

# COLLEGE OF THE HOLY CROSS OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) EXPOSURE CONTROL PLAN

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# College of the Holy Cross Exposure Control Plan Table of Contents

Introduction.....	3
Definitions.....	4
Employer responsibilities, agreements.....	7
Exposure Determination.....	7
Personal Protective Equipment .....	7
Universal Precautions.....	8
Engineering and Work Practice Controls.....	8
General Policies.....	10
HBV Vaccination.....	12
Laundry.....	13
Biohazardous Waste.....	13
Housekeeping.....	13
Biohazardous Labeling.....	14
Employee Training.....	15
Handling Emergencies.....	13
Recordkeeping.....	16
Post Exposure Evaluation and Follow-Up.....	17
Exposure Incident Reporting.....	18
Post Exposure Prophylaxis.....	19
Appendices: (available by contacting Health Services or Human Resources)	
Supervisor's Accident Report	
Exposure Evaluation Form	
Accident Report and Investigation Form	
Informed Refusal of Post-Exposure Medical Eval.	
Healthcare Professional's Opinion for Post-Exposure Eval.	
Hepatitis B Immunization/Declination Form	
Report of Emergency Not Wearing Appropriate PPE	
Sharps Injury Log	
Biohazard Label	
References.....	21

## **INTRODUCTION**

The College of the Holy Cross is committed to providing a safe environment for its employees, students and contract personnel. As part of that commitment, The College of the Holy Cross recognizes that specialized safety needs and hazards are associated with occupational exposure to blood or potentially infectious materials.

The Occupational Safety and Health Administration (OSHA) Blood-borne Pathogens Standard (Section 1910.1030 of CFR 29) is the law which sets forth the specific requirements OSHA believes will prevent the transmission of blood-borne diseases to healthcare employees. This law is applicable to any employer who has one or more employees with occupational exposure to blood or other body fluids. OSHA defines "employee" broadly to include part-time, temporary and probationary workers as well as practitioners themselves if they practice as a part of a professional organization.

To comply with these OSHA regulations, The College of the Holy Cross has developed the Exposure Control Plan for the safe handling of blood-borne pathogens and other potentially infectious materials. The standard requires that all employees at risk for exposure to blood-borne pathogens receive training prior to being placed at risk, anytime a new risk for exposure is introduced, and annually. This training must include symptoms and epidemiology of HIV and HBV.

## DEFINITIONS

Antiseptic	A chemical used externally, on the skin, or in and around wounds to control surface microbial contamination that could cause infection
Blood	Human blood, human blood components, and products made from human blood
Blood-borne Pathogens	Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to hepatitis B virus (HBV) and human immunodeficiency virus (HIV)
Clinical Laboratory	A workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials
Contaminated	The presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface
Contaminated Laundry	laundry which has been soiled with blood or other potentially infectious materials or may contain sharps
Contaminated Sharps	Any contaminated object that can penetrate the skin including, but not limited to needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires
Decontamination	The use of physical or chemical means to remove, inactivate or destroy blood-borne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling use or disposal
Engineering Controls	Controls (e.g. sharps disposal containers, self-sheathing needles) that isolate or remove the blood-borne pathogens hazard from the workplace
Engineered Sharps Injury Protections	A physical attribute built into a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, that effectively reduces the risk of an exposure incident by a mechanism such as a barrier creation, blunting, encapsulation, withdrawal, retraction, destruction, or other effective mechanisms
Exposure Incident	Specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties
Handwashing Facilities	Facility providing an adequate supply of running potable water, soap and single use towels or hot air drying machines
HBV	Hepatitis B virus
Hepatitis B Virus	HBV is principally spread via infected blood or blood products, but other body fluids, such as saliva and semen, are also infectious. Symptoms of HBV infection - anorexia - nausea - vomiting- malaise - arthralgia - abdominal pain have a relatively slow onset
Hepatitis C Virus	HCV is transmitted mainly by blood and blood products but sexual transmission occurs also. Saliva contains HCV and may be a major

	source of undetermined HCV infection
HIV	Human immunodeficiency virus
Human Immunodeficiency Virus	HIV is the causative agent of acquired immune deficiency syndrome (AIDS). It is transmitted via infected blood or blood products, sexual contact, or contaminated sharp injury. HIV is a disease of the immune system, characterized by the progressive loss of CD4-positive lymphocytes, with fatal consequences for the infected host. The first signs and symptoms of HIV disease may be diarrhea, night sweats, loss of more than ten percent of body weight, fever of 100 °F for more than three months, fatigue, lymphadenopathy and oral candidiasis
Licensed Healthcare Professional	A person whose legally permitted scope of practice allows him or her to independently perform the activities required by OSHA guidelines in accordance with hepatitis B vaccination and post-exposure evaluation
Needle-less System	The term 'needle-less system' means a device that does not use needles for: <ul style="list-style-type: none"> <li>A) the withdrawal of body fluids after initial venous or arterial access is established;</li> <li>B) the administration of medication or fluids; and</li> <li>C) any other procedure involving the potential for an exposure incident</li> </ul>
Occupational Exposure	Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties
Potentially Infectious Materials	The following human body fluids; blood, blood components, blood products, semen, vaginal secretions, cerebrospinal fluid, synovial pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; <p>any unfixated tissue or organ (other than intact skin) from a human (living or dead);</p> <p>cell, tissue, or organ cultures containing potentially infectious materials; and HIV, HBV or other potentially infectious material containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV, HBV, or other potentially infectious material</p>
Parenteral	Piercing mucous membranes or the skin barrier through such events as needlestick, human bites, cuts, and abrasions
Percutaneous	Effected or performed through the skin
Personal Protective Equipment	Specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g.: uniforms, pants, shirts, or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.
Production Facility	Facility engaged in industrial-scale, large volume or high-concentration production of HIV or HBV

