HAMPSHIRE COLLEGE

BLOODBORNE PATHOGEN EXPOSURE CONTROL PLAN

July 2006

In compliance with the OSHA BLOODBORNE PATHOGEN STANDARD 29 CFR 1910.1030

Environmental Health & Safety 559-6620

Table of Contents

		Page
I.	OSHA REQUIREMENTS	1
II.	EXPOSURE DETERMINATION	1
III.	 EXPOSURE CONTROL A. Engineering and Work Practice Controls Personal Hygiene Handling Sharps Material Handling Procedures B. Personal Protective Equipment C. Housekeeping D. Waste Disposal E. Contaminated Laundry 	2 2 3 3 4 5 5 6
IV.	NEEDLESTICK SAFETY AND PREVENTION	6
V.	HEPATITIS B VACCINATION	6
VI.	EMERGENCY PROCEDURES AND REPORTING EXPOSURE	7
VII.	POST-EXPOSURE EVALUATION AND FOLLOW-UP	8
VIII.	RECORDKEEPING	8
IX.	COMMUNICATION OF HAZARDS A. Signs and Labels B. Information and Training	8 8 9

APPENDICES

- A. PROCEDURE FOR CLEANING BODILY FLUIDS CONTAMINATION
- B. HEPATITIS B VACCINE [RECOMBINANT] EMPLOYEE INFORMATION SHEET
- C. DECLINATION OF HEPATITIS B VACCINATION
- D. TRAINING RECORD
- E. INCIDENT REPORT FORM

I. OSHA REQUIREMENTS

The Occupational Safety and Health Administration (OSHA) Bloodborne Pathogens Exposure Control Standard (29 CFR 1910.1030) requires that employers who have employees who are occupationally exposed to human blood or other potentially infectious materials develop a program to eliminate or minimize such exposures. This Bloodborne Pathogen Exposure Control Plan describes that program at Hampshire College. This Plan is reviewed annually or more frequently as needed. The Environmental Health & Safety Office coordinates the review.

The program includes all employees who have occupational exposure to bloodborne pathogens. OSHA defines occupational exposure as "reasonably anticipated skin, eye, mucous membrane, or parenteral (under the skin) contact with blood or other potentially infectious materials that may result from the performance of an employee's duties". The OSHA Standard does not cover "good samaritan" assistance provided in an emergency, however, should an employee be exposed while providing such assistance in the workplace, the College offers post-exposure evaluation and follow-up as described in Section VI.

This Plan is maintained as on on-line document on the College intranet system. Paper copies are available upon request to the Environmental Health & Safety Office.

II. EXPOSURE DETERMINATION

Employees in the following job classifications have occupational exposure to bloodborne pathogens. The Environmental Health & Safety Office maintains a list of employees with occupational exposure.

List of all job classifications in which all employees have occupational exposure:

Public Safety Officers EMT Staff Custodians Children Center Teachers EHS Staff

List of job classifications in which some of the employees have occupational exposure:

Outdoor Programs and Recreational Athletics (OPRA) employees Housing Operations Staff Cole Science faculty and staff

List of task and procedures performed in which occupational exposure occurs and that are performed by the employee classifications listed above in 1 and 2:

First responder and first aid Equipment decontamination Packaging regulated waste Cleaning of bathrooms Cleaning of bodily fluids and wastes Teaching or research using human blood or tissue

Hampshire College Health Services health care providers are employees of the University of Massachusetts and are covered under that Control Plan.

III. EXPOSURE CONTROL

Universal precautions must be observed to prevent contact with blood and other potentially infectious materials. Under the concept of universal precautions, all blood and certain human body fluids are always handled as if they are infectious. Blood is the single most important source of bloodborne pathogens in occupational settings. As defined by OSHA, other "potentially infectious materials" include tissue, semen, vaginal secretions, and the following fluids(surrounding the): cerebral (brain), spinal (spine), synovial (joints), pleural (lungs), peritoneal (abdomen), pericardial (heart), and amniotic (fetus). Feces, nasal secretions, sputum, saliva, sweat, tears, urine, and vomit are not included unless they are visibly contaminated with blood.

