MARSHALL UNIVERSITY SCHOOL OF MEDICINE
BYRD BIOTECHNOLOGY SCIENCE CENTER (BBSC)
EXPOSURE CONTROL PLAN

Occupational Exposure to Bloodborne Pathogens:
A Control Plan (9/26/2008)
Under Revision

To All Healthcare Workers and Staff:

In December of 1991 the Occupational Safety and Health Administration published the Occupational Exposure to Bloodborne Pathogens Final Rule. This Rule provides guidelines for healthcare facilities to reduce significant risk of infection for employees exposed to infected body fluids or tissue from infected persons. The targeted diseases specifically include human immunodeficiency virus (HIV), hepatitis B virus (HBV) and hepatitis C (HCV) virus. Other bloodborne diseases include syphilis, malaria, babesiosis, brucellosis, leptospirosis, arboviral infections, relapsing fever, Creutzfelt-Jakob, human T-lymphotrope virus Type 1 and viral hemorrhagic fever.

The Rule addresses definitions, work practices, procedures, equipment and policies related to staff training, information dissemination, preventative and post-incident medical interventions. The objective *is* to minimize the exposure risk or, if necessary, to effectively treat employees involved in an incident where there *is* a possibility of exposure.

The new Exposure Control Rule differs from traditional Infection control rules. Exposure control puts emphasis on an **employer's responsibility** for protecting healthcare workers and employees from dangerous bloodborne infection. Infection Control directives are aimed at the prevention and management of general infection in and among patients. The new Exposure Control Rule focuses on identifying healthcare workers at various degrees of risk to ensure that they receive appropriate training, protective equipment and vaccination, and that existing universal precautions are employed to reduce the risk of infection by bloodborne pathogens.

The Exposure Control Plan addresses the following:

A. Determining the risk classification into which each job in the facility best fits and the identification of which specific tasks associated with a job create the risk of exposure to bloodborne pathogens.

B. Scheduling the Implementation of:

1. Methods of compliance with the Rule covering:

- Hand washing facilities
- Waste management including storage and disposal of sharps and potentially infected materials or equipment
- Handling of fluid and tissue specimens
- Availability and suitability of protective equipment
- Housekeeping related to equipment, work areas and surfaces, protective coverings, waste and waste disposal containers and laundry

2. Hepatitis B vaccination (or waivers) and post-exposure follow-up.
3. Communication of hazards to employees through training, signs and labels.

C. Procedures for evaluating circumstances surrounding exposure incidents.

D. Special rules for HIV/HBV research or production facilities.

I. Covered Diseases

Among the more common bloodborne diseases that you could be exposed to on the job are hepatitis B, hepatitis C and hepatitis delta, as well as syphilis, malaria and human immunodeficiency virus. The two most significant are hepatitis B (HBV) and human immunodeficiency virus (HIV).

HBV: hepatitis means "inflammation of the liver." HBV is the major infectious bloodborne hazard faced by a healthcare worker on the job. It affects approximately 8,700 healthcare workers a year resulting in more than 400 hospitalizations and 200 deaths. If you become infected with HBV, you may suffer from flu-like symptoms so severe that you may require hospitalization or you may feel no symptoms at all. Your blood, saliva and other body fluids may be infectious and you might spread the virus to sexual partners, family members and even an unborn infant. There is a vaccine available to reduce or eliminate risk of infection.

HIV: HIV attacks the body's immune system and causes the disease known as Acquired Immune Deficiency Syndrome (AIDS). Currently there is no vaccine to prevent this infection. A person infected with HIV may carry the virus for several years without developing symptoms but if untreated will eventually develop AIDS. An infected person may suffer from flu-like symptoms, fever, diarrhea and fatigue. Eventually AIDS-related illnesses including neurological problems, cancer and other opportunistic infections occur as the body's ability to fight off illness decreases. Although HIV can be transmitted through contact with blood and some body fluids, it is not transmitted by touching, eating or working around those who carry the disease.

HCV: from Wikipedia. **Hepatitis C** is a blood-borne, infectious, viral disease that is caused by HCV. The infection can cause liver inflammation (hepatitis) that is often asymptomatic, but ensuing chronic hepatitis can result later in cirrhosis (fibrotic scarring of the liver) and liver cancer.

HCV is spread by blood-to-blood contact with an infected person's blood. The symptoms can be medically managed, and a proportion of patients can be cleared of the virus by a long course of anti-viral medicines. Although early

medical intervention is helpful, people with HCV infection often experience mild symptoms, and consequently do not seek treatment.[1] An estimated 150-200 million people worldwide are infected with hepatitis C. In the U.S., those with a history of intravenous drug use, nasally inhaled drug usage, tattoos, or who have been exposed to blood via unsafe sex or social practices are increased risk for this disease. Hepatitis C is the leading cause of liver transplant in the United States.