Regulated Waste	Liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials
Source Individual	Any individual, living or dead, whose blood or potentially infectious materials may be a source of occupational exposure to the employee. Examples: clinic patients; human remains; and individuals who donate or sell blood or blood components
Sterilization	Use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores
Universal Precautions	An approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other blood-borne pathogens.
Work Practice Controls	Controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g. prohibiting recapping of needles by a two-handed technique)
Viral Hepatitis	Various infectious and non-infectious agents can cause inflammation of the liver, commonly called "hepatitis." Drugs such as oxacillin, methotrexate, and acetaminophen, other non-infectious agents such as alcohol and carbon tetrachloride, as well as bacteria, fungi, and viruses can all affect the liver. However, the term "viral hepatitis" is reserved for hepatic dysfunction caused by the hepatitis A virus (HAV), hepatitis B virus (HBV), hepatitis C virus (HCV), or hepatitis D virus (HDV).

# BLOODBORNE PATHOGEN EXPOSURE CONTROL PLAN

The College of the Holy Cross Risk Manager, William J. Conley, Jr., Director of Administrative Services, has the overall responsibility for the Exposure Control Program, in compliance with OSHA standard CFR 1910.1030.

The College of the Holy Cross will comply with the Blood-borne Pathogen Standard by:

- 1) Determining exposure risks of personnel;
- 2) Implementing an exposure control program;
- 3) Providing engineering controls and personal protective equipment as needed;
- 4) Providing Hepatitis B vaccinations and post-exposure follow-up at no cost to personnel; and
- 5) Providing training to all personnel

Adherence to all policies is the responsibility of each individual and the Risk Manager. The Risk Manager shall monitor adherence by visual observation, exposure incident frequency and reporting of non-adherence.

## EXPOSURE DETERMINATION

OSHA defines occupational exposure as any reasonably anticipated skin, eye, mucous membrane or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties. Those employees who are determined to have occupational exposure to blood or other potentially infectious materials (OPIM) must comply with the procedures and work practices outlined in this Exposure Control Plan.

Departments with employees that have a moderate or high risk of occupational exposure to blood-borne pathogens and responsible supervisors:

Health Services: Director of Health Services, (508) 793-2276

Sports Medicine: Head Athletic Trainer, (508) 793-2627

Public Safety: Director of Public Safety, (508) 793-2224

Physical Plant/Building Services: Asst. Director, (508) 793-2454

### A. High Risk Job Classification

Employees having the following job classifications have occupational exposure to blood or other potentially infectious materials:

- Physicians in Health Services, Athletic Dept.
- Nurses in Health Services
- Trainers, Assistant Trainers, Equipment managers in Athletic Dept.
- Public Safety Officers, Emergency Medical Technicians, First Responders

### B. Moderate Risk Job Classification

The following are job classifications in which some employees may have occupational exposure to blood or other potentially infectious materials:

- Custodians
- Housekeepers

### C. Task and Procedure Risks

The following is a list of tasks or procedures in which occupational exposure may occur:

- Cleaning up blood or bodily fluid spills
- Rendering first aid to bleeding victims
- Performing CPR to victims
- Handling contaminated, soiled/exposed materials
- Disposal of/cleaning of contaminated sharps

# Methods of Compliance

## UNIVERSAL PRECAUTIONS

- In this practice we will use the Universal Precautions approach to infection control.

All human blood and other potentially infectious body fluids will be treated as though known to be infectious for HBV , HCV, HIV and other blood-borne pathogens. Other blood-borne pathogens include but are not limited to Hepatitis C, syphilis, malaria, babesiosis, brucellosis, and Creutzfeldt-Jakob Disease (CJD).

Other potentially infectious body fluids include, all body fluids containing visible blood, saliva in dental procedures, semen, vaginal secretions, synovial fluid, cerebrospinal fluid, pleural fluid, peritoneal and pericardial fluid and amniotic fluid. It does not include feces, nasal secretions, sputum, sweat, tears, urine, saliva (in most settings), breast milk and vomitus unless blood is present. It does cover unfixed tissues and cultures.

## 1. ENGINEERING AND WORK PRACTICE CONTROLS

This practice has instituted the following engineering controls and work practices to help minimize employee exposure to bloodborne pathogens. It is imperative that all employees utilize these techniques and observe these rules.

a) **Hand Washing:** Hand washing facilities have been provided for the employee's use in all exposure-prone areas of this facility. Where no sink is available, an antimicrobial product (gel or foam) will be used as an intermediate measure, to be followed by washing with soap and water as soon as feasible. Hands are to be thoroughly washed with water and an antimicrobial solution under the following circumstances:

- Before gloving
- After removing gloves
- After each patient procedure
- Before leaving the work area
- Before eating
- After hands have touched a possibly contaminated surface

Effective hand washing means scrubbing with soap for at least 15 seconds on the palms, between the fingers, the back of the hands, and the wrist. Scrubbing is followed by a thorough rinse with water and complete drying. If a paper towel is used for drying, it should be used to turn off the water.

b) **Hand-to-Hand Transfer:** Hand-to-hand transfer of contaminated sharps such as scalpels, hand pieces, picks, probes, and burrs is forbidden where other methods are available. Transfer contaminated items by placing the sharp(s) on a flat surface, then using a "pick-up" to retrieve the item when feasible.

c) **Safer Sharps:** Health Services will use engineered sharps injury protection devices wherever feasible. When recapping of contaminated needles is medically necessary, a one-handed technique or a mechanical device will be used. Tube/needle holders used for collecting blood specimens will be discarded into the sharps container with the needle attached.

