BCIT Safety Manual

BLOODBORNE PATHOGEN

EXPOSURE CONTROL PLAN

Contents

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1. Purpose

This exposure control plan includes sections on hazard identification, risk assessment, hazard control, safe work procedures and education. It has been developed to:

- Ensure compliance with federal, provincial and WorkSafeBC policies and regulations regarding occupational exposure to bloodborne pathogens
- Minimize employees' students' and visitors' exposure to bloodborne pathogens
- Provide guidelines for Schools/Departments, programs, laboratories, and First Aid Attendants across the Institute to develop task/activity specific safe work procedures for bloodborne pathogens

This Exposure Control Plan applies to all BCIT employees, students, and visitors who have or may have exposure to bloodborne pathogens.

2. Definitions

2.1 Bloodborne Pathogen

A human bloodborne pathogen is a microorganism (bacteria, virus, etc.) that lives in the bloodstream and can cause disease in humans.

2.2 Biohazardous Material

A pathogenic organism, including a bloodborne pathogen, which, due to its known or reasonably believed ability to cause disease in humans, would be classified as Risk Group 2, 3, or 4 as defined by Health Canada, or any material contaminated with such an organism.

2.3 Contamination

For the sake of this document, contamination means the presence or reasonably anticipated presence of blood, other potentially infectious materials, or biohazardous material.

2.4 Decontamination

The use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens or other biohazardous materials so that they can no longer transmit disease and a surface or item is safe for handling, use, storage, or disposal.

2.5 Universal Precautions

A universal approach to infection control in which all human blood and body fluids are treated as though they are infectious for blood-borne diseases such as human immunodeficiency virus (HIV), hepatitis B virus (HBV), hepatitis C virus (HCV).

2.6 Supervisor

A BCIT employee who instructs, directs, and controls employees and/or students in the performance

of their duties and activities.

2.7 Employee

A person employed at BCIT fulltime, part time or auxiliary.

2.8 Instructor

A BCIT employee who provides instruction and supervision in a classroom, laboratory, clinic, or workshop.

2.9 Student

A person who enrolls in a full-time or part-time program or any courses in BCIT, including students in practicum and apprenticeships.

3. Applicable Legislation and Reference Materials

WorkSafeBC *Occupational Health and Safety Regulation (OHS Regulation)* Part 6 – Section 6.33 – 6.41
PHAC Recommendations and Laboratory Biosafety Guidelines 3rd Edition 2004

BCIT Occupational Health and Safety Manual Part 1 – Section 4 - Occupational First Aid Reporting Procedures

BCIT Occupational Health and Safety Manual Part 3 – Section 42 - Personal Protective Equipment

4. Roles & Responsibilities

BCIT is committed to protecting the health and well-being of employees, students, and visitors. Employees and students must be aware of the hazards in their environment and know how to protect themselves from exposure to bloodborne pathogens when handling, using, and disposing biohazardous materials.

4.1 BCIT

- Implement a Biological Safety Committee for biosafety across the Institute.
- Support the implementation of the Exposure Control Plan by ensuring:
    1) Biosafety training is given to employees and students who have, or may have, occupational exposure to a bloodborne pathogen.
    2) Personal protective equipment, biohazard containers, sharps containers, safe needle devices, sinks, and facilities for decontamination, spill clean-up and emergencies are available.
    3) Prompt first aid is accessible.
    4) Hepatitis B virus vaccination is available at no cost to the employee, upon request, for all employees who have, or may have, occupational exposure to the hepatitis B virus.

5) Subsequent post-exposure health management is provided.

4.2 BCIT Safety, Security & Emergency Management

- Enforce compliance with federal, provincial, WorkSafeBC and institute polices and regulations regarding biosafety.
- Direct and coordinate emergency responses to major biohazard events that have high potential of exposure to bloodborne pathogens.
- Address post-exposure health management and accident investigation.

