

University of Maryland Baltimore County
BLOODBORNE PATHOGENS
CAMPUS EXPOSURE CONTROL PLAN

I. INTRODUCTION

Certain activities within the University of Maryland, Baltimore County (UMBC) campus have the potential for exposure to human blood and/or body fluids. Human blood, other body fluids, and unfixed human tissues are potential sources of harmful and lethal diseases such as Hepatitis B and Acquired Immunodeficiency Syndrome (AIDS). Therefore, to minimize the risk of occupational exposure to potentially contaminated blood and body fluids, a combination of education, personal protective equipment (PPE), vaccinations, engineering controls, and application of recommended work practices will be used.

The following Bloodborne Pathogens Exposure Control Plan (ECP) has been developed in accordance with the Occupational Safety and Health Administration (OSHA) Bloodborne Pathogens Standard, 29 CFR 1910.1030.

II. DEFINITIONS

Glossary

- **AIDS-** Acquired Immunodeficiency Syndrome
- **ECP-** Bloodborne Pathogens Exposure Control Plan
- **ESH-** Environmental Safety and Health 5-2918
- **HBV-** Hepatitis B Virus
- **HCV-** Hepatitis C Virus
- **HIV -**Human Immunodeficiency Virus
- **OPIM-** Other Potentially Infectious Material
- **OSHA-** Occupational Safety & Health Administration
- **PPE-** Personal Protective Equipment
- **UMBC-** University of Maryland, Baltimore County
- **Bloodborne Pathogens-** hepatitis B virus, human immunodeficiency virus, and hepatitis C virus. In the future, UMBC may identify additional pathogens as bloodborne pathogens if such pathogens are identified by OSHA, the Centers for Disease Control and Prevention (CDC), or a relevant State or federal law or regulation as requiring control or prevention measures similar to those required for HIV, HBV, or HCV under the OSHA Standard.
- **Exposure Incident-** specific eye, mouth, other mucous membrane, non-intact skin, or

parenteral contact with blood or other potentially infectious materials that result from the performance of the duties or assignments of any UMBC personnel.

- **Needleless Systems**- devices that do not use needles for the collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established, or the administration of medication or fluids, or any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps. Examples of needleless systems include, but are not limited to, intravenous medication delivery systems that administer medication or fluids through a catheter port or connector site using a blunt cannula or other non-needle connection, and jet injections that deliver injections through the skin without use of a needle.
- **Occupational Exposure**- reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials (OPIM) that may result from the performance of UMBC personnel's duties or assignments, including assigned work, volunteer tasks, academic programs and practicum experiences. Occupational exposure may occur in many contexts, including, but not limited to, patient care, client services, research activities, classroom work, and housekeeping, maintenance, and security services.
- **OSHA Standard**- means the Bloodborne Pathogens Standard issued by OSHA, United States Department of Labor, as amended from time to time and published as 29 CFR 1910.1030. Other Medical Devices are defined as those devices designed to reduce the risk of percutaneous exposure to bloodborne pathogens, including, but not limited to, blunt suture needles, plastic or mylar-wrapped glass capillary tubes, sharps disposal containers, and biosafety cabinets.
- **Personal Protective Equipment (PPE)**- specialized clothing or equipment worn for protection against potentially infectious materials as well as the spread of contamination of these materials.
- **Potentially Infectious Materials**- as referenced by the OSHA Bloodborne Pathogen Standard, are defined as (i) the following human body fluids (in liquid or dried state): blood, semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva (in dental procedures only), any material visibly contaminated with blood, any body fluid in a situation where it is difficult to differentiate between types of body fluids; (ii) any unfixed tissue or organ (excluding skin) from a human (living or dead); (iii) HIV-containing cell or tissue cultures, organ cultures, and HIV or HBV-containing culture media or solutions; (iv) blood, tissues, or cultures from animals experimentally infected with HIV, HBV, HCV or other bloodborne pathogens.
- **RIH**- Retriever Integrated Health
- **Sharps with Engineered Sharps Injury Protections**- defined as non-needle sharps or needle devices used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident. They include, but are not limited to,

syringes or catheters with a sliding sheath over the needle or needles that retract).

- **Source Individual**- any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to UMBC personnel.

Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.

- **UMBC Personnel**- (i) all part-time and full-time students of UMBC as well as any special students who are not registered; (ii) all employees of UMBC, including full-time, part-time, temporary, contractual, and visiting personnel in any employment category; and (iii) all volunteers participating in UMBC activities.
- **Unit**- any administrative, service, or research unit of UMBC which does not report, directly or indirectly, to the Dean of a department.
- **Universal Precautions (Standard Precautions)** - an approach to infection control according to which all human blood and certain human body fluids are treated as if known to be infectious for bloodborne pathogens. More specifically, Universal Precautions means the universal precautions recommended by the Centers for Disease Control and Prevention, U.S. Public Health Service. More specifically, Standard Precautions means the standard precautions recommended by the CDC.
- **Work Practice Controls**- controls that reduce the likelihood of exposure by altering the manner in which a task is performed. Any term used in this Policy which is defined in paragraph (b) of the OSHA Standard shall have the meaning set forth in the OSHA Standard unless a different meaning is set forth in this part of the exposure control plan.

III. EXPOSURE DETERMINATION

OSHA requires employers to perform an exposure determination concerning which employees may incur occupational exposure to blood or OPIM. The exposure determination is made without regard to the use of personal protective equipment (i.e., employees are considered to be exposed even if they wear personal protective equipment). The exposure determination should identify job classifications in which all employees may be expected to incur such occupational exposure, regardless of frequency.

In addition, OSHA requires a listing of job classifications in which some employees may have occupational exposure. Since not all the employees in these categories would be expected to have exposure to blood and other body fluids that are to be considered potentially infectious materials, the tasks, procedures or groups of closely related tasks and procedures that would have occupational exposure for employees are required to be listed by each department or Unit. Each department performs an exposure determination for the department's Students.

IV. METHODS OF COMPLIANCE

OSHA requires that this plan include a schedule and method of implementation for the various requirements of the standard. The Centers for Disease Control and Prevention (CDC) Standard Precautions will be observed at UMBC in order to prevent contact with blood or other potentially infectious materials. All blood or OPIM will be considered infectious regardless of the perceived status of the source individual.

Engineering Controls

Engineering and work practice controls will be utilized to eliminate or minimize exposure to UMBC personnel. Where occupational exposure remains after institution of these controls, personal protective equipment shall also be utilized. The following engineering controls will be utilized:

- **Specimen Containers** - Containers for specimens of blood or OPIM must be designed to prevent leakage during collection, handling, and storage. They must be inspected for leakage prior to use and on a daily basis. Contamination of the outside of the container should be avoided. The lid shall be tightly secured. The outside of the container shall be decontaminated before transporting. All specimen containers must be clearly labeled as to contents, labeled with a biohazard label, and then double containerized for transport.
- **Containers for Special Medical Waste** - Special medical waste such as used disposable containers, gloves, etc., must be kept in closed containers that can hold all contents without leakage during handling, storage, and transport. Waste containers must be clearly labeled with the biohazard symbol, indicating that they contain biohazardous waste. Containers are to be inspected for leakage daily.
- **Sharps Containers** - Sharps include syringes, needles, slides, scalpels, cover slips, glass pipettes, and broken glass that may be contaminated with infectious materials. Sharps containers are leak-proof, puncture-resistant, labeled with the universal biohazard symbol, and closeable. Sharps containers will have a line denoting the level at which the container should be replaced, this is typically $\frac{3}{4}$ of the container capacity. Once $\frac{3}{4}$ full, sharps containers must be placed in a properly lined biohazard burn box.
- **Sharps with engineered sharps injury protection** - Sharps that have a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident must be used whenever possible.
- **Labels** - Warning labels must be affixed to containers of regulated waste, refrigerators, freezers, incubators, or other containers that contain blood or OPIM. They also must be placed on containers used to transport regulated materials, and are required for any equipment that can reasonably be expected to become contaminated during the course of its use.
 - The warning label must contain the word "Biohazard" along with the universal

biohazard symbol (example below) and printed in fluorescent orange or orange-red color with lettering or symbols in a contrasting color.