All sharps injuries involving contaminated sharps will be documented on a Confidential Sharps Injury Log that will be maintained for five years from the date of exposure. The injury will also be documented in the same manner as all exposures.

## Safer Medical Devices Evaluation Procedure

This practice will use applicable safer medical devices where possible to reduce or eliminate the potential for sharps injuries that could lead to the transmission of blood-borne pathogens.

1. Each year we will review our reported sharps injuries and/or device failures for the past year to determine if additional training is required or if certain devices should be replaced.
2. If training is needed, we will contact the manufacturer for appropriate training resources. We will provide and document this additional training.
3. If certain devices seem problematic we will initiate an effort to find safer replacements by contacting: our supplier, the device manufacturer, and other sources for suggestions.
4. Even if we have experienced no sharps injuries or device failures, each year we will evaluate new safer devices available.
5. When improved devices are available, we will determine if they would be useful in our setting and will request samples.
6. We will evaluate these devices and document our findings.

### **d) Post Exposure Policy:**

Employees who experience an exposure should first clean the area thoroughly. If the exposure is to the face, splash with copious amounts of clean water. If the exposure is elsewhere, clean it with soap and water. The exposed employee should then report the exposure to the Safety Coordinator. All exposed employees will be offered Post-Exposure Evaluation and Follow-up at no charge to the employee. Exposed employees may choose to have their blood collected and preserved for 90 days, during which time they may choose to have the testing done. Exposed employees may decline this medical follow-up upon signing a declination form.

Housekeeping staff members who experience an exposure outside of regular business hours should report the exposure and then immediately go to Fallon Occupational Health/Urgent Care, 630 Plantation St., Worcester, MA, 508-852-0600.

### **e) Disposable Sharps:**

Used needles should not be bent, broken, re-sheathed or otherwise manipulated by hand. They should be discarded immediately after use into a puncture resistant sharps disposal container or destruction device that is labeled and color-coded which should be located as close to the user area as practical (in all clinical areas including testing, treatment, and patient rooms.)

Any contaminated object that can puncture the skin is considered a contaminated sharp. This includes, but is not limited to, needles, scalpels, broken glass and slides and any other objects capable of penetrating the skin. These must be placed immediately into a sharps container. Containers must never be overfilled.

Recapping and removing of contaminated needles are strictly forbidden in this facility except under the rare circumstances where no alternative is feasible. In these situations, recapping will only be performed by the use of a mechanical device or by a one-handed scoop method.

### **f) Contaminated Reusable Sharps:**

Once reusable sharp instruments are contaminated with blood or body fluids, employees will handle them as follows:

1. Place them in puncture resistant containers that are leak-proof on the sides and bottoms, closeable, and labeled with the biohazard symbol or color-coded (red).
2. The containers used for transporting contaminated sharps will be closed during transport.
3. In the preparation for cleaning and sterilization, retrieve these instruments from the container by mechanical means.
4. Anytime these instruments need to be scrubbed prior to sterilization the employee will wear the appropriate personal protective equipment.
5. Instruments will be processed for patient use according to manufacturer guidelines, based on the intended use of the instrument.

## 2. GENERAL POLICIES

- a. Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are strictly prohibited in treatment areas, sterilization areas, and laboratory areas or waste storage areas
- b. Food, drink and cosmetics shall NOT be kept in refrigerators, freezers, shelves, and cabinets or on countertops or benches where blood or potentially infectious materials are stored or handle.
- c. Mouth pipeting or suctioning of blood or other potentially infectious materials is strictly prohibited.
- d. Failure of an employee to comply with the safety policies implemented by this practice may be reflected on the employee's annual evaluation and salary adjustment, and may result in termination of employment if the failure to comply is serious enough.

## 3. BLOOD STORAGE

Blood and other potentially infectious materials are to be placed in a biohazard container that prevents leakage during collection, handling, processing, storage, transportation, or shipping. If the primary container could be punctured, then it must be placed in another container that is puncture-resistant and labeled with the biohazard symbol.

## 4. EQUIPMENT TO BE SERVICED OR REPAIRED

Contaminated instruments or equipment must be decontaminated prior to servicing or shipment. If these are unable to decontaminate, proper labeling and notification is required.

## 5. PROCEDURE REVIEW

Procedures involving exposure will be reviewed at least annually to determine if any new engineering controls are available to reduce the risk of contamination, or if a modified technique would minimize or eliminate exposure. The written plan will be reviewed annually and revised as needed.

## 6. PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment (PPE) will be used to prevent blood or other potentially infectious material from passing through or contacting the employees' work clothes, street clothes, or undergarments, or to the skin, eye, mouth, or other mucous membranes. This office maintains an inventory of personal protective equipment, including protection for the eyes, hands, face, head, extremities, air passages, and clothing. Although this equipment is meant to reduce the risks of exposure, it may not eliminate it. All PPE must be removed prior to leaving the work area. It must be replaced when damaged or contaminated. Contaminated PPE must not leave the work area and must be discarded properly.

