and copy of confirmatory test results to OH&S and patient's health record at the acute care sites.