The pathogens which can transmit these diseases may be present in the blood and other body fluids such as saliva, semen and vaginal secretions. Pathogens can also be present in cerebrospinal, synovial, pleural, peritoneal, pericardial, amniotic and any other fluids contaminated with blood. Unfixed tissue or organs from living or dead humans, cell, tissue or organ cultures and other biological matter from laboratory experiments have also proven to be sources of pathogens.

These pathogens can enter and infect the human body through openings in the skin including cuts, nicks, abrasions, dermatitis or acne. Infection can also result from punctures or cuts caused by sharp contaminated objects such as needles, scalpels, broken glass, exposed ends of dental wires or any other object that can puncture or cut skin. Infection can also gain access to the body through mucous membranes of the eyes, nose and mouth when these areas are touched with contaminated hands or implements. The HBV virus is particularly dangerous since it can survive on dried surfaces at room temperature for at least one week. This means that a surface can be dangerously contaminated without any visible signs if the work areas are not thoroughly cleaned immediately after being contaminated with infectious material.

II. Risk Reduction

The following pages contain a summary of the OSHA Rule designed to protect healthcare workers from exposure to these serious diseases while performing lifesaving services for patients. The Rule provides guidelines but will not offer protection unless the staff and administration work faithfully to adhere to and improve on the policies, engineering and work procedures used when there is an exposure risk. Know the policies and be alert to protect yourself and your co-workers.

Department	Occupational Environmental Health Division
Subject	BBSC BBP Exposure Control Plan
Prepared By	Chris A. McGuffin MS, Program Coordinator/Data Manager
Original Effective Date	Original Effective Date: May 5, 1992
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Distribution:	All SOM and COS Departments in the BBSC
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PURPOSE: To comply with final regulations for blood-borne pathogens.

PROCEDURES:

A. Scope: This Exposure Control Plan covers all employees who as the result of performing their job duties could be reasonably anticipated to face contact with blood and other potentially infectious materials.

B. Definitions

1. Blood: human blood, blood components and products made from human blood.
2. Bloodborne Pathogens: microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to HBV, HIV.
3. Clinical Laboratory: work place where diagnostics and other screening procedures are performed on blood and other potentially infectious materials.
4. Contaminated: presence or reasonably anticipated presence of blood or other potentially infectious materials.
5. Contaminated Laundry: laundry soiled with blood or potentially infectious materials on an item or surface.
6. Contaminated sharps: contaminated object that can penetrate the skin, but not limited to, needles, scalpels, broken glass, capillary tubes, and exposed ends of dental wires.
7. Decontamination: use of physical or chemical means to remove, inactivate or destroy bloodborne pathogens on a surface or item to point that it is no longer capable of transmitting infectious particles and surface or item is safe for handling, use and disposal.
8. Engineering Controls: controls (sharps containers, self sheathing needles) that isolate or remove bloodborne pathogens hazard from the workplace.

9. Exposure Incident: specific eye, mouth or other mucous membrane, non-intact skin, or parenteral contact with blood or potentially infectious materials that results from the performance of an employee's duties.
10. Occupational Exposure: 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.
11. Universal Precautions: all human blood and certain human body fluids are treated as if known to be infectious for HBV, HIV or other bloodborne pathogens.

    Human body fluids for which Universal Precautions apply:
    a. semen
    b. vaginal secretions
    c. cerebrospinal fluid
    d. synovial fluid
    e. pleural fluid
    f. pericardial fluid
    g. amniotic fluid
    h. peritoneal fluid
    i. saliva in dental procedures
    j. 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.
    k. any unfixed tissue or organ (other than intact skin) from human (alive or dead)
    l. HIV containing cell or tissue cultures, organ cultures and HIV or HBV containing culture medium or other solutions, and blood, organs or other tissues from experimental animals containing HBV or HIV

12. Parenteral: piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts and abrasions.
13. Personal Protective Equipment: specialized equipment or clothing worn by the employee for protection against the hazard. General work clothes not intended to function as protection against a hazard are not considered PPE.
14. 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; items that are caked with dried blood or other potentially infected materials and are capable of releasing these materials during handling; contaminated sharps, pathological or microbiological wastes containing blood or potentially infectious materials.
15. Source Individual: individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to an employee.

16. Work Practice Controls: controls that reduce the likelihood of exposure by altering the manner in which a task is performed. (For example-prohibiting recapping of needles with a two handed method).
17. Exposure-prone procedures are defined by CDC as those invasive procedures where the patient is likely to be exposed to the health care provider's blood in the event of an injury. Characteristics of these procedures include digital palpation of a needle tip in a body provider's fingers and a needle or other sharp instrument or object in a poorly visualized or highly confined anatomic site.

C. Record Keeping

1. Medical Record: Occupational Environmental Health Division (OEH) will keep medical records for each employee with occupational exposure for the duration of employment plus thirty (30) years. Records must include name; social security number; hepatitis B vaccination status, including dates; results of any examinations; medical testing and follow-up procedures; a copy of information provided to the health care professional; and a copy of the health care professional's written opinion.