- a. **Gloves:** Disposable latex or vinyl gloves are available in this facility.
  1. These gloves are not puncture-resistant, nor are they 100% protective against infectious agents.
  2. Gloves must be replaced as soon as practical when contaminated (at a minimum, after each patient).
  3. Torn or punctured gloves must be replaced as soon as feasible.
  4. Disposable gloves may not be washed for reuse.
  5. Gloves will be removed prior to leaving the treatment area.
  6. Gloves will be removed prior to writing in the patient's chart or prior to answering the telephone.
  7. Grossly contaminated gloves will be discarded into the biohazardous waste container located in each treatment room.
  8. Heavy-duty utility gloves used for clean-up may be decontaminated for reuse if glove integrity is not compromised.
  9. Employees must wash their hands with soap and running water immediately after removing their gloves.
  10. Hand sanitizer may be used as an intermediate measure but not in place of hand washing.

### **Types of gloves and their uses:**

1. Use sterile gloves for procedures involving contact with normally sterile areas of the body.
2. Use examination gloves for procedures involving contact with mucous membranes, unless otherwise indicated, and for other patient care or diagnostic procedures that do not require the use of sterile gloves.
3. Change gloves between patients.
4. Do not wash or disinfect surgical or examination gloves for reuse.
5. Use general purpose or utility gloves for housekeeping chores involving potential blood contact and for instrument cleaning and decontamination procedures. Utility gloves may be decontaminated and reused, but should be discarded if they are peeling, cracked, or discolored, or if they have punctures, tears or other evidence of deterioration.

### **Gloves must be used:**

1. If the skin of the healthcare worker is cut, abraded or chapped
2. During exam of the mouth, oropharynx, GI tract, GU tract or any other mucous membrane.
3. When examining abraded or non-intact skin or patients with active bleeding
4. during invasive procedures
5. during housekeeping and cleaning involving body fluids
6. during decontaminating procedures
7. When performing phlebotomy, processing and/or testing blood or other potentially infectious specimens
8. during all surgical or dental procedures

### **b. Eyewear:**

Protective eyewear is used in this facility when indicated; goggles, face shields, or glasses with solid side shields. If a procedure presents a danger of splashing or if a manufacturer recommends that goggles be worn when using their product, the employee must wear goggles.

1. Protective eyewear, other than prescription glasses, shall be removed prior to leaving the treatment area
2. Goggles and face shields will be decontaminated and cleaned after each use.

### **c. Masks:**

Masks are used in this facility when indicated.

1. Contaminated masks will be replaced immediately or as soon as feasible.
2. Contaminated masks will be placed in the biohazardous waste container located in each treatment room.

### **d. Gowns, Aprons, Lab Coats**

Gowns are worn to protect street wear and the arm and neck areas from contamination. They may be worn until or unless they become soiled, damaged, or wet, at which time they must be immediately removed and replaced.

Protective laboratory coats, gowns and aprons will be removed and replaced as soon as they become visibly damaged or contaminated. Disposable gowns should be properly disposed of by placing them into the appropriate container based on whether or not they are contaminated. If coats, gowns, and aprons are reusable, they will be placed into the laundry container. The employer will clean them either in-house or by a commercial laundry.

### **e. Resuscitation Equipment**

Pocket masks, resuscitation bags, and/or other ventilation devices are kept in each treatment room.

### **f. Selection of Appropriate PPE**

Determination of Appropriate PPE is based on the anticipated exposure to blood or other potentially infectious body fluids during any given procedure. The type of exposure, amount of blood or fluids, and

likelihood of splattering are taken into account when making these determinations. The following is a general outline which employees in this facility are to follow regarding PPE appropriate to the given procedure. On rare occasions, there is the possibility of greater than normal exposure to blood and body fluids for a particular treatment procedure. On these occasions, the employee is to upgrade the PPE to an appropriate level of protection.

1. Procedures with minimal potential for exposure: vascular access, pelvic examinations, suture removal, and bandage change. Appropriate PPE: latex or vinyl gloves
2. Procedures with moderate potential for exposure: arterial punctures, lancing cysts or chalazions. Appropriate PPE: gloves, long sleeve lab coat
3. Procedure with relatively high potential for exposure: surgical procedures, dental procedures, aerosolized treatments, induced sputum collection. Appropriate PPE: gloves, long sleeve lab coat, face protection (mask and eyewear or full length face shield)
4. Procedures requiring full sterile surgical attire: surgery.

#### **f. Latex Allergy**

This practice will reduce the potential for latex allergy by using low powder or powder-free gloves and by keeping the facility very clean. Alternatives, including vinyl gloves, will be offered to employees who are allergic to latex.

- Symptoms: Irritation, dermatitis, asthma, shock
- Diagnosis: History and physical, scratch testing and/or blood tests
- Treatment: Avoidance of latex-containing items

## **HEPATITIS B VACCINATION POLICY**

This practice will comply with OSHA's guidelines for Hepatitis B immunization as delineated in the CPL 2-2.69 Enforcement Procedures for Exposure to Blood-borne Pathogens released on November 27, 2001, and the CDC's recommendations of ACIP and HICPAC,"Vol.46, No RR-18, 6/30/2001 MMWR

We will offer the Hepatitis B immunization to each occupationally exposed employee within 10 working days of his/her initial assignment. This will be done at no cost, including no "out-of-pocket" expenses to the employee. It will be done during the normally scheduled work time.