Under circumstances in which it is difficult to distinguish between infectious and noninfectious body fluids, all body fluids shall be considered "potentially infectious materials". If any of the exposure control methods are not feasible for a certain operation, permission to use alternate methods must be obtained from the department head.

Departments are responsible for providing all materials and equipment necessary to comply with the requirements of this Plan.

A. Engineering and Work Practice Controls

The following engineering and work practice controls must be used in all applicable operations with potential exposure.

Personal Hygiene

- Hand washing facilities or antiseptic towelettes (for use in remote locations) are available to all exposed employees. Exposed skin that comes into contact with any body fluid must be washed immediately. Employees must wash their hands immediately or as soon as feasible after removing gloves. If antiseptic towelettes are used, the hands must be washed with soap and water as soon as feasible. Antiseptic towelettes are kept in all first aid kits that are used in remote areas.
- 2. Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a reasonable

likelihood of exposure. Each department is responsible for designating such areas.

3. Food and drink must not be kept in areas (e.g., refrigerators, freezers, shelves, cabinets, or countertops) where blood or other potentially infectious materials are or may have been present.

Handling Sharps

- 1. Contaminated needles or other contaminated sharps must not be bent, broken, or sheared. Recapping of needles is not allowed.
- All contaminated sharps must be immediately placed in a disposable, closeable, puncture resistant container, leak proof on the sides and bottom, and bearing a biohazard label. Official needle boxes must be used for all needles.
- Containers for contaminated sharps must be easily accessible and located as close as feasible to the area where sharps are being used or anticipated to be found
- 4. Public Safety has sharps containers for use if sharps are found on campus. Staff other than Public Safety, should call Public Safety if a needle is found. Public Safety will respond and collect the needle for disposal.
- 5. Containers must be kept upright and must not be overfilled.
- 6. When full, containers of disposable sharps must be closed and taken to biomedical waste collection area in the building behind Cole Science Center by Public Safety, the Cole Science Laboratory Manager, or Environmental Health & Safety.

Material Handling Procedures

- 1. All procedures involving blood or other potentially infectious materials must be performed so as to minimize splashing, spraying, spattering, or the generation of droplets or aerosols of these materials.
- 2. Mouth pipeting or suctioning of blood or other potentially infectious materials, or any other material is prohibited.
- 3. Secondary containers must be used as necessary if outside contamination of the primary container occurs or if the specimen could puncture the primary container.
- 4. Equipment that may be contaminated with blood or other potentially infectious materials must be examined and decontaminated as necessary prior to servicing or shipping. If portions cannot be decontaminated, a label must be affixed indicating those areas, and the appropriate service representative or

manufacturer informed.

- 5. All refrigerators or other storage areas where blood or other potentially infectious materials are kept must be marked with a biohazard label.
- 6. Blood spill kits are available for emergency response from the Environmental Health & Safety Office. Response procedures are outlined in Appendix A.

B. Personal Protective Equipment

Hampshire College provides appropriate personal protective equipment (PPE) to all employees. The employee must use the equipment provided. Departments are responsible for providing the necessary PPE. If under unusual circumstances, it is the employee's professional judgment that use of the equipment would prevent the delivery of health care or public safety services or pose an increased risk to the worker or coworker, the employee should petition the Director of Environmental Health & Safety.

If the employee's judgment is made in an emergency situation, the circumstances will be investigated by the Director of Environmental Health & Safety, and documented to determine whether changes can be instituted to prevent future occurrences.

- 1. All PPE must be removed before leaving the work area. PPE, which is penetrated by blood or other potentially infectious material, must be removed immediately.
- 2. Gloves must be worn by all employees when it is reasonably anticipated that there may be hand contact with blood, other potentially infectious materials, mucous membranes, and non-intact skin; and when handling or touching contaminated items or surfaces. This requirement includes all vascular access procedures, and all handling of specimens and specimen containers.
- 3. Disposable (single use) gloves must be replaced as soon as practical when contaminated and immediately when they are torn, punctured, or no longer act as a barrier. Disposable gloves cannot be reused and must be discarded in the appropriate location after each use.
- 4. Gloves must be changed between patient contact.
- 5. Utility gloves may be decontaminated and reused, by washing with a disinfectant cleaner, rinsing and air-drying. They must be discarded when any deterioration is noticed (e.g., punctures, tears, cracks, peeling, discoloration).
- 6. Masks, splash goggles or face shields must be worn whenever splashes, spray, splatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose or mouth contamination is reasonably anticipated.
- 7. Gowns, aprons, or other protective clothing must be worn in all situations where exposure is anticipated.