Medical Records will be available to the subject employee, anyone with written consent of the employee, OSHA and NIOSH.

2. Training Records: OEH Division will maintain training records for three (3) years and must include dates, contents of training program or a summary, trainer's name and qualifications, names and job titles of all persons attending training sessions.

D. MU Institutional Biosafety Committee will act as Review Panel.

Any employee who has knowledge of their positive HIV and HBV status will refrain from performing exposure-prone procedures unless they have been advised by the MU Institutional Biosafety Committee differently.

E. Engineering and work Practice Controls

1. Work practices shall be used to eliminate or minimize employee exposure.
2. Whenever such changes do not effectively reduce/minimize exposure, personal protective equipment shall also be used.
3. Engineering controls shall be examined, maintained, or replaced annually to ensure its effectiveness.

4. Handwashing facilities are readily accessible to employees.

    a. When hand washing facilities are not feasible, BBSC investigators and course directors will provide **either** appropriate antiseptic hand cleaner in conjunction with clean cloth or paper towel or antiseptic

towel. When an antiseptic towelette is used, hands shall be washed with soap and running water as soon as feasible.

b. The OEH Division, through direct observation, will ensure that employees wash their hands immediately or as soon as feasible following contact of such body areas with blood or other potentially infectious materials.

5. Contaminated needles and other contaminated sharps shall not be bent, sheared, broken, recapped or removed except when such recapping or needle removal must be accomplished through the use of a mechanical device or one handed method. Contaminated needles or sharps shall not be recapped or removed unless the employer can demonstrate that no alternative is feasible or that such action is required by a specific medical procedure.

a. Immediately or as soon as possible after use, contaminated reusable sharps shall be placed in appropriate containers until properly processed.

These containers shall be:

(1) puncture resistant

(2) labeled or color coded, according to standard

(3) leak proof on sides and bottom

(4) shall not be stored or processed in manner that requires an employee to reach by hand into the containers where the sharps have been placed.

(5) closable

(6) containers shall be easily accessible to personnel and located as close as if feasible to the immediate area where the sharps are used or can be reasonably anticipated to be found (example: laundry).

(7) Reusable containers shall not be opened, emptied or cleaned manually or in any manner that would expose the employee to risk of percutaneous injury.

(8) Place container in a secondary container if leakage is possible.

(9) Close container prior to removal to prevent spillage or protrusion of contents during handling, storage, transport or slipping.

(10) If outside contamination of regulated waste container occurs, it shall be placed in a secondary container.

(11) Disposal of all regulated waste shall be in accordance with appropriate state and local regulations.

(12) A representative from the MU Institutional Biosafety Committee will inspect sharps containers once per quarter. Employees utilizing sharps containers shall visibly inspect them prior to each use to determine if they need to be replaced.

(13) A brush and a dustpan or tongs must be used to clean up broken glass.
(14) Replace sharps containers routinely and do not allow them to be overfilled.
(15) Maintain sharps containers in an upright position when transporting.

F. Methods of Compliance

1. Universal precautions/body substance barrier precautions.
2. Eating, drinking, smoking, applying cosmetics or lip balm and handling contact lenses are prohibited in work areas where there *is* a likelihood of occupational exposure.
3. Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets or on counter tops or bench tops where blood or other potentially infectious materials are present.
4. All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances.
5. Mouth pipetting/suctioning of blood and other potentially infectious materials is prohibited.
6. Specimens of blood or other potentially infectious materials shall be placed in a container which prevents leakage during collection, handling, processing, storage, transport or shipping.

    a. Containers for storage, shipping or transport shall be labeled and color coded according to biohazard symbol.
    b. If the outside of container becomes contaminated, the primary container must be placed in secondary container that prevents leakage.
7. If the container is unable to be decontaminated, information is conveyed to all affected employees, the servicing representative, and/or manufacturer, prior to handling, servicing or shipping so that appropriate precautions can be taken for potentially infectious materials.
8. Personal Protective Equipment

    a. BBSC investigators, lab heads and course directors shall furnish at no cost to their employees appropriate protective equipment, not limited to gloves, gowns, laboratory coats, face shields, masks and eye protection, and mouth pieces, resuscitation bags, pocket masks, or other ventilation devices.
    b. Personal protective equipment is deemed appropriate only if it does not permit blood or other potentially infectious materials to pass through or reach the employee's work clothes, street clothes, undergarments, skin, eyes, mouth or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

c. **Marshall University** ensures that the employee uses appropriate personal protective equipment (PPE) unless Marshall University can show that the employee temporarily and briefly declined to use the PPE. This would occur when, under rare and extraordinary circumstances, it was the employee's judgment that its use would have prevented the delivery of health care or public safety services or would have posed an increased risk to the safety of the employee or the coworker.