● **Signs** - Signs will be posted at the entrance to work areas in which infectious and potentially infectious materials are used. Required signs will be in a contrasting color and they must contain the following information:

- Universal biohazard symbol that conforms to OSHA 1910.145 (Specifications for accident prevention signs and tags).
- Laboratory biosafety level (BSL) or animal biosafety level (ABSL)
- Full name of agent(s) in use (as determined by risk and security assessment).
- Name and phone number of laboratory supervisor or other responsible personnel.
- Entry and exit requirements, Required PPE, Required Vaccinations or medical clearance
- Emergency contact phone numbers
 - Please use a reachable phone number such as a cell phone number, avoid using an office phone number
- Any special instructions/information required for safe operations

Pictured below is the universal biohazard symbol.



V. PERSONAL PROTECTIVE EQUIPMENT (PPE)

Personal protective equipment (PPE) is provided without cost to UMBC personnel. PPE is chosen based on the anticipated exposure to blood or OPIM. Protective equipment will be considered appropriate only if it does not permit blood or OPIM to pass through or reach the individual's clothing, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time in which the protective equipment will be used.

Supervisors shall ensure that appropriate PPE in the appropriate sizes is readily accessible at the work site or is issued without cost to UMBC personnel. Hypoallergenic gloves, glove liners, powder free gloves, or other similar alternatives shall be readily accessible to those who are allergic to the gloves normally provided. PPE shall be removed before leaving the work site and either be stored or disposed of appropriately.

The following pieces of PPE shall be available and used when there is potential for exposure to bloodborne pathogens:

- **Gloves** - Disposable, single-use latex or nitrile gloves shall be worn where it is reasonably anticipated that UMBC Personnel will have hand contact with blood or other potentially infectious materials, when collecting and processing human specimens and when handling or touching contaminated items or surfaces.
 - Disposable gloves are not to be washed or decontaminated for reuse and are to be replaced as soon as practical when they become contaminated or as soon as feasible if they are torn or punctured, or when their ability to function as a barrier is compromised.
- Utility gloves can be washed or decontaminated for reuse. Utility gloves must be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration or when their ability to function as a barrier is compromised. Double gloving has been shown to provide more protection from punctures and abrasion that can occur during use than does a single glove layer.
- Gloves shall be checked for leaks prior to wearing them. If gloves are damaged (torn or punctured) or become damaged or contaminated during a procedure, they shall be replaced. Hands must be washed with soap and water for 30 to 60 seconds immediately after gloves are removed.
- **Protective Clothing** - Protective clothing must be worn when there is a risk of body fluids spattering or becoming aerosolized and contacting an individual's skin or clothing. Protective clothing should be resistant to fluids, and may be disposable or reusable. Reusable clothing must be properly laundered prior to reuse.
- **Face Protection** - Face shields or masks in combination with eye protection such as goggles or glasses with solid side shields are required to be worn when splashes, sprays, aerosolized blood, or other potentially infectious materials may contact eye, nose, mouth, or mucous membranes.

- **Respiratory Protection** - If personnel are exposed to airborne or aerosolized bloodborne or OPIM that cannot be feasibly controlled through other means, respiratory protection may be required. Refer to the [UMBC Respiratory Protection Program](#) for more information or to request a consultation regarding respirator use.
- **Eyewear** - Safety glasses with side shields or face shields must be worn during all work with potentially infectious material whenever there is a potential for splashes or sprays.
- **Protective Footwear and Headwear** - Disposable shoe covers and caps must be worn in situations where cross contamination of materials or personnel is possible.

Supervisors shall ensure that all PPE is removed when penetrated by blood or OPIM and then double bagged for laundering or disposal. All PPE shall be removed prior to leaving the work area. When PPE is removed, it shall be placed in an appropriately designated container for storage, washing, decontamination, or disposal. All repairs and replacements will be made by UMBC at no cost to UMBC personnel.

VI. WORK PRACTICE CONTROLS

General Requirements -

Work practice controls are procedures that reduce the risk of occupational exposure by altering the way a task is performed. The following work practice controls are to be followed by all UMBC personnel when working with human blood or OPIM.