- 8. Lab coats worn as PPE must be disposable.
- 9. Mouthpieces, resuscitation bags (ambu), or pocket masks must be worn when performing artificial resuscitation.
- 10. Any employee who is allergic to latex will be provided an alternative glove.

Public Safety has gloves, masks, eye protection, a gown, and resuscitation devices in each vehicle and in the main office. Officers also carry gloves on their person. OPRA keeps with first aid supplies. The Children's Center keeps gloves with first aid supplies and in each classroom. Physical Plant personnel keep gloves with their cleaning or material handling supplies. Cole Science Center has supplies gloves and eye protection to every lab.

C. Housekeeping

The work site must be maintained in a clean and sanitary condition. A bleach solution (1/4 cup per 1 gallon), or hospital disinfectant, is used for cleaning all surfaces visibly contaminated with blood. A general-purpose disinfectant is used for other surfaces. Gloves are worn during all cleaning procedures.

- 1. All equipment and surfaces are decontaminated immediately with a disinfectant after overt contamination with blood or other potentially infectious materials; and at the end of the work shift if it may have been contaminated since the last cleaning.
- 2. Protective coverings, such as foil or imperviously backed absorbent paper, are removed and replaced as soon as feasible when they become contaminated.
- All containers intended for reuse, including contaminated waste containers, which have a reasonable likelihood of becoming contaminated are inspected and decontaminated at least monthly and as soon as feasible after known contamination.
- 4. Broken glassware, which may be contaminated, must not be picked up directly with the hands; forceps, dustpan and brush/spatula or other equipment are used. A brush should not be used to avoid splashing or generation of aerosols.
- 5. Only trained personnel are authorized to clean-up potentially infectious materials.
- 6. Procedures for cleaning contaminated areas are included in Appendix A.

D. Waste Disposal

- 1. All contaminated disposable sharps, including broken glass, are immediately placed in a disposable, closeable, puncture resistant container, leak proof on the sides and bottom, and bearing the international biohazard label.
- 2. All other contaminated waste are segregated from uncontaminated trash and

placed in red bags or other appropriate containers. Any wastes containing free liquids are placed in a liquid tight container marked with the international biohazard symbol. Any items that could puncture a bag should be put in a puncture resistant container and then a red bag.

- 3. Secondary containers must be used if outside contamination of the primary container occurs, or if the waste could puncture the primary container.
- 4. All red bags are tied prior to removal from the area of generation to the biomedical waste storage area.
- 5. In Cole Science Center contaminated material may also be autoclaved. Once autoclaved, waste is labeled with the statement, "Noninfectious Biomedical Waste, Treated by Hampshire College" prior to disposal as solid waste.

Biomedical waste is stored in the waste storage building behind Cole Science Center. Waste can be brought to the storage area by: Public Safety, the Cole Science Center Laboratory Manager, custodial supervisors, or the Environmental Health & Safety Staff. Waste transport by a vendor to a licensed incinerator is coordinated by the Environmental Health & Safety Office.

E. Contaminated Laundry

- 1. Gloves are worn when handling all dirty laundry. A gown is also used when the laundry is grossly soiled with blood or other potentially infectious materials.
- 2. Soiled laundry is handled as little as possible and in a manner that prevents the laundry from coming into contact with the body or clothing.
- 3. Soiled laundry is placed directly into designated laundry bags. Grossly soiled laundry is placed in the regular laundry bag and that bag placed in a red biohazard bag. If the laundry is wet it is placed in a double bag or other container to prevent soak-though or leakage of the fluids.