(1) When an employee makes such a judgment, the circumstances shall be investigated and documented in order to determine whether changes can be instituted to prevent recurrence of similar situation.
(2) PPE shall be removed prior to leaving the work area.
(3) PPE shall be removed and placed in the designated area for storage, washing, decontamination or disposal.

d. Accessibility of PPE

(1) Appropriate sizes shall be readily available at the work/site/issued.
(2) Hypoallergenic gloves, liners, or powderless gloves shall be readily accessible to employees who are allergic to the gloves normally provided.

e. Cleaning, Laundering, Disposal

(1) Marshall University shall clean, launder and/or dispose of PPE at no cost to the employee. The laundry is located in room 119 BBSC and is under the direction of the IBC chair.

f. Repair and Replacement

(1) BBSC investigators and course directors are responsible for repair and replacement of PPE as needed to maintain its effectiveness, at no cost to the employee.

g. If garment is penetrated by blood or other potentially infectious materials, the garment shall be removed immediately or as soon as feasible.

h. Gloves

(1) Gloves shall be worn when it is reasonably anticipated that the employee will have hand contact with blood or other infectious materials, mucous membranes, and non-intact skin:

when performing vascular access procedures, and when handling or touching contaminated items or surfaces.

(2) Disposable gloves (single use such as a surgical or examination glove) shall be replaced as soon as practical when contaminated, or as soon as feasible when torn or punctured, or when the ability to function as a barrier is compromised.

(3) Disposable single use gloves shall not be washed or decontaminated for reuse.

(4) Utility gloves may be decontaminated or reused if the integrity of the glove is not compromised.

(a) Discard gloves if they are showing signs of cracking, peeling, puncture or if their ability to function as a barrier is compromised.

i. Masks, Eye Protection and Face shield

(1) Masks in combination with eye protection wear shall be worn whenever splashes, splatters, spray or droplets of blood or other infectious materials may be generated and contamination of the eyes, nose or mouth may reasonably be anticipated.

j. Gowns, Aprons, other Body clothing

(1) Appropriate clothing, not limited to lab coats, gowns, aprons or similar outer garments, shall be worn in occupational situations. Type of protective clothing is dependent on degree of exposure.

G. <u>Exposure Determination</u>

1. Criteria for identifying pertinent staff for exposure determination.

Any employee who has a reasonable likelihood of occupational exposure to potentially infectious materials during the performance of their assigned duties without regard to the use of personal protective equipment will be included in section G2.

2. Job class/task procedure with exposure potential/work practice-engineering exposure is as follows:

CATEGORY I: JOB CLASSIFICATION IN WHICH EMPLOYEES HAVE NO OCCUPATIONAL EXPOSURE

JOB CLASS	TASK/ PROCEDURE	PROCEDURE/ENGINEERING CONTROLS
School of Medicine Departments		
ANATOMY, CELL AND NEUROBIOLOGY		
Administrative Aide	None	Follow Employee Heath Guidelines
ANIMAL CARE FACILITY		
Director	None	Follow Employee Heath Guidelines
BIOCHEMISTRY & MICROBIOLOGY		
Administrative Aides	None	Follow Employee Heath Guidelines
Secretaries	None	Follow Employee Heath Guidelines
BIOMEDICAL SCIENCES		
Director of Admissions	None	Follow Employee Heath Guidelines
Forensic Science Division	None	Follow Employee Heath Guidelines
Academic Program Manager NEST Training Coordinator	None	Follow Employee Heath Guidelines
Director MUFSC	None	Follow Employee Heath Guidelines
Academic Program Extra-Help	None	Follow Employee Heath Guidelines
Administrative Assistant	None	Follow Employee Heath Guidelines
NIJ Liaison and Public Information Officer	None	Follow Employee Heath Guidelines
Web Administrator	None	Follow Employee Heath Guidelines
Business Manager	None	Follow Employee Heath Guidelines
Technical Leader Computer	None	Follow Employee Heath Guidelines
Training Coordinator	None	Follow Employee Heath Guidelines
Finance Officer	None	Follow Employee Heath Guidelines
Secretary		
INFORMATION TECHNOLOGY		
Chair	None	Follow Employee Heath Guidelines
Manager/Systems Analyst	None	Follow Employee Heath Guidelines
Administrative Computer Specialist	None	Follow Employee Heath Guidelines
PHARMACOLOGY, PHYSIOLOGY AND TOXICOLOGY		
Administrative Aide	None	Follow Employee Heath Guidelines
Student Assistant	None	Follow Employee Heath Guidelines