Exemptions: The practice is not required to provide the immunization under these conditions:

- a. The employee has been previously immunized
- b. An antibody test reveals a protective titer
- c. The vaccine is medically contraindicated
- d. The employee chooses to decline the immunization(must sign approved declination form)

Postvaccination Testing: The current hepatitis B vaccines have a response rate of 95%. Thus routine post-vaccination testing to document anti-HBs seroconversion is unnecessary except in health-care workers, patients on chronic hemodialysis, and other individuals (such as spouses or sexual partners of carriers and infants of carrier mothers) who are at risk for recurrent exposure to hepatitis B. Testing should be performed one to two months after completion of the primary vaccination series. Non responders should complete a second three dose vaccine series. The second three-dose course is successful in about 50-70 percent of patients. Retesting of anti-HBs should be repeated after the second vaccination series. Non-responders to the second course of vaccine should be tested for HBsAg.

This does not apply to anyone who started and/or finished the vaccination series prior to 2/15/00. There is no recommendation for periodic titers or boosters. Documentation of the Hepatitis immunization will be kept in a confidential manner for 30 years beyond termination of the employee's job.

## LAUNDRY

Contaminated laundry (gowns, lab coats, towels, etc.) will be placed in leak-proof containers and will not be sorted or rinsed prior to placement into the container. Contaminated laundry bags will be labeled with the biohazard symbol or color-coded red. If the container becomes contaminated on the outside, it will be placed in another labeled, leak-proof container.

Employees who have contact with contaminated laundry will wear protective gloves. In the event the laundry contains blood soaked items, the handler will wear a fluid resistant gown.

No employee may wear or transport out of this facility any contaminated laundry. (ITEMS MUST NOT BE TAKEN HOME FOR CLEANING).

Health Services sends all laundry to Dooley's Cleaners, Auburn MA. The CDC recommends a temperature of at least 71°C (160°F) for 25 minutes. Lower temperatures are effective only if bleach (50-150ppm) is used. Commercial dry cleaning renders soiled fabrics free of pathogen transmission.

## BIOHAZARDOUS WASTE

The College of the Holy Cross observes all OSHA regulations concerning the handling of contaminated waste. Contaminated wastes include the following: blood or other potentially infectious body fluids; saliva in dental procedures; items which would release these fluids if compressed; items which are coated with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; pathological and microbiological waste containing blood or other body fluids including saliva.

Protocol for waste handling in this facility is as follows:

- All contaminated sharps are to be placed in the sharps container at the location where they are used. These containers will be tightly closed and removed when contents reach the full line.
- All wastes will be separated into contaminated and non-contaminated types.
- Non-contaminated waste is placed in the regular trash can. If in doubt, place the item in the red container.
- Contaminated wastes, including grossly contaminated gloves, are to be placed in the bio-hazardous containers located in each treatment area. These containers must be closeable, leak-proof and properly labeled.
- Contaminated wastes and filled sharps containers may not be placed in with the regular trash for removal from this facility.
- Health Services is responsible for the packaging of hazardous waste for disposal. Contaminated waste will be packaged in double sealed bags and boxed according to the instructions provided by the contracted generator (Stericycle).

## HOUSEKEEPING

1. Equipment: Each worker will use an EPA FDA-approved disinfectant to clean and decontaminate all equipment and environmental work surfaces after he/she has used them and made contact with blood or other potentially infectious materials.
2. Work Surfaces: Workers using an appropriate disinfectant (e.g. Lemon Quat®, SaniCloth®, 10% bleach/water solution) shall decontaminate work surfaces immediately or as soon as feasible when surfaces are overly contaminated or after any spill of blood or potentially infectious materials; and at the end of the work shift if the surface may have become contaminated since the last cleaning. Work surfaces include countertops, exam tables, etc.
3. Protective Coverings: Protective coverings such as plastic wrap, aluminum foil or absorbent paper used to cover equipment or environmental surfaces shall be removed

and replaced as soon as feasible when they become obviously contaminated and at the end of the work shift.

4. **Trash Cans:** All bins, pails, cans, and similar receptacles which have a reasonable likelihood for becoming contaminated with blood or other potentially infectious materials will be inspected, cleaned, and decontaminated daily or as soon as feasible upon visual contamination.

General housekeeping, such as dusting, sweeping and floor mopping, vacuuming carpet, cleaning bathrooms, and emptying trash is done on a as-needed basis.

## **BIOHAZARDOUS LABELING**

Biohazardous warnings, either the internationally recognized biohazard symbol or bright orange-red coloring, will be used to alert persons of potential contamination of:

1. Containers of contaminated waste
2. Containers used to store, transport, or ship blood or other potentially infectious materials

Exceptions:

- a. Containers of blood, blood components or blood products that are labeled as to their contents and have been released for transfusion or other clinical use.
- b. Individual containers of blood or other potentially infectious materials that are placed in a labeled container during storage, transportation or shipment
3. Refrigerators, freezers and other containers used to store, transport, or ship blood and/or potentially infectious materials.
4. Sharps containers