4.3 Biosafety Occupational Health and Safety Special Committee

- Meet regularly to address emerging issues related to human pathogen exposure
- Review this Exposure Control Plan on an annual basis and audit its effectiveness.
- Conduct regular inspections of the workplace to ensure compliance with this plan.
- Report bloodborne pathogen exposure potentials to corresponding Supervisors and the OHS Group.
- Participate in investigations of major exposure accidents with remedial recommendations.
- Provide input regarding the safe handling, storage, and disposal of biohazardous materials that contains, or may contain, bloodborne pathogens.
- Distribute information on prevention of bloodborne pathogen infection to Schools/Departments.

4.4 OHS Group

- Develop and update the Bloodborne Pathogen Exposure Control Plan.
- When required, conduct risk assessments to anticipate and identify potentials for bloodborne pathogen exposure.
- Plan for training and education on biological safety and this Exposure Control Plan.
- Coordinate investigations of related accidents and provide advice on reoccurrence avoidance.
- Act as an advisory resource for biosafety.
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- Liaise with the Biosafety Occupational Health and Safety Special Committee, Joint Occupational Health and Safety Committee, Supervisors, and staff in regard to the implementation of the Exposure Control Plan.

4.5 Human Resources

- Ensure vaccination for Hepatitis B virus is available, upon request and at no cost to the employee, for those employees who have, or may have, occupational exposure to Hepatitis B virus.
- Provide advice on seeking advanced medical care and post-exposure health management.
- Keep records of post-exposure management.

4.6 First Aid Attendants

- Within their professional capability, provide first aid treatment to injured employees and students.

- Advise the Safety, Security & Emergency Management and Human Resources in post-exposure management.
- Keep records of first aid, vaccination and other relevant medical information related to exposure to human blood or blood-containing materials.
- Forward pertinent exposure records and information to Manager of OHS Group and to Human Resources, as necessary.

4.7 Supervisors

- Ensure risk assessments have been carried out prior to any teaching/research activities with potential of exposure to bloodborne pathogens.
- Consult with biosafety professionals, the OHS Group and personnel involved and develop safe work procedures for activities potential bloodborne pathogen exposure.
- Ensure this Exposure Control Plan and safe work procedures are read and understood by relevant employees and students.
- Arrange pertinent training and education for appropriate persons. Ensure they have been trained on:
    1) potential bloodborne pathogens of the material(s) being handled
    2) health effects of bloodborne pathogens
    3) safe work procedures, including Universal Precautions, safe use and disposal of personal protective equipment (PPE), and
    4) procedures for accidental exposure management.
- Conduct routine inspections and maintain sufficient supervision to ensure that safe work procedures are followed, OHS facilities are effectively operated, and corrective actions are implemented.
- Report accidental exposures to the Safety, Security & Emergency Management and BCIT First Aid Attendant and ensure that the person exposed seeks medical assistance immediately.

4.8 School & Department

- Develop and maintain an updated inventory for biohazardous materials that contain bloodborne pathogens.
- Forward updated inventory for bio-hazardous materials to the OHS Group when necessary. .
- Provide access to the inventory for those people concerned.
- Ensure subsequent post-exposure health management is carried out.

4.9 Central Stores

- Coordinate the receipt, shipment and transport of blood-containing materials and body fluids across the Institute according to pertinent OHS policies and regulations.
- Maintain an updated inventory of biohazardous materials and forward a copy to School/Department.

4.10 BCIT Employees and students

- Attend training and education provided

- Read and understand this Exposure Control Plan.
- Follow Universal Precautions and safe work procedures for handling of blood-containing materials and body fluids.
- Consider recommendations for immunization.
- Conduct daily inspection and clean-up of their work areas to ensure a healthy and safe work environment.
- Implement remedial actions required.
- Report any unsafe conditions or acts to the Supervisor.
- Report any accidental exposure to the Supervisor and BCIT First Aid Attendant.

5. Risk Identification, Assessment & Control

5.1 Hazard Identification

Bloodborne Pathogens

Bloodborne pathogens, such as HIV/AIDS (human immunodeficiency virus), Hepatitis B, Hepatitis C, malaria, and Ebola (viral hemorrhagic fever) are viruses which are carried in human blood, other fluids, tissues and organs.