Secretary	None	Follow Employee Heath Guidelines
College of Science Departments		

CATEGORY II: JOB CLASSIFICATIONS IN WHICH EMPLOYEES HAVE OCCUPATIONAL EXPOSURE

JOB CLASS	**TASK/ PROCEDURE**	**PROCEDURE/ENGINEERING CONTROLS**
School of Medicine Departments		
ANATOMY, CELL AND NEUROBIOLOGY		
Assistant, associate and Full professor	Occasional contact with blood or other potentially infectious materials	Universal precautions/handwashing. Personal protective equipment (PPE) when needed
Lab Technician	Occasional contact with blood or other potentially infectious materials	Universal precautions/handwashing. Personal protective equipment (PPE) when needed
Lab Trainee	Occasional contact with blood or other potentially infectious materials	Universal precautions/handwashing. Personal protective equipment (PPE) when needed
Graduate students	Occasional contact with blood or other potentially infectious materials	Universal precautions/handwashing. Personal protective equipment (PPE) when needed
Medical Technicians	Occasional contact with blood or other potentially infectious materials	Universal precautions/handwashing. Personal protective equipment (PPE) when needed
ANIMAL CARE FACILITY		
Animal Caretaker	Occasional contact with blood or other potentially infectious materials	Universal precautions/handwashing. PPE when needed
BIOCHEMISTRY & MICROBIOLOGY		
Assistant, associate and Full professor	Occasional contact with blood or other potentially infectious	Universal precautions/handwashing. PPE when needed

	materials	
Lab Technician	Occasional contact with blood or other potentially infectious materials	Universal precautions/handwashing. PPE when needed
Lab Trainee	Occasional contact with blood or other potentially infectious materials	Universal precautions/handwashing. PPE when needed
Graduate students	Occasional contact with blood or other potentially infectious materials	Universal precautions/handwashing. PPE when needed
Medical students	Occasional contact with blood or other potentially infectious materials	Universal precautions/handwashing. PPE when needed
Biostatistician		
Forensic Science		
Assistant, associate and Full professor	Occasional contact with blood or other potentially infectious materials	Universal precautions/handwashing. PPE when needed
Lab Technician	Occasional contact with blood or other potentially infectious materials	Universal precautions/handwashing. PPE when needed
Lab Trainee	Occasional contact with blood or other potentially infectious materials	Universal precautions/handwashing. PPE when needed
Graduate students	Occasional contact with blood or other potentially infectious materials	Universal precautions/handwashing. PPE when needed
DNA Analysts	Occasional contact with blood or other potentially infectious materials	Universal precautions/handwashing. PPE when needed
Adjunct Faculty	Occasional contact with blood or other potentially infectious materials	Universal precautions/handwashing. PPE when needed
PHARMACOLOGY, PHYSIOLOGY AND TOXICOLOGY		
Assistant, associate and Full professor	Occasional contact with blood or other potentially infectious	Universal precautions/handwashing. PPE when needed

	materials	
Lab Technician	Occasional contact with blood or other potentially infectious materials	Universal precautions/handwashing. PPE when needed
Lab Trainee	Occasional contact with blood or other potentially infectious materials	Universal precautions/handwashing. PPE when needed
Graduate students	Occasional contact with blood or other potentially infectious materials	Universal precautions/handwashing. PPE when needed
College of Science		
Biological Sciences		
Chemistry		
Integrated Science Technology		
Receiving		
Supervisor		
Warehouse attendant		

CATEGORY III: JOB CLASSIFICATION IN WHICH EMPLOYEES HAVE ROUTINE OCCUPATIONAL EXPOSURES

JOB CLASS	TASK/ PROCEDURE	PROCEDURE/ENGINEERING CONTROLS
School of Medicine Departments		
ANATOMY, CELL AND NEUROBIOLOGY		
ANIMAL CARE FACILITY		
BIOCHEMISTRY & MICROBIOLOGY		
Surgery	Invasive procedures IV's. IV meds and IM injections. Handling sharps and specimens. Changing dressing in patients with open/draining lesions.	Handwashing/gloves gowns/goggles if splashing may occur. Universal precautions
Human Blood Lab technician	Extraction of Genomic DNA from human blood	Universal precautions. Lab coats and gloves are mandatory. BSL2 conditions.
BIOMEDICAL SCIENCES		
Forensic Science	Taking cuttings of dried body fluids from swabs, clothing, or swatches.	Universal Precautions. Lab coats, goggles and gloves are mandatory.
PHARMACOLOGY, PHYSIOLOGY AND TOXICOLOGY		
Graduate Students	Taking cuttings of dried body fluids from swabs, clothing, or swatches.	Universal Precautions. Lab coats, goggles and gloves are mandatory.
College of Science Departments		

H. Housekeeping

1. Schedule for cleaning areas

Area	**Frequency**
Clean Bathroom Sink with germicidal. Commode with germicidal. Mirror with germicidal. Floor with germicidal.	**Daily**
Lobby Empty waste containers. clean with germicidal. Dust all flat surfaces. Vacuum all carpet. Clean lobby door glass inside/out. Spot clean wall, woodwork and trim. Clean lobby telephone. Clean/polish furniture. Dust light fixtures. Clean public restrooms, trash, fixture/floors.	**Daily**
Day Room/Activity Room Empty trash, clean container with germicidal. Vacuum carpet. Spot clean walls. Wash walls with germicidal. Clean vents. Dust damp doors, jams and hinges with germicidal.	**Daily**
Bathroom, Restroom Carpets Lobby Areas Main corridors Day Rooms Activity Areas	**Daily**
Offices Ancillary Areas	**Weekly**
Offices Trash Containers Vacuum	**Daily**
Lab Areas Empty trash, clean container Vacuum/wet mop floors Semi-Annually Wash Walls Restroom	**Daily** Daily
Shampooing Carpets First floor hall	**Semi-Annually**