All procedures are to be conducted in a manner which will minimize splashing, spraying, splattering, and generation of droplets of blood or OPIM. Specific methods include the use of protective clothing, gloves, chin length face shields, eye protection, and the use of utility gloves to protect latex/nitrile gloves from abrasion and tearing when large items are handled.

Sharp objects must be handled with safety awareness. Eye contact must be maintained with the item. Machines that splash and splatter shall be shielded. Capped tubes and safety cups shall be used during vortexing and centrifugation. Cotton or a gauze pad moistened with disinfectant shall be wrapped around rubber stoppers or lyophilized containers when opening them. To the extent possible, all procedures that could aerosolize material shall be performed in a Biosafety Cabinet (BSC).

Hand Washing - After the removal of personal protective gloves, UMBC personnel shall wash hands and any other potentially contaminated skin area immediately or as soon as feasible with soap and running tap water for at least twenty seconds. If UMBC personnel incur exposure to their skin or mucous membranes, then those areas shall be washed or flushed with running tap water for at least 10 minutes as soon as feasible following contact.

Needles and Sharps - Contaminated needles and other contaminated sharps shall not be bent, recapped, removed, sheared, or purposely broken. OSHA allows an exception to this if the

procedure would require that the contaminated needle be recapped or removed, no alternative is feasible, and the action is required by the medical procedure. If such action is required, the recapping or removal of the needle must be done by the use of a mechanical device or a one-handed technique. Procedures which require recapping of needles are discouraged.

Personal Hygiene - Applying cosmetics and handling contact lenses in the laboratory are forbidden at all times. Hands shall be washed with soap and water before leaving the work site.

Food and Drink - Food and drink are never to be stored or consumed in a laboratory.

Handling of Materials - Packages marked with the universal biohazard symbol or otherwise identified as containing potentially infectious materials are to be inspected for leaks immediately upon arrival.

Pipetting/Transfer of Materials - Mouth pipetting or suctioning of any blood or OPIM is strictly prohibited under both UMBC safety protocol and OSHA regulation.

Specimen Collection - Specimens of blood or OPIM are to be placed in a container that prevents leakage during the collection, handling, processing, storage, and transport of the specimens. The container used for this purpose shall be labeled in accordance with the requirements of the OSHA standard. Supervisors shall ensure that all equipment has been decontaminated prior to servicing and shipping.

Any specimen container(s) shall be placed within a secondary container that is leak-proof and closed to prevent spillage of infectious materials. When specimens are collected, the liquid must never be forced into a tube or other container.

VII. HOUSEKEEPING

Routine Cleaning - All areas of the worksite must be maintained in a clean and sanitary condition. All tables must be disinfected with an appropriate disinfectant solution at least daily and immediately following completion of procedures involving human blood and OPIM.

Contaminated Work Surfaces – Contaminated work surfaces must be decontaminated with an appropriate disinfectant solution after completion of procedures involving and/or immediately following any spill of blood or OPIM. Recommended liquid disinfectant contact time for effective decontamination is 20-30 minutes.

Broken Glass – Broken glass must never be picked up by hand. Recommended mechanical means of cleanup include use of a brush and dust pan, stiff paper, tongs, or forceps. Utensils must be cleaned and decontaminated immediately after use. The contaminated glass should be discarded into a sharps container.

Contaminated Sharps – Contaminated sharps must be placed in a properly marked sharps container and labeled with a biohazard symbol. Containers for contaminated sharps shall be easily accessible to UMBC personnel and located in each separate work or procedure area. The

container shall be maintained upright throughout its use and replaced as needed and shall not be overfilled. When a container of contaminated sharps is moved from the area of use, the container shall be closed immediately prior to removal. The sharps container shall be placed in a plastic-bag-lined biohazard burn box.

Biohazard Waste Box – Biohazard waste boxes should be lined with a plastic bag and labeled with a Universal biohazard symbol that conforms to OSHA 1910.145 (Specifications for accident prevention signs and tags). Biohazard waste boxes should be free of any non-biohazardous waste.

Laundry - If contaminated protective clothing is to be laundered it shall be placed in labeled bags and sent to a commercial laundry service which has the capability to properly handle and launder potentially infectious material. Home laundering is not permitted.