Carriers of these viruses may not show signs of illness. For instance, people can continue to carry Hepatitis B in their bloodstream and other body fluids for long periods after initial infection without symptoms, but can still infect others. The same is true for carriers with HIV and Hepatitis C. One cannot tell through appearance whether a person or body fluid is hazardous.

Blood, body fluids/tissue samples are used or analyzed in some laboratories in BCIT Health Science Programs. Most of the blood samples used have been screened for pathogens, but not all of them.

Transmission Routes

People can be exposed to bloodborne pathogens through:

1) Sharp Injuries or Puncture Wounds

When a person is pierced or stabbed with a needle or sharp instrument contaminated with human blood or other body fluids with blood, he/she would have a potential to be exposed to bloodborne pathogens. Sharps may be found in labs, garbage bins, on the ground and in other places.

2) Broken Skin

When a person has a cut/wound or skin is abraded, chapped, weeping or covered with a rash or eruption and the broken skin comes in contact with human blood or body fluids, there is a risk of exposure to bloodborne pathogens. Saliva, entering through broken skin due to a bite can transmit Hepatitis B.

3) Mucous Membranes of the Eye, Nose and Mouth

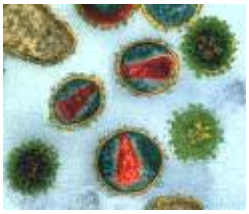
If human blood or body fluids with blood are splattered in a person's eyes, nose or mouth, there is a risk of being exposed to bloodborne pathogens. Saliva that has been spit can transmit Hepatitis B

thorough a mucous membrane.

Health Effects

1) HIV/AIDS

Human immunodeficiency virus (HIV) is a retrovirus that can lead to Acquired Immunodeficiency Syndrome (AIDS), a condition in humans in which the immune system begins to fail, leading to life-threatening opportunistic infections. Below is a microscope image of HIV virus:

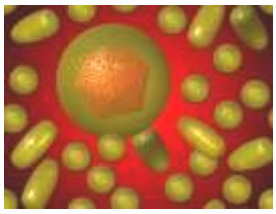


HIV primarily infects vital cells in the human immune system such as helper T cells (specifically CD4+ T cells), macrophages and dendritic cells. HIV infection leads to low levels of CD4+ T cells through three main mechanisms: firstly, direct viral killing of infected cells; secondly, increased rates of apoptosis in infected cells; and thirdly, killing of infected CD4+ T cells by CD8 cytotoxic lymphocytes that recognize infected cells. When CD4+ T cell numbers decline below a critical level, cell-mediated immunity is lost, and the body becomes progressively more susceptible to opportunistic infections. If untreated, eventually most HIV-infected individuals develop AIDS and die.

At present there is neither a cure for HIV infection nor for AIDS. The virus remains in the body for the remainder of the individual's life. Treatment with anti-retrovirals, where available, may increase the life expectancy of people infected with HIV.

2) Hepatitis B

Hepatitis B is a virus that causes infection in the liver. Below is a microscopic image of Hepatitis B virus in bloodstream:

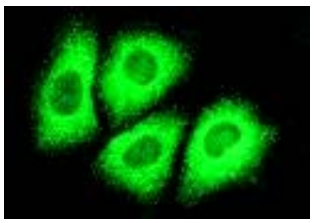


Symptoms usually begin 6 weeks to 6 months after exposure to the virus (average 2 months). The duration of illness varies; most people recover within 3 weeks. In adults, early symptoms can include nausea (upset stomach), loss of appetite, vomiting, fatigue, and abdominal cramps (stomach or side pain). Dark yellow or brown urine, pale or white-colored stools (bowel movements), and jaundice (yellow eyes or skin) may also be present. Persons can have all or only a few of the above signs and symptoms. About 50% of adults with a new infection have no symptoms whatsoever and 5% of adults with acute Hepatitis B will develop chronic or long-term infection.

Chronic Hepatitis B may lead to liver disease including cirrhosis and liver cancer.