Conference rooms **Annually**
Day rooms
Offices

Vacuum **Daily**
Lobby Areas
Main halls
Activity Areas

Unit Refrigerators **Weekly**

Equipment, surfaces cleaned after contact with blood or other infectious materials with appropriate disinfectant or after procedure accomplished.

3. Protective coverings, such as plastic wrap, aluminum foil, imperviously backed paper used to cover equipment or surfaces, shall be removed and replaced as soon as feasible when contaminated.
4. All bins, pails, cans, and similar receptacles intended for reuse which have the potential for becoming contaminated with blood or infectious materials shall be inspected and decontaminated on a regularly scheduled basis and cleaned as soon as feasible upon visible contamination.
5. Broken glassware should not be picked up with the hands. Clean up with mechanical means, such as brush and pan; forceps.
6. Reusable sharps that are contaminated shall be stored and processed in a manner that does not require the employee to reach hand into containers where sharps have been placed.
7. Sorting or rinsing of contaminated laundry that is contaminated with blood or other potentially infectious materials is prohibited in the area where it is used.

I. Communications of Hazards to Employees

1. Labels and Signs

a. Warning labels will be affixed to containers of regulated waste, refrigerators and freezers containing blood or other infectious materials.
b. Labels will be affixed to other containers used to store, transport or ship such materials, except when universal precautions are in place for in-hospital transport.

(1) Red bags may be substituted for labels.

(2) Containers of blood, blood components or products that are labeled as to content and have been released for transfusion or other clinical use are exempted from labeling requirements.

c. Individual containers of blood or other potentially infectious materials are exempt from labeling when they are placed in a labeled container during storage, transport, shipment or disposal.

2. Regulated Waste (biohazard waste) that has been decontaminated does not have to be labeled or color-coded.
3. Signs

a. **BBSC investigators and course directors** will post signs at entrance to work areas with BIOHAZARD stated under the symbol and list the biohazards that may be present.
b. Signs shall be fluorescent orange-red or predominantly so, with letters or symbols in contrasting colors.

4. Sharps Containers

Sharps containers shall be

a. Closable
b. Puncture resistant
c. Leakproof on sides and bottom
d. Labeled properly according to biohazard requirements.
e. During use, containers shall be:
   (1) Easily accessible and as close as feasible to immediate area where sharps are used or reasonably to be found.
   (2) Maintained upright
   (3) Replaced routinely and not allowed to be overfilled.
   (4) When moving containers from area of use:
      (a) Close immediately prior to removal or replacement to prevent spillage or protrusion of contents during transport
      (b) Placed in secondary container if leakage is possible with the same requirements as on single container

5. Information and Training

a. The Division of Occupational Environmental Health and the Institutional Biosafety Committee will ensure that all employees with occupational exposure participate in a training program which will be provided at no cost to the employee and during working hours.
   (1) Training will be provided at the time of initial assignment of tasks where occupational exposure may take place.
   (2) Annual training for all employees will be provided within one year of their previous training.

(3) When changes such as modification of tasks or procedures or the institution of new tasks or procedures affect the employee's occupational exposure, additional training will be provided and can be limited to addressing the new exposures created.

(4) Material content and language provided will be at the level appropriate for audience.

b. Content of training program will include:

(1) An accessible copy of the regulatory text and an explanation of its content.

(2) General explanation of epidemiology and symptoms of bloodborne diseases.

(3) Explanation of modes of transmission of bloodborne pathogens.

(4) Explanation of employer's exposure control plan and the means by which the employee can obtain a copy.

(5) Explanation of use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices and protective personal equipment.

(6) Explanation on the basis for selection of personal protective equipment.

(7) Information on Hepatitis B vaccine, including efficacy, safety, method of administration, benefits of being vaccinated and vaccination offered free of charge.

(8) Information on appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials.

(9) Explanation of procedure to follow if an exposure incident occurs, including method of reporting incident and the medical follow-up that is made available.

(10) Information on the post-exposure evaluation and follow-up that the employer is required to provide after employee exposure.

(11) Explanation of the signs and labels and/or color-coding required.

(12) An opportunity for interactive questions and answers with a person conducting the education and training session.