## **HANDLING EMERGENCIES INVOLVING OCCUPATIONAL EXPOSURE**

### **A. Accidents/Spills**

1. **Blood and other potentially infectious materials**
  - a. Isolate area where spill occurred-place hazard sign in front of spill or have another employee stay at spill site to warn others.
  - b. Put on gloves, mask, eyewear, and fluid-proof gown.
  - c. Apply the absorbent material in the spill kit to absorb the fluid.
  - d. Place the absorbed material and all disposable clean-up items in the biohazard bag.
  - e. Clean area where spill occurred with soap and water followed by a disinfectant.
  - f. Place the biohazard bag in the central biohazard container (HS).
  - g. Remove and dispose of disposable PPE and clean and disinfect non-disposable items.
  - h. Wash hands with soap and running water.
2. **Alternate method:**
  - a. Retrieve spill kit.
  - b. Put on heavy-duty utility gloves.
  - c. Saturate the area with diluted bleach and leave for 10 minutes.
  - d. Remove any broken glass using a pickup and discard in sharps container.
  - e. Wipe up excess materials with disposable towels.
  - f. Discard wiped up material in regulated trash.
  - g. Disinfect the area.
  - h. Disinfect and remove gloves.
  - i. Wash hands.
3. Sharps and contaminated broken glass or other sharp materials must be placed in the biohazard container. These items are never to be picked up by the hand, even when wearing gloves. Always use forceps or scoop and brush.

### **B. Emergencies Involving Patient Care**

1. CPR- Always use the provided CPR device
2. Unexpected bleeding; airway obstruction; etc.
  - a. The patient must be cared for immediately in these events.
  - b. If the treatment results in blood or other body fluids contaminating any area of employee's skin or eyes or mucous membranes, these are to be washed with soap and running water as soon as possible. Mucous membranes contact with a patient's body fluids is an exposure incident, should be reported as soon as possible and the employee may request a post-exposure evaluation. Following a report of an exposure incident, the employer will immediately make available, at no cost to the employee, a confidential medical evaluation and follow-up.
  - c. If blood or other body fluids soak through clothing, then this clothing must be removed and the skin underneath cleaned with soap and running water.
  - d. The contaminated item of clothing is to be placed in the linen container
  - e. If at any time during this emergency it becomes possible to interrupt treatment and put on proper PPE (with no increased risk to the patient), then the employee is to do so.

### **C. Reporting of Accidents and Emergencies**

1. Employees must report any and all such emergency occurrences to either the employer or the Safety Coordinator as soon as feasible.
2. All incidents that involve having to treat a patient without appropriate PPE must be documented and placed in this manual.

### **D. Employer's Responsibility**

When an incident such as the one listed above occurs where an employee must treat a patient without appropriate PPE, the circumstances shall be investigated and documented in order to determine whether changes can be instituted to prevent such occurrences in the future.

## **EMPLOYEE TRAINING**

All employees and other persons in the workplace who may have occupational exposure to bloodborne pathogens must participate in a training program during working hours.

Training shall be provided as follows:

- A. At the time of initial assignment to tasks with risk for occupational exposure
- B. At least annually thereafter
- C. When changes, such as modification of tasks or procedures or institution of new tasks or procedures, affect the employee's occupational exposure. Additional training may be limited to the new exposures.
- D. The training program shall contain the following elements:
  1. An accessible copy of the regulatory text of the Exposure Control Plan and an explanation of it's contents;
  2. A general explanation of the epidemiology and symptoms of bloodborne disease;
  3. An explanation of the modes of transmission of bloodborne pathogens;
  4. An explanation of the exposure control plan and the means by which the employee can obtain a copy of the written plan;
  5. Individual departments, under the supervision of the Risk Manager, retain training records. Assistance with determining appropriate training materials may be obtained from Personnel who will consult the Health Service and Public Safety Departments as necessary.
  6. An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and potentially infectious materials;

7. An explanation of the use and limitations of exposure including appropriate engineering controls, work practices, and personal protective equipment;
8. Information on the types, proper uses, location, removal, decontamination and disposal of personal protective equipment;
9. The explanation of the basis for selection of personal protective equipment;
10. Information on the hepatitis B vaccine, including information on it's efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination series will be offered free of charge to employees;
11. Information on the appropriate actions to take and persons to contact in an emergency involving blood and other potentially infectious materials;
12. An explanation of the procedure to follow if an exposed incident or spill occurs, including the method of reporting the incident and the medical follow-up that will be made available;
13. Information on the post exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident;
14. An explanation of the signs and labels and/or color coding required;
15. An opportunity for interactive questions and answers with the person conducting the training session.

Records shall be maintained on the training sessions and shall include the following information:

- A. The dates of the training sessions
- B. The contents or a summary of the training sessions
- C. The names and qualifications of persons conducting the training
- D. The names and job titles of all persons attending the training sessions

Training records shall be maintained for three years from the date on which the training occurred. These are not confidential

## **RECORDKEEPING**

This office will establish and maintain an accurate record for each employee with occupational exposure. This record shall include:

- A. The name and date of birth of the employee
- B. A copy of the employee's Hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination
- C. A copy of the information provided to the healthcare professional regarding the employee's duties as they relate to the exposure incident and documentation of the routes of exposure and circumstances under which exposure occurred
- D. The employer's copy of the healthcare professional's written opinion following an evaluation after an exposure incident

Employees' medical records are:

- a. Confidential;
- b. Not disclosed or reported without the employee's expressed written consent to any person within or outside the workplace except as required by this section or as may be required by law; and
- c. Maintained for at least the duration of employment plus 30 years in accordance with state guidelines.
- d. The employee may request a copy of his/her medical records by contacting the Health Services department.