3) Hepatitis C

Hepatitis C is another virus that causes infection in the liver. Below is a microscopic image of Hepatitis C:



After a person is infected with Hepatitis C, it takes several weeks before the infection is established in the liver. Most people (86%) with Hepatitis C do not know that they are infected because they do not feel sick. Some people do get mild symptoms that are flu-like, such as nausea, fatigue (feeling tired), loss of appetite, fever, headaches, and abdominal pain. Jaundice (yellow eyes or skin) may occur but is not common. These symptoms may last a few days or weeks and then go away. In rare cases, infection with Hepatitis C leads to hospitalization. Fatigue is the most common symptom of chronic Hepatitis C infection.

About 85% of the people with Hepatitis C carry the virus in their body for the rest of their life. Most of these people have some liver damage from the infection, but not enough to make them sick. Some people develop scarring of the liver (cirrhosis) over many years. Some people with cirrhosis have no long-term effects but others may develop liver failure or liver cancer. People with immune suppression, such as HIV infection or people who drink alcohol may have a faster progression of liver disease.

People with Hepatitis C can pass the infection to others even if their liver tests are normal. Currently, Hepatitis **C** has no effective vaccine approved for public use.

People at Risk

There are a number of occupational groups at BCIT that have, or may have, potentials of exposure to human blood and/or body fluids with blood. These groups include, but are not limited to:

1) First Aid Attendants

First Aid Attendants are at risk of being exposed to casualties' blood during rescue or emergency medical treatments, especially when he/she has broken skin and/or Universal Precautions are not taken.

2) Staff in Health Science Labs

Lab technicians, researchers and instructors may handle a variety of blood or tissue samples for experiment preparation and/or demonstration.

3) Practicum Nurses and Students in Health Science Programs

Students in Nursing, Medical Lab Science, Medical Office Assistant, Cardiovascular Technology, and other Health Science Programs have various opportunities to have contact with blood samples/products during their experiments, practicum, and research activities.

4) Housekeepers

While handling regulated or non-regulated waste, sorting recycling and cleaning up spills, grounds and equipment, housekeepers may be at risk of being cut with sharps contaminated with human blood or body fluids.

5) Safety and Security Personnel

Safety and Security staff may be exposed to human blood or body fluids while collecting and discarding contaminated sharps and dealing with violence, accidents, or during emergency response to terrorism and natural disasters.

5.2 Risk Assessment

Supervisors, program heads, clinic coordinators, and coordinators of research projects must ensure a risk assessment of exposure to bloodborne pathogens has been conducted prior to any teaching and research activities that involve handling of human blood and/or body fluids.

In general, the magnitude of a risk of exposure to bloodborne pathogens depends on:

- infection likelihood of the bloodborne pathogen concerned
- frequency of potential exposure
- duration of potential exposure
- number of people with potential for exposure
- consequences of an exposure
- protective factors (such as vaccination, genetic feature, PPE and hygiene practice)

Supervisors must conduct a risk assessment following the Risk Assessment Procedures prescribed in Part 2 - Section 23, of the BCIT Safety Manual to determine the risks of exposure to bloodborne pathogens. Consultation with biotechnology experts, the OHS Group or the Biosafety OHS Special Committee is encouraged whenever necessary.

5.3 Control Measures

BCIT management, employees, students and visitors must take all measures to eliminate or minimize the risk of exposure to bloodborne pathogens.

Elimination of Pathogens

Whenever practical, ensure that blood or blood-containing samples have been screened for bloodborne pathogens before handling.

Engineering Controls

Engineering controls involve the use of a needleless device, a safety-engineered hollow bore needle or a safety-engineered medical sharp.

A needleless device or safety-engineered hollow bore needle must be used for the following procedures performed to care for or treat a person:

1) Withdrawal of body fluids;
2) Accessing a vein or artery;
3) Administration of medications or fluids;
4) Any other procedure involving the potential for an exposure to accidental parenteral contact for which a needleless system or safety-engineered hollow bore needle system is available.