(13) Person conducting the training shall be knowledgeable in subject matter as it relates to the work place that the training will address.

c. For employees that have had training on bloodborne pathogens in year preceding 3/5/92, only training with respect to the provisions of the OSHA Standard which were not included will be provided.

d. Training records shall include:

(1) Dates of training sessions

(2) Content or summary of training sessions

(3) Names and qualifications of person(s) conducting training

(4) Names and job titles of all persons attending the training sessions.

e. Training records must be maintained for three (3) years from the date on which training occurred.

f. Availability of all records to the Director/Assistant Secretary for examination or copying.

(1) Employee training records shall be provided upon request for examination and copying to employees, employee representatives, and to the Director of the Assistant Secretary (Department of Labor).

(2) Employee medical records shall be provided upon request for examination and copying to the subject employee, to anyone having written consent of the subject employee, to the Director and to the Assistant Secretary (Department of Labor).

g. Transfer of records

(1) Employer shall adhere to responsibility as defined in 29CFR 1910.20 (h).

(2) If employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer shall notify the Director at least three (3) months prior to their disposal and transmit them to the Director, if required by the Director to do so within a three (3) month period.

J. Employee Health Guidelines

1. HBV vaccination and TB skin testing will be offered to employees within 10 days of employment at no cost to the employee and under supervision of a licensed professional.
These services will be provided at the Marshall University Dept of Internal Medicine during regular business hours Monday through Friday.

The Division of Forensic Science requires documentation that its students and employees have 1) undergone the three injection HBV series as well as demonstrating immunity based on a titer or 2) signed the HBV vaccination declination form AFTER they have participated in BBP Training. Students are required to pay for their own HBV series and titer as a requirement of admission to the program. Most students use the Cabell County Health Department if they have not been vaccinated prior to entry to the program. HBV vaccination series is offered to employees at the time of employment. Internal Medicine has been the source of the injections.

2. Hepatitis B antibody screening is not a prerequisite for receiving the Hepatitis B vaccination. If the employee has already received the vaccine, or if antibody testing has revealed that the employee is already immune, or

if the vaccine is contraindicated for medical reasons, Marshall University will not offer the Hepatitis B vaccine. If the employee's health status changes, he/she will be offered the Hepatitis B vaccine or Hepatitis B vaccine booster (as appropriate).

3. Employees have the right to decline the Hepatitis B vaccine, but may request to be vaccinated at a later date.

4. The MU Institutional Biosafety Committee will obtain a signed vaccination consent or declination from all BBSC employees. The signed consent or declination is maintained in the Employee's Health file in the OEH Division. All employee records containing findings and diagnoses are kept confidential.

5. Specific training will be provided for all new employees within 10 days of their initial assignment that includes information on:

    - Hepatitis B vaccine, TB testing.
    - Safety, efficacy and methods of testing, administration.
    - The benefits of vaccinations/titers.
    - The right to decline HBV/rubella vaccination.
    - Exposure potentials for infectious/hazardous substances
    - Exposure control plan contents/location.
    - Procedure for reporting exposure.
    - Education on engineering/work practice controls.

    New employees will receive a copy of the standard.

6. Routine boosters are recommended and will be made available at no cost to the employee. This includes situations where post-exposure evaluation reveals the exposed employee has an inadequate antibody response and the source individual is Hepatitis B surface antigen positive.

7. A written opinion by a licensed health care professional is limited to whether or not the Hepatitis B vaccination is indicated and whether or not the employer received the vaccine. A copy of this written opinion must be given to the employee.

8. A list of employees for whom the vaccine is indicated and Hepatitis B vaccination status will be maintained by the OEH Division.

9. Post-vaccination testing is not recommended or required.

10. To ensure that a complete medical assessment and post-exposure evaluation has been completed, the employer must obtain a copy of the evaluating health care professional's written opinion within 15 days of the

completion of the medical evaluation following exposure incident. This written opinion must include information that the employee has been informed of the results of the evaluation and told about any medical conditions resulting from exposure that may require further evaluations and treatment. All other medical findings or diagnoses must be kept confidential and not included in the written report provided to the employer.

11. Information about exposure incidents will be recorded on the OSHA 200 Log summary of occupational injuries and illness. Only needle sticks that result in medical treatment or seroconversion are to be reported on 200 Log; conversion status is not to be included. OSHA 29 CFR 1910.7 requires personal identifiers must be removed prior to granting access to the record.

K. Post-Exposure Evaluation/Follow-up

STEP 1: IMMEDIATE TREATMENT

Percutaneous (needlesticks/sharp objects) Injury (where there is the slightest suggestion that the integrity of skin has been broken by a potentially contaminated item)

1. Wash wound thoroughly with a sudsy soap and running water; if water is not available use alcohol. Betadine soap, not Betadine solution, is acceptable for this step. (This first step with soap directly reduces the viruses ability to infect).

2. Remove any foreign materials embedded in the wound.

3. Disinfect with Betadine solution.

Non-intact Skin Exposure

1. Wash skin thoroughly as in #1 above.

2. Disinfect with Betadine solution.

There is no evidence that squeezing the wound or applying topical antiseptics further reduces the risk of viral transmission.