## POST EXPOSURE EVALUATION AND FOLLOW-UP

An exposure incident is defined as a specific occupational incident involving eye, mouth, other mucous membranes, non-intact skin, or parenteral contact with blood or other potentially infectious materials, including saliva. The most common example is a needlestick.

Holy Cross shall follow this protocol for exposure to bloodborne pathogen incidents:

- A. Post exposure medical care is coordinated through Health Services with support from Human Resources as necessary.
- B. Employee will immediately inform their Departmental Supervisor, who will then inform Public Safety and/or Health Services as indicated.
- C. Following a report of an exposure incident, the employer will immediately make available, at no cost to the employee, a confidential medical evaluation and follow-up that includes:
  1. Documentation of the route(s) of exposure, and the circumstances under which the exposure incident occurred. Documentation of specific instrument and task if a contaminated sharp was involved.
  2. Identification and documentation of the source individual, unless the employer can establish that identification is not feasible or prohibited by state or local law.
    - a. The source of exposure must be tested as soon as feasible and after consent is obtained in order to determine HBV, HCV and HIV infectivity. If consent is not obtained, the employer must establish that legally required consent cannot be obtained. When law does not require the source's consent, the source's blood, if available, must be tested and the results documented. If the source individual's blood status is already known, testing need not be repeated.
    - b. Results of the source's testing must be made available to the exposed employee, and the employee must be informed of applicable laws and regulations concerning disclosure of the identity and infectious state of the source.
  3. Following an exposure incident, immediate collection and testing of the exposed employee's blood will be done, after consent is obtained. The employee may refuse this service, or may have the blood collected and preserved for ninety days, during which time the employee may choose whether or not to have the testing done.
  4. Copies of all documentation, a copy of the Blood-borne Pathogen Standard, and the results of HIV, HBV and HCV testing (source and employee) will be provided directly to the healthcare professional chosen to provide post-exposure care. Employee and patient confidentiality will be maintained at all times.
  5. Post-exposure prophylaxis as recommended by the U.S. Center for Disease Control and Prevention. Immediate referrals may be made to the UMass Memorial HealthCare Inc. Infectious Disease Clinic @ 508-334-6053 or 508-856-6027 or to Fallon Occupational Medicine, Plantation St. @ 508-856-6027.
  6. Counseling as determined by the healthcare provider.
  7. Evaluation if reported illnesses.

Follow-up procedures include the following record keeping and briefing measures:

1. The employer shall insure that the healthcare professional evaluating an employee after an exposure incident is provided the following:
  - a. A description of the employee's duties as they relate to the incident
  - b. Documentation of the routes of exposure and circumstances under which the exposure occurred
  - c. Results of the source patient's blood test, if available
  - d. All medical records relevant to the appropriate treatment of the employee including vaccination status.

2. The employee will be provided with a copy of the evaluating healthcare professional's written opinion within fifteen (15) days of the completion of the evaluation:
3. Post exposure evaluation and follow-up will be the responsibility of the referring medical facility and/or Primary Care Physician in accordance with 29 CFR 1910.30 The referring healthcare professional's written opinion shall be limited to facts that:
  - a. The employee has been informed of the results of the evaluation
  - b. The employee has been told about any medical condition resulting from the exposure to blood or potentially infectious materials that require further evaluation or treatment.
  - c. All other findings or diagnoses must **REMAIN CONFIDENTIAL** and shall not be included in the written report.

## EXPOSURE INCIDENT REPORTING

An exposure incident is defined as a specific occupational incident involving eye, mouth, other mucous membranes, non-intact skin, or parenteral contact with blood or other potentially infectious materials, including saliva. Exposure incident reporting and investigation will follow the same policies and procedures as for injury reporting. These procedures are:

Reporting exposure incident:

- A. Seek medical assistance: Call X2222
- B. Report incident immediately to Supervisor
- C. Public Safety will:
  1. Notify Health Services
  2. Arrange transport of victim as necessary

Reports required:

- A. College of the Holy Cross Accident/Injury Report
- B. Department Supervisor's Investigation Report (S.I.R.) forwarded to Human Resources within 48 hours
- C. Human Resources: OSHA 300 log reporting as required, Sharps Injury Log as indicated
- D. Healthcare professional's written opinion for post-exposure evaluation as indicated
- E. Informed Refusal of Post Exposure Medical Evaluation as indicated
- F. Report of Emergency Involving Patient Treatment Where Employee was Unable to use Appropriate PPE form as indicated
- G. Exposure Evaluation Form

The Appendices include:

- A. College of the Holy Cross Accident/Injury Report
- B. Department Supervisor's Investigation Report (S.A.R.)
- C. Sharps Injury Log
- D. Healthcare Professional's Written Opinion for Post Exposure Evaluation Form as indicated
- E. Informed Refusal of Post Exposure Medical Evaluation as indicated
- F. Report of Emergency Involving Patient Treatment Where Employee was Unable to Use Appropriate PPE Form as indicated
- G. Exposure Evaluation Form

The Risk Manager, in reviewing trends in workplace injuries and accidents, will modify this plan as indicated.

## Injury Report Flow Chart



## POST EXPOSURE PROPHYLAXIS

OSHA requires all employees to offer post-exposure evaluation and follow-up, including counseling and post-exposure prophylaxis, to any employee who sustains an exposure to blood or other infectious materials. It begins with informed consent for testing, followed by testing both the exposed employee and the source patient for HBV, HCV, and HIV. Information about the exposure incident, results of both sets of results, and available clinical information about the source patient all contribute to the decisions concerning further actions.