Any medical sharp used to care for or treat a person must be a safety-engineered medical sharp unless:

1) Use of the required device, needle or sharp is not clinically appropriate in the particular circumstance, or
2) the required device, needle or sharp is not available in commercial markets.

If more than one type of safety-engineered hollow bore needle or safety-engineered medical sharp is available in commercial markets, the needle or sharp that provides the highest level of protection from accidental parenteral contact must be used.

Determination of the highest level of protection must be based on information provided by manufacturers, independent testing agencies, objective product evaluation, or other reliable sources.

Safe work procedures and practices relating to the use of safety-engineered hollow bore needles and safety-engineered medical sharps must be developed and implemented before use of these devices.

An example of engineering control is to perform occupational first aid treatment for Subungual Hemotoma with needleless devices such as a high temperature fine tip with thermal cautery handle or a nail drill instead of a hollow needle.

Although the above regulations refer to caring for, or treatment of, a person, the same controls should be applied whenever medical sharps are used with samples that can be reasonably expected to contain bloodborne pathogens.

Administrative Controls

Administrative controls include Universal Precautions, Immunization, and Post Exposure Management.

1) Universal Precautions

The system of Universal Precautions is used for all tasks that could expose workers to bloodborne pathogens.

Because it is often difficult to tell if a person is infected with a bloodborne pathogen, Universal Precautions require that workers who handle biohazardous materials must always assume that all

"blood and body fluids" are infectious for blood-borne diseases such as HBV (Hepatitis B Virus), HCV (Hepatitis C Virus) and HIV (Human Immuno-deficiency Virus).

Specifically, all employees and students at BCIT must:

- Consider all sharp items ("sharps") as potentially infectious and handle them with care to prevent injury.
- Never recap or purposely bend, shear, or break needles.
- Dispose of sharps in a secure, leak-proof, puncture-resistant container.
- Wear PPE such as gloves, gowns, aprons, masks, or protective eyewear when there is a potential for blood splash or contact with blood or other potentially infectious materials.
- Wash hands immediately and thoroughly after any contact with blood or other potentially infectious materials.
- Use resuscitation devices such as pocket masks with one-way valves to eliminate the need for direct mouth-to-mouth resuscitation.

2) Immunization

Vaccination is safe and effective in preventing hepatitis B for over 90% of people who receive the complete three dose series of shots over six months.

BCIT provides free vaccination against the Hepatitis B virus, upon request, to all employees who have, or may have, occupational exposure to Hepatitis B virus.

3) Post-exposure Management

Post-exposure management is an integral part of the control plan for preventing infection following exposure incidents.

After an accidental exposure, which, due to the exposure routes or known virus involved, is reasonably believed to have a potential of bloodborne pathogen infection, the person concerned must immediately report to his/her Supervisor and BCIT First Aid and seek immediate medical attention. Clinical evaluation and baseline testing should be conducted in accordance with guidelines for post-exposure follow-up.

The circumstances and post-exposure management should be recorded in the person's confidential medical record.

Personal Protective Equipment

In accordance with WorkSafeBC regulations, PPE is required for all work at the Institute involving blood or other biohazardous materials.

PPE should be selected based on:

- Work procedures
- Anticipated pathogens and possible exposure routes
- The quantity of blood or other potentially infectious materials encountered

1) Hand Protection

Wear waterproof, disposable, intact gloves while handling human blood and body fluids. Nitrile/latex gloves should be used while handling human tissues. Leather or Neoprene gloves are recommended for situations where broken glass and sharp edges may be encountered. Gloves selected must fit the wrist tightly when large amounts of blood are likely to be encountered.

2) Eye and Face Protection

Wear surgical masks and safety goggles or a face shield when there is potential for splashing or spattering of blood or other infectious materials or for the generation of airborne particles from dried blood.

3) Body Protection

When there is a potential for splashing or splattering, wear impervious disposable gowns, aprons, or coveralls that will prevent blood or other biohazardous materials from penetrating and contaminating the inner surfaces of PPE and subsequently underlying clothing and skin.

4) Foot Protection

Wear closed toe shoes such as rubber boots or appropriate shoe covers where there is potential for footwear to be grossly contaminated with blood.