IV. NEEDLESTICK SAFETY AND PREVENTION

In addition to the specific engineering and work practice controls described above for handling needles, OSHA requires evaluation and implementation of commercially available and effective safer medical devices. Since, Health Services health care providers are University of Massachusetts employees, there is no or minimal use of needles or other medical devices by Hampshire College employees. Should a situation arise where needles or other medical devices will be used with potentially infectious materials, alternatives will be review on a case-by-case basis.

V. HEPATITIS B VACCINATION

Hepatitis B vaccination is available to all employees who have occupational exposure at no cost to the employee. The vaccine is offered to employees with occupational exposure after initial training and within 10 days of assignment to a

position with occupational exposure. Vaccination records are maintained at Health Services as part of the employee's medical record.

Vaccines are administered by Health Services, or, when Health Services is closed, other arrangements are made with a local care provider. Appointments with Health Services can be made directly by the employee. When Health Services is closed, the employee should contact Environmental Health & Safety.

Occupationally exposed employees are given a fact sheet (Appendix B) describing the vaccination series and are asked to elect to have the series or sign the mandatory declination (Appendix C). Declination statements are returned to the Environmental Health & Safety Office. The Environmental Health & Safety Office records that a declination statement has been received and forwards the signed statement to Health Services to be maintained as part of the employee's medical record Should an employee who continues to work in a position with occupational exposure and who has signed a declination wish to have the vaccination at a later time, it will be provided upon request to Health Services or Environmental Health & Safety.

VI. EMERGENCY PROCEDURES AND REPORTING EXPOSURE

Upon skin contact, the area should be washed immediately with soap and water. If soap and water is not available, an antiseptic towelette should be used, and soap and water used as soon as possible.

Upon eye or other mucous membrane contact, the area should be flushed immediately with water or saline solution, whichever is available.

Employees must <u>immediately</u> report all exposure incidents to their immediate supervisor, who will notify the department head. An exposure incident is "a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral (under the skin) contact with blood or other potentially infectious material that results from the performance of an employee's duties".

The department head is responsible for initial investigation of the incident, and notification of Human Resources and the Environmental Health & Safety Office within 24 hours. The department head may designate these duties to a supervisor who has attended the Bloodborne Pathogen Training.

An Exposure Incident Report (see Appendix E) should be attached to the employee accident report form submitted to Human Resources. A copy should be sent to the Environmental Health & Safety Office. The investigation must document:

- 1. The route and circumstances of exposure.
- 2. Identification and documentation of the source individual, unless that identification is not feasible.
- 3. Procedural changes identified which would prevent reoccurrence of any conditions that increased the risk of exposure.

VII. POST-EXPOSURE EVALUATION AND FOLLOW-UP

Following a report of an exposure incident to the department head, the employee will be offered a confidential evaluation and follow-up. The employee and the source individual, if identified, will be immediately referred to the Cooley Dickinson Hospital by the department head, Environmental Health & Safety, or Human Resources. If the exposed employee or source individual is a student, s/he will be referred to the Health Services. The employee will be advised that post-exposure evaluation is recommended within 24 hours of exposure.

The College has confirmed that Cooley Dickinson Hospital has a copy of the OSHA Standard that describes the requirements for exposure evaluation and follow-up, and will provide, at the time of the incident, the results of the investigation of exposure. Cooley Dickinson Hospital will follow the procedures established by OSHA and the Center for Disease Control for post-exposure medical evaluation and provide Human Resources a written opinion within 15 days of completion of the evaluation as prescribed by the OSHA Standard.

VIII. RECORDKEEPING

Medical records required by the OSHA Standard are kept at Health Services. Those records include for all employees with occupational exposure:

- * the employee name and social security number
- * a copy of the employee's vaccination status or declination
- * a copy of any results of examination and medical testing
- * a copy of any health professional written opinions
- * a copy of any information provided to the health care professional.

All medical records are kept confidential and are not be disclosed without the employee's express written consent to any person within or outside the workplace except as required by the OSHA Standard or as may be required by law.

Human Resources maintain the sharps injury log required by OSHA in 29 CFR 1910 as part of the OSHA 300 log.

IX. COMMUNICATION OF HAZARDS

A. Signs and Labels

- 1. Warning labels are firmly affixed to all equipment and containers used to store, or ship blood or other potentially infectious materials. The labels include the international biohazard symbol.
- 2. Waste may either by labeled as described above or placed in a red bag or container.
- 3. 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 are exempt from additional labeling requirements.