To ensure work practice control effectiveness and compliance in their respective departments, labs, and units, managers and supervisors shall:

- Regularly examine, maintain, and modify/update controls as necessary
- Develop department, lab, and unit/area-specific Standard Operating Procedures for all activities, tasks, and experiments to which UMBC personnel may be exposed to blood or OPIM.

The procedure must contain the following elements:

- A clear and descriptive position description (title);
- The names and classifications of all individuals who will participate in the bloodborne pathogen activities;
- Identification of the area where duties are performed and a description of the procedures to be used to prevent unauthorized persons from being exposed to a potential hazard;
- A listing of the possible sources of exposure to bloodborne pathogens or other potentially infectious material in the specific task or procedure (Note: All liquids or media that come into contact with blood, unfixed human tissue, or human cell lines are to be considered potentially infectious material until the source tissue has been disinfected.);
- A detailed description of the task or procedure including all of the applicable safety precautions detailed in the Bloodborne Pathogens Exposure Control Plan (ECP)
- Identification of the departmental point of contact for exposure incidents.

VIII. HEPATITIS B VACCINATION PROGRAM

UMBC Retriever Integrated Health (RIH) located on UMBC main campus in the Center For Well-Being building offers the hepatitis B vaccination series to UMBC employees who have occupational exposure. Hepatitis B vaccination shall be available to UMBC employees at a

reasonable time and place, performed by or under the supervision of a licensed physician or by or under the supervision of another licensed health care professional, and provided according to the recommendations of the U.S. Public Health Service.

The hepatitis B vaccination shall be offered by UMBC, at no cost, to all employees who have potential occupational exposure. Students who have potential occupational exposure will be offered the hepatitis B vaccination on campus at the student's expense. Any persons who are neither students nor employees, and who have occupational exposure, shall be offered the hepatitis B vaccination at their own expense.

Participation in a pre-screening program shall not be a prerequisite for receiving hepatitis B vaccination. If an individual initially declines hepatitis B vaccination but at a later date, while still covered under the standard, decides to accept the vaccination, the vaccination shall then be made available.

Employees and students at risk of exposure who decline the hepatitis B vaccination offered shall sign the OSHA waiver indicating their refusal (**see forms in Appendix A**). Copies of declination forms will be maintained by the employee supervisor or manager. If a routine booster dose of hepatitis B vaccine is recommended by the U.S. Public Health Service at a future date, such booster shall be made available.

IX. BLOODBORNE PATHOGEN POST-EXPOSURE EVALUATION AND FOLLOW-UP

Individuals exposed to a bloodborne pathogen shall first wash the exposed site with soap and water and then contact the Retriever Integrated Health at 410-455-2542. The Retriever Integrated Health after hours support line can be reached at 410-455-3230. If appropriate, the individual may be referred to a local health care provider if the call is made during regular business hours or to a local emergency department if the call is made after business hours. Current CDC guidelines call for medical treatment of high risk exposures to be initiated immediately.

Closest emergency room by campus:

UMBC Main Campus

Ascension Saint Agnes Hospital

900 S Caton Ave, Baltimore, MD 21229

(667) 234-6000

Universities at Shady Grove

Adventist HealthCare Shady Grove Medical Center

9901 Medical Center Dr, Rockville, MD 20850

(240) 826-6000

Rita Rossi Colwell Center

Mercy Medical Center

345 St. Paul Place, Baltimore, MD 21202

(410) 332-9477

All employee exposure incidents shall be reported, investigated, and documented. If an employee incurs an exposure incident, the employee shall report the incident to his or her supervisor. If a student incurs an exposure, the student shall be encouraged to report the incident to their supervising faculty, principal investigator or supervising staff. Employees with potential exposure shall follow the medical advice given them by the healthcare professional providing care.

Follow-up care will be available at Retriever Integrated Health located in the Center for Well-being Building (CWB), call (410) 455-2542 (normal business hours) or (410) 455-3230 (after hours).