5) Head Protection

Wear head covers in case of handling large quantities of blood over-head.

6) Respiratory Protection

Respiratory protection is not normally required unless there is a risk of inhaling airborne particles from dried blood or other biohazardous materials.

6. Education & Training

Training and education must be completed as outlined in the BCIT Safety Manual- Part 2, Section 23. Employees and students who have, or may have, occupational exposure to bloodborne pathogens must be adequately trained and educated and should be able to answer four key questions:

1) What biohazards you may encounter in your work/experiment/practicum?
2) What precautions are required to prevent exposure?
3) What must you do in case of emergency?
4) Where can you obtain further information?

Supervisors must arrange education and training on:

1) Biohazards of bloodborne pathogens.
2) Universal Precautions.
3) This Exposure Control Plan.

4) Task/activity specific safe work procedures, including decontamination and waste disposal.
5) Personal protective equipment
6) Hepatitis B vaccination, and
7) Emergency procedures

Supervisors shall retain training records following BCIT records retention policy.

7. Written Work Procedures

7.1 Safe Work Procedures

In addition to the general safe work procedures for biological laboratories and clinics, Supervisors, in consultation with Lab Technicians, biotechnology experts or the OHS Group, are required to develop activity specific work procedures for employees and students who have, or may have occupational exposure to bloodborne pathogens.

Appendix C is an example of safe work procedures for Fist Aid Attendants.

7.2 Cleanup and Decontamination Procedures

In the event of a spill of blood or other potentially infectious body fluids, the people involved must follow the Trauma Scene Cleanup Procedures presented in Appendix D to perform cleanup and decontamination.

7.3 Emergency Procedures

If accidental exposure to human blood or potentially infectious body fluids, the person affected should:

1) Wash the contaminated area with soap and warm water immediately and thoroughly (do not put bleach or any other caustic disinfection solution on the skin; this could cause a chemical burn to the skin and increase the risk of infection)
2) If a sharp is the cause of an injury, carefully place the sharp in a sharps container.
3) Report the exposure to your Supervisor immediately. You should also report the exposure to a BCIT First Aid Attendant and seek medical treatment and evaluation as soon as possible.
4) BCIT First Aid Attendants will refer the person to their family doctor or student health services to evaluate the risk of exposure and recommend treatment.
   Note: preventative treatment for HIV is most effective when started within 2 hours of the injury but will still confer benefit if started later.

8. Labels and Signs

Unless exemptions specified in Section 6.37 of the *OHS Regulation* are applicable, a substance of known or suspected bloodborne pathogen or biohazardous material must have a label or placard which discloses the name of the pathogen known or suspected to be present along with applicable precautions, or the universal biohazard symbol as shown in Appendix A.

Examples of the materials that should be labeled include containers of specimens of human blood, body fluids, tissues and regulated biohazardous materials, waste infectious materials, and equipment/surfaces that cannot be decontaminated.

9. Health Monitoring

An employee or practicum nurse/student who is suspected to have accidentally been exposed to bloodborne pathogens must seek a medical evaluation at the time of the incident. The medical evaluation must be based on an assessment of the risk associated with the incident. Subsequent post-exposure health management must be provided as necessary. The Director of Safety, Security & Emergency Management, First Aid Attendant, and BCIT Human Resources will advise the person exposed to seek subsequent post-exposure health management.

10. Documentation

First Aid will keep records of accidental exposure to bloodborne pathogens.

Records of education and training sessions on the hazards and prevention will be kept as outlined in Section 6 of this document.

Copies of records will be forwarded to the Biological Safety Committee and Director of Safety, Security & Emergency Management when necessary.

11. Program Review

This Exposure Control Plan will be reviewed annually for the following:

- The effectiveness of control measures and work procedures.
- First aid reports related to exposures to bloodborne pathogens.
- Documentation for training, awareness and education.

The annual review will be done in consultation with Joint Occupational Health and Safety Committee and the Biological Safety Occupational Health and Safety Special Committee.