- 4. Individual containers of blood or other potentially infectious materials that are placed in a labeled container during transport, shipment or disposal are exempted from the additional labeling requirements.
- 5. If equipment that may be contaminated with blood or other potentially infectious materials cannot be decontaminated, a label is affixed indicating those areas, and the appropriate service representative or manufacturer informed.

B. Information and Training

All employees with occupational exposure are trained during working hours at no cost to the employee. All new or transferred employees with occupational exposure are trained at the time of initial assignment to tasks where occupational exposure may take place. Appendix D includes an attendance form.

Training is updated at least annually and whenever a modification of tasks or procedures affects occupational exposure. There is opportunity for the employee to ask questions during the training session.

Online training customized to include Hampshire College policies may be used. When on-line training is used, the Environmental Health & Safety Office will follow-up with the employee to answer any questions they may have.

Employee training is coordinated by the Environmental Health & Safety Office or Public Safety (Public Safety employees and EMTs). All supervisors with occupationally exposed staff must also attend training. Departments are responsible for scheduling new employee training with the Environmental Health & Safety Office. The Environmental Health & Safety Office maintains training records for at least three years.

PROCEDURE FOR CLEANING BODILY FLUIDS CONTAMINATION

1. Obtain a biomedical spill clean-up kit, utility gloves, and disinfectant (bleach and water (1/4 cup/gallon) or hospital disinfectant.

2. Put on protective gloves and safety glasses or goggles.

3. Absorb liquid with absorbent powder or other absorbent material.

4. When liquid is absorbed, use scoops to collect as much of the absorbed material as possible and put material and scoops in a red biohazard bag.

5. Flood area with disinfectant. For small area, germicidal cloth supplied with clean-up kit may be used and let stand for 10 minutes, or the time recommended by the manufacturer.

6. Wipe up remaining contamination with disposable wipes and put in the red biohazard bag.

7. Remove and dispose of gloves in the red biohazard bag.

8. Wash hands thoroughly with soap and water. If water is not immediately available use an antiseptic towelette and wash with soap and water as soon as possible.

9. Notify, as appropriate, Public Safety, a Custodial supervisor, the Cole Science Center Laboratory Manager or the Environmental Health & Safety Office for transport of redbagged biohazard waste to the storage area. Use gloves when handling the bag.

<u>HEPATITIS B VACCINE (RECOMBINANT)</u> <u>EMPLOYEE INFORMATION SHEET</u>

Hepatitis B Recombinant vaccine is a non-infectious viral vaccine derived from Hepatitis B surface antigen (HBsAg) produced in yeast cells. A portion of the Hepatitis B virus gene, which codes for HBsAg is cloned into yeast, and the vaccine for Hepatitis B is produce from cultures of this recombinant yeast strain. The HBsAg proteins are released from the yeast cells by cell disruption and purified by a series of physical and chemical methods. The vaccine may contain up to 4% yeast protein. It has been shown to be comparable to the plasma-derived vaccine. Each lot is tested for safety and sterility. This recombinant vaccine is free of association with human blood or blood products.

Employees occupationally exposed to blood or other potentially infectious materials are encouraged to have the vaccine. Hepatitis B may occur when the virus, transmitted by infected body fluids, is absorbed by mucous membranes or through breaks in the skin. The virus is predominantly in the blood of patients with active Hepatitis B or patients who are chronic carriers. It is also found in tears, saliva, breast milk, urine, semen and vaginal secretions. It can survive for days on environmental surfaces. Transmission is also associated with close interpersonal contact with an infected individual and crowded living conditions.

The recombinant vaccine induces protective levels of antibodies in greater than 90% of healthy adults who receive the recommended 3 doses. Two additional follow-up booster doses may needed for some individuals. Hepatitis B Immune Globulin given simultaneously with recombinant Hepatitis B vaccine does not interfere with the induction of Hepatitis B antibodies by the vaccine.

The vaccine is not recommended for those with hypersensitivity to yeast, aluminum hydroxide, and thimerosal (a mercury derivative).