- Following a report of an exposure incident, an exposed employee shall receive a confidential medical evaluation and follow-up, including at least the following elements:
- Documentation of the route of exposure and the circumstances under which the exposure incident occurred;
- Identification and documentation of the source individual, unless it can be established that identification is infeasible or prohibited by state or local law;
- The source individual's blood shall be tested as soon as feasible after consent is obtained in order to determine HBV, HCV, and HIV infectivity. If consent is not obtained, the person responsible for the hepatitis B vaccination program shall establish that legally required consent cannot be obtained. If the source individual's consent is not required by law, the source individual's blood, if available, shall be tested and the results documented;
- Results of the source individual's testing shall be made available to the exposed employee along with information on applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

Collection and testing of blood for HBV, HCV, and HIV serological status will comply with the following:

- The exposed individual's blood shall be collected as soon as feasible and tested after

consent is obtained.

- The exposed individual shall be offered the option of having his or her blood collected for testing of HIV/HBV/HCV serological status. The blood sample shall be preserved for up to 90 days to allow the individual to decide if the blood should be tested for HIV serological status.
- Employees who experience an exposure incident shall be offered post-exposure evaluation and follow-up consultation.

The health care professional responsible for the person's post-exposure evaluation shall be provided with the following:

- A written description of the exposed individual's duties as they relate to the exposure incident;
- Written documentation of the route of exposure and circumstances under which exposure occurred;
- Results of the source individual's blood testing, if available;
- All medical records relevant to the appropriate treatment of the person including vaccination status.

UMBC shall obtain and provide to an exposed employee a copy of the evaluating health care professional's written opinion within 15 days of the completion of the evaluation. The health care professional's written opinion for hepatitis B vaccination must be limited to whether hepatitis B vaccination is indicated, and whether the employee has received such vaccination. It shall include a statement that the employee has been informed of the results of the evaluation and of any medical conditions resulting from exposure to blood or OPIM which require further evaluation or treatment. All other findings or diagnosis shall remain confidential and shall not be included in the written report.

X. INFORMATION AND TRAINING

The Exposure Control Plan, and all associated department, laboratory, and area/unit-specific exposure prevention SOPs shall be reviewed on at least an annual basis, to achieve the following:

- Reflect changes in technology that eliminate or reduce exposure to bloodborne pathogens;
- Document consideration and implementation of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure.
 - Documentation should include a description of the safer devices identified as candidates for adoption, the methods used to evaluate devices, the results of evaluations, and the justification for selection decisions. Selection and evaluation of devices by departments or units should be based on the following factors:
- The device's ability to perform the function for which it was designed;
- The effect of the engineered sharps injury protection on patient care;

- Expected effectiveness in reducing injuries;
- Anticipated costs;
- Ease of use;
- Staff preference;
- Compatibility with other devices and systems;
- Purchasing agreements.
- Solicitation of employee input during selection of safe sharps:

Regulations require that input be solicited from some non-managerial employees responsible for direct patient care or who are potentially exposed to injuries from contaminated sharps. Such input may be solicited through periodic conversations, informal problem-solving groups, participation in safety audits, worksite inspections, exposure incident investigations, or evaluation through pilot testing.

Training Requirements

Training shall be required for all UMBC personnel who may have exposure to bloodborne pathogens in the course of their employment, studies, or volunteer effort. UMBC shall ensure

that bloodborne pathogens trainers are knowledgeable in the subject matter. UMBC shall ensure that training is provided at the time of initial assignment to tasks where occupational exposure may occur and that training shall be repeated every twelve months.

Training shall be tailored to the education and language level of UMBC personnel being trained, provided at no cost and during the normal work shift or normal class hours. The training will be interactive and cover the following:

- OSHA Bloodborne Pathogen Standards and contents of the regulations.
- The epidemiology and symptoms of bloodborne diseases.
- The modes of transmission of bloodborne pathogens.
- The Exposure Control Plan and a method for obtaining a copy.
- The recognition of tasks that may involve exposure.
- The use and limitations of methods to reduce exposure, for example, engineering controls, work practices and PPE.
- The types, use, location, removal, handling, decontamination, and disposal of PPE
- The basis of selection of PPE.
- The hepatitis B vaccine, including efficacy, safety, method of administration, benefits, and cost, if any.
- The appropriate actions to take and persons to contact in an emergency involving blood or OPIM.

- The procedures to follow if an exposure incident occurs, including the method of reporting and medical follow-up.
- The evaluation and follow-up required after an exposure incident.
- The signs, labels, and color coding systems used to identify