Appendix A-
Biohazard Symbol

Appendix B-
Core Components and Persons Responsible

Core Components	Person in Charge
Risk Assessment of Biohazards	Supervisors
Safe Work Procedures	Supervisors
Training and Education	Supervisor, School/Department (OHS Group)
Vaccination	Human Resources, Schools/Departments, Medical Services
Inspection for Compliance	Supervisors (Biosafety Committee)
Report of Accidental Exposure	Supervisor, Employees/Students, First Aid Attendants
First Aid	First Aid Attendants
Post-exposure Management	Human Resources
Accident Investigation	Supervisor (OHS Group and Biosafety Committee)
Remediation	Supervisors, Facilities, Employees/Students
Program Review	Biosafety Committee and OHS Group
Direction, Enforcement & Coordination	Director, Safety & Security & OHS Group

Appendix C- Work Procedures for First Aid (Example)

Safe Work Procedures for First Aid
(Example)

1. Precautions

- Adhere to Universal Precautions and Standard Precautions for First Aid.

2. Preparation

- Call 9-1-1 for ambulance in the event of serious bleeding.
- Tie up long hair, if applicable.
- Get biohazard absorbent materials (e.g. paper towels and swabs) and biohazard containers at hand.

3. PPE

- Wear intact, waterproof, disposable medical examination gloves when assessing and treating patients or touching contaminated items or surfaces (especially when there is a potential of contact with patient's blood, body fluids, secretions, excretions, mucous membranes or non-intact skin).
- Wear pocket masks with one-way valves if the patients/casualties require CPR.
- Wear goggles if the potential of a splash of blood or body fluids exists.
- Wear clean medical laboratory coats when there is a potential clothing contamination.
- Wear closed toe shoes or appropriate shoe covers.

4. Task Requirements

- Use safe needle handling devices whenever applicable/available, and discard any contaminated disposable sharp items in sharps disposal containers immediately.
- Replace gloves immediately if they are torn, cut, punctured or leaking, and when they become contaminated or damaged such that their ability to function as a barrier is in question.
- Follow the post-exposure health management procedure in case of an exposure to human blood or other biohazardous materials.

  Note: Safe needle handling devices include grip elements for gripping, removing and retaining a sheath surrounding a needle attached to an injector device, guide elements for guiding the sheath back onto the needle after completed injection, elements for removing the needle from the injector device and activation elements capable of acting on the grip elements for removing the needle from the device.

5. Cleanup

- Follow the procedures prescribed in the Trauma Scene Cleanup Protocol (Appendix D)

6. Disposal

- Follow the procedures for glove removal and hand-washing.
- Follow the disposal procedures prescribed in the Trauma Scene Cleanup Protocol (Appendix D)
- Never wash or decontaminate disposable gloves for reuse.
- Never touch different bleeding victims with the same gloves

7. Documentation

- Never type/enter/write first aid records/data before glove removal.

8. Hygiene

- Always wash hands before eating, drinking, smoking, touching the skin/membranes, and going home.
- Never wear medical lab coats outside the first aid facilities.
- Regularly disinfect surfaces/materials potentially contaminated during medical treatments.
- Never store or consume food or drink in first aid facilities.
- Avoid using telephone with gloves on.

Appendix D - Trauma Scene Cleanup Protocol

Trauma Scene Cleanup Protocol

Introduction

Trauma scenes often involve human blood spills. Cleanup of human blood can pose a risk of exposure to bloodborne pathogens. This protocol is aimed to provide safe guidelines for trauma scene cleanup at BCIT.

Responsibility

All BCIT employees, students, visitors and contractors must report blood spills as promptly as possible and follow the cleanup/management procedures prescribed in this protocol.