It is not known whether recombinant Hepatitis B vaccine can cause fetal harm when administered to a pregnant woman or can affect reproductive capacity. Also, it is not known whether it is excreted in human milk. Pregnant women should consult with their obstetrician prior to vaccination.

The vaccine is generally well tolerated. No serious adverse effects or serious hypersensitivity reactions have been reported. No adverse experiences related to yeast antibodies have been reported. However, as with any vaccine, further broad use of the vaccine could reveal adverse reactions not noted in clinical trials. Injection site and generalized complaints have been reported. These include local pain, redness, and swelling at the injection site. Generalized complaints many include fatigue/weakness, headache, low fever, malaise, nausea, diarrhea, and cold-like symptoms.

The vaccine is given intra-muscularly in 3 doses. The first 2 doses are given one month apart, and the third dose 6 months after the first. Persons with immuno-deficiency or those receiving immuno-suppressive therapy (radiation therapy, chemotherapy, or steroids), should report this information before receiving the vaccine. Also, those with any active infection or severe cardiopulmonary condition should report this before receiving the vaccine. **Recipients of the vaccine should still continue to use precautions in handling blood, blood products, and other body fluids.** They should also continue to report needle sticks and direct contact with those products to their Supervisor.

The vaccine will be administered by Health Services, or, when the Health Center is closed, by a health care provider chosen by Human Resources. If you choose not to receive the vaccine at this time, you must sign a declination statement. Please decide if you would like to receive the vaccine by _______. If you would like to receive the vaccine by _______. If you would like to receive the vaccine, call Health Services at ext. 5458, or when Health Services is closed, call Environmental Health & Safety at ext. 6620. If you choose not to receive the vaccine, sign the provided declination statement and return it to the Environmental Health & Safety Office.

DECLINATION OF HEPATITIS B VACCINATION

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, during the course of my employment at Hampshire College, to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination at no charge.

Employee Name (print)

Employee Signature

Department

Date

Return to: Environmental Health & Safety Office Mail Stop: Physical Plant

TRAINING RECORD

In compliance with the OSHA Bloodborne Pathogen Standard, 29 CFR 1910.1030, I have attended training on the Hampshire College Bloodborne Pathogen Exposure Control Plan. That training included a discussion of the following:

- the types and characteristics of bloodborne pathogens
- the symptoms of the diseases
- the routes of occupational exposure
- recognizing jobs with potential exposure
- work practices and engineering controls
- personal protective equipment
- signs and labels
- information on the Hepatitis B vaccination
- emergency procedures following exposure
- post-exposure evaluation and follow-up

I understand that I can look at or request a copy of the Hampshire College Bloodborne Pathogen Exposure Control Plan and the OSHA Standard by asking the Environmental Health & Safety Office.

Employee Name (print)

Employee Signature

Trainer Signature

Date

Department

Date

HEPTATITIS B VACCINATION STATUS

_____ I have already received the hepatitis B vaccination.

_____ I would like the vaccination and will call Health Services to schedule an appointment.

_____I do not want the vaccination at this time and have signed a Declination Statement.

_____I have not decided.

EXPOSURE INCIDENT REPORT			
Date: Time: Location: Exposed Employee: Witnesses:	What was the employee doing at the time of the exposure? First Aid: Cleaning: Waste Handling: Laboratory Procedure: Medical procedure: Other [describe]:		
What was the route of exposure? Non-Intact Skin: Mucous membrane:	What protective equipment was the employee wearing at the time of the exposure? Exam/Surgical Gloves: Utility Gloves: Goggles: Safety Glasses: Mask/Eye Shield Comb.: Mask: Lab Coat/Gown: Other [describe]: Did the employee receive immediate first aid or medical care? If yes, where: Did the employee receive a post exposure medical evaluation?		
Describe the specific circumstances of the exposure incident. What was the employee doing? Describe any procedures intended to prevent exposure which were not being followed. What steps could be taken to prevent a similar exposure from occuring in the future?			
Signature of Investigator:	Date:		
Attach to Accident Report and send to Human Resources with a copy to the Environmental Health and Safety Office			