HBV:

- 1) If the source patient is negative for HbsAg and HbcAg, and the exposed employee has been immunized against HBV, no further HBV prophylaxis is needed.
- 2) If the exposed employee has not been immunized against HBV, the exposed employee should immediately begin receiving the series, regardless of the HBV status of the source patient.
- 3) If the exposed employee has been vaccinated but did not respond, (i.e. protective antibody titer soon after the third shot was < 10 mlu/ml), the exposed person should begin the series again and receive at least one dose of HB Immune Globulin (HBIG). If the exposed employee did not respond after two complete series, the expose employee

may receive one injection of HBIG at the time of incident and another injection one month later.

- 4) If the exposed employee had started but not completed the vaccination series, the series should be continued on schedule with HBIG added.
- 5) If the source patient is positive for HBV and the exposed employee has been immunized against HBV, the exposed employee's antibody should be established. If it is low, the employee should start receiving the series again and receive HBIG.
- 6) If the exposed employee is protected, (HBV-antibody titer >10 mlu/ml), no further prophylaxis is needed.

#### HCV:

Immune Globulin (including Interferon) and antiviral agents (such as ribavirin) are not recommended for PEP for HCV. They do not seem to be effective in preventing the infection and are not approved by the FDA for that use.

If the source patient is positive for HCV, the exposed employee should be retested at 4-6 months post exposure, for anti-HCV and for ALT activity. Anti-HCV positive results should be confirmed by enzyme immunoassay. Because acute HCV virus frequently resolves, Immune Globulin and antiviral agents are usually administered only after chronic infection is established. There are some indications that these drugs may be beneficial when started early in the acute phase.

#### HIV:

If the source patient has no symptoms or clinical indications of AIDS and is HIV negative, no further actions are necessary.

If the source individual is HIV positive or is highly likely to have HIV, post-exposure prophylaxis should be initiated within 24-36 hours.

If the source individual is HIV positive, the exposed person should be retested for HIV at 72 hours, 6 weeks, 12 weeks, and six months. If the source individual is positive for both HIV and HCV, the exposed person should be retested for HIV at 12 months.

1. The employee will be offered post exposure HIV evaluation and prophylaxis in accordance with the current recommendations from the U.S. Center for Disease Control and Prevention. Immediate referrals may be made to the UMass Memorial HealthCare Inc. Infectious Disease Clinic @ 508-334-6053 or 508-856-6027 or to Fallon Occupational Medicine, Plantation St. @ 508-856-6027.

For Post-exposure Prophylaxis Guidance:

National Clinician's Post-exposure Prophylaxis Hotline:

PEPLine 888-448-4911

Needlestick: <http://www.needlestick.mednet.ucla.edu>

Hepatitis hotline 888-443-7232

## **HEPATITIS B VACCINE DECLINATION**

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring Hepatitis B virus (HBV) infection.

I have been given the opportunity to be vaccinated with Hepatitis B vaccine, at no charge to myself. However, I decline Hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring Hepatitis B, a serious disease.

If, in the future, I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with Hepatitis B vaccine, I can receive the vaccination series at no charge to me.

\_\_\_\_\_  
(employee name)

\_\_\_\_\_  
(date)

\_\_\_\_\_  
(member representative)

\_\_\_\_\_  
(date)

### **REFERENCES**

Association for Practitioners in Infection Control, *HIV Information for Health Care Workers*

Centers for Disease Control Morbidity and Mortality Weekly Report: *“Public Health Service Guidelines for the Management of Health-Care Worker Exposures to HIV and Recommendations for Postexposure Prophylaxis,”* May 15, 1998; Vol. 47, No. RR-07.001

*Immunization of Health-Care Workers: A recommendation of the ACIP and the HICPAC,* December 26, 1997

National Research Council, Bio-safety in the Laboratory, *Prudent Practices for Handling and Disposing Materials.* National Academy Press, 1989

*Six Steps to Safety,* OSHA Manual 2005 for Medical and Dental Practices, American Ass. Of Physician Offices and Laboratories  
November 5, 1999

OSHA Regulations (Standards- 29CFR), *Bloodborne Pathogens*.-1910.1030, February 13,1996

OSHA statement of Secretary of Labor, Alexis Heman on signing of *Needlestick Safety Prevention Act* November 6, 2000

*Six Steps to Safety*, OSHA Manual 2005 for Medical and Dental Practices, American Ass. Of Physician Offices and Laboratories

OSHA 2009 Compliance and Training for medical and dental offices, [www.drsmgmt.com](http://www.drsmgmt.com)

U.S. Department of Health and Human Services, CDC/NIH, *Bio-safety in Microbiological and Biomedical Laboratories*. U.S. Government Printing Office, Washington D.C. May 1988

U.S. Department of Labor, *Enforcement Procedures of the Occupational Exposure to Bloodborne Pathogens Standard*, 29 CFR 1910.1030. U.S. Government Printing Office, Washington D.C., March 6,1992

U.S. Department of Labor, Federal Register 29 CFR part 1910 *Occupational Exposure to Bloodborne Pathogens; Needlesticks and Other Sharps Injuries;Final Rule*. U.S. Government Printing Office, Washington D.C., January 18, 2001