Definitions

❖ Major blood spill

Greater than 500 ml blood (about 10% - 15% of the circulating blood of a human body), which can be caused by:

- Gunshot or other violent acts
- Suicide or suicide attempt
- Severe accidental cuts
- Severe open injuries caused by disasters

❖ Minor blood spill

A blood spill that neither meets the criteria for major blood spill nor the criteria for non-spill bleeding. Examples of minor blood spills include:

- Blood drops from bloody nose
- Accidental cuts (even those requiring a small number of stitches) if the blood spill is small

❖ Non-spill bleeding

Bleeding that does not cause any contamination of the environment with the bloodshed (i.e. no blood gets onto the surroundings). Examples of minor bleeding are scrapes or minor cuts where blood is

contained by cloths or other absorbent materials.

Procedures

Cleanup Procedure for Major Blood Spill

If a spill of blood or bodily fluids containing visible blood meets the definition of a major blood spill:

1. Report a major blood spill to the Safety, Security, and Emergency Management Department immediately.
2. The Director of the Safety, Security and Emergency Management will dispatch delegate(s) to the trauma scene to assess the situation and determine whether the scene needs to be preserved for investigation before cleanup by contacting the authorities concerned.
3. Follow the cleanup procedures prescribed in Part 3-Section 40 of the BCIT Safety Manual.

Cleanup Procedure for Minor Blood Spill

The cleaner should use his/her own judgment regarding the volume of blood that they are willing to clean.

The procedures below must be followed during cleanup.

1. Report the blood spill to the Supervisor.
2. Restrict access to the immediate area.
3. The Supervisor shall determine whether the scene needs to be preserved for investigation before cleanup by contacting the Safety Security and Emergency Management when appropriate.
4. Use intact laboratory gloves (latex, nitrile, etc.).
5. Lay down absorbent materials (e.g. paper towel etc.) to soak up blood, preventing the splashing or extension of the spill.
6. Apply an appropriate disinfectant agent (refer to BCCDC recommendations) to the absorbent material. Use a 10% solution of household bleach if nothing else is available.
7. Allow 10 minutes contact time (for a commercial solution, follow manufacturer's directions).
8. Clean the spill using absorbent paper towels, detergent and water, starting from the outside of the spill, working toward the center.
9. After cleaning is complete, use appropriate disinfectant (refer to BCCDC recommendations) to disinfect all tools or mops that were used in the process before taking off gloves.
10. Put all contaminated wastes (i.e. towels) and gloves in a biohazard bag or any other appropriate sealed, labeled and leak proof container/bin. The bag/container/bin MUST be marked as biohazard and/or have the universal biohazard symbol as shown in Appendix A.
11. Wash hands thoroughly using soap and warm water after discarding gloves.

12. Ask Central Stores to take the wastes to the BCIT biohazard waste bunker located in Room, SW01 - 1474 for waste pickup.
    Note:
    - *Central Stores will arrange waste pickup, collection, and transportation.*
    - *Central Stores will provide biohazard bags and sealed, labeled and leak proof disposal containers/bins.*

Procedures for Non-spill Bleeding Management

1. Whenever applicable, avoid promoting bleeding of precutaneous injuries by cutting, scratching, squeezing, or puncturing the skin.
2. Seek medical help/first aid if necessary.
   Cleanse and treat the minor wound in accordance with the standard practice for minor wound care outlined by WorkSafeBC or St. John Ambulance.
3. For used swabs, dressings, bandages, gloves that are not dripping blood upon compression:
   3.1 Put the wastes into a thick, leak proof plastic bag.
   3.2 Disinfect the contents inside the bag if an appropriate disinfectant is handily available.
   3.3 Tightly seal the bag.
   3.4 Drop the sealed bag into common garbage bins on the campuses for disposal.
4. For swabs, dressings, bandages, gloves that are so grossly contaminated with blood that they would produce dripping upon compression:
   4.1 Put the wastes into a biohazard bag.
   4.2 Tightly seal the bag.
   4.3 Put the bag into a labeled, leak proof container/bin for appropriate disposal. The container/bin MUST be marked as biohazard and/or have universal biohazard symbol.
5. Wash hands thoroughly using soap and warm water after the wound care.
   Note:
   - *Obtain biohazard bags, containers/bins from Central Sores.*
   - *When the container/bin is 80% full, First Aid Attendants or Lab Supervisors should ask Central Stores for waste pickup.*