Mucous Membrane Exposure

Irrigate copiously with tap water, sterile saline or sterile water.

Intact Skin Exposure

Exposure of intact skin to potentially contaminated material is not considered an exposure at any significant risk and is neither considered an exposed person or in need of evaluation. Thoroughly clean and wash exposed intact skin.

STEP 2: EXPOSURE PROTOCOL

Exposure within SOM/UP&S: C:\Documents and Settings\IBC ALL\IBC Plans and Protocols\SOM Post Exposure Control Plan.htm

1. If the exposure occurs within the BBSC, the exposure should be immediately communicated to the Collateral Duty Safety Officer, Dr. Donald Primerano, at 304-696-7338. If the exposed person cannot identify the Collateral Safety Officer immediately, that person should ask for immediate help or direction from other responsible personnel.

2. The Collateral Safety Officer or other responsible person should immediately direct the exposed patient to either Cabell-Huntington Hospital or St. Mary's Medical Center Emergency Departments.

3. The exposed person should immediately identify themselves as having been exposed to a bloodborne pathogen and insist on urgent evaluation. If PEP is going to be recommended or initiated to an exposed person, this needs to be started within two hours of exposure per current CDC guidelines.

If the exposed person is an employee of SOM/UP&S, it is important to make sure that the ED generates a Worker's Compensation Form and does **not** bill your insurance. Because medical students are not employees who are covered by Worker's Compensation, a Worker's Compensation Form need not be completed.

In the case of a medical student, his or her health insurance will be billed. If the exposure occurs after work hours or a safety officer or other responsible personnel within the work area is not immediately available, the exposed person should proceed on their own to the ED for immediate and timely evaluation. The exposed person is to report back the incident and the outcome of that initial evaluation as soon as feasibly possible to the SOM/UP&S Safety Officer or the Collateral Safety Officer. It will be the responsibility of the exposed person to complete and return the **Needlestick & Sharp Object Injury Report** to the SOM/UP&S Safety Officer.

Medical Costs.

Follow-up must include:

a. Documenting the route and circumstances of exposure on the incident report and first report of injury form. This information will be provided to the health care professional during the post-exposure follow-up.

b. Identifying and testing the source individual (if feasible) after the attending MD has written an order and consent is obtained.
   (1) Information on the source individual's HIV and HBV testing must be provided to the health care professional evaluating the exposure and the exposed employee. The exposed employee must be informed of laws regarding confidentiality/disclosure of the identity and the infectious status of the source individual.
   (2) **Marshall University** will make good faith efforts to obtain consent from the source individual. If consent cannot be obtained and is required by state law, the employer must document in writing that legally required consent cannot be obtained. If the source individual's consent is not required by law, the source individual's blood may be tested and results documented.
   (3) In situations where testing of the source individual's blood reveals the presence of the Hepatitis B surface antigen, and the exposed employee has already been vaccinated and is known to have had an adequate antibody response to the HBV, serological testing of the exposed individual may not be deemed necessary.

c. Testing of exposed employee's blood for HIV should be done
   - At the time of exposure
   - 4-6 weeks after exposure
   - 3 months after exposure
   - and
   - 6 months after exposure (Is this all OK with you)
   - As a part of the confidential medical evaluation, the federal standard requires that if an employee consents to perform baseline blood collection after an exposure incident but does not consent at that time for HIV serological testing, the sample must be preserved for 90 days. If within 90 days of the exposure incident the employee elects to have the baseline sample tested for HIV, testing must be done as soon as feasible. The 90 day time period would include the 12-week post-exposure period in which an acute retroviral illness may develop following HIV infection. Is this section OK or does it contradict what the scheduled time post exposure.

d. Post-exposure counseling/prophylaxis as recommended by MD evaluating exposure.

e. Evaluating post-exposure employee illnesses.

The health care professional responsible for the post-exposure follow-up must:

- Provide the employee with a copy of the standard.

- Provide the employee with sufficient information so that a determination can be made of the type of prophylaxis and medical treatment that is indicated following an exposure incident:
    - A description of the employee's duties as they relate to the exposure event,
    - Documentation of the route and circumstances of the exposure,
    - Results of the source individual's blood testing, and
    - All medical records relevant to the appropriate treatment of the employee, including vaccination status

Test the exposed employee's blood:

- At the time of exposure
- 4-6 weeks after exposure
- 3 months after exposure
- 6 months after exposure

Perform post-exposure counseling

Evaluate post-exposure employee illnesses

L. Accessibility of Control Plan

The plan will be kept in the OEH Division and in the office of each department. It is accessible (by appointment or request) to all employees and to OSHA. The plan will be reviewed with all new employees within 90 days of hire and annually thereafter.

M. Evaluation

The effectiveness of the exposure control plan will be evaluated if changes in equipment personnel or procedures necessitate.

This evaluation will include findings of a clinic-wide risk assessment, findings of departmental exposure determinations, and findings from a review of the effectiveness of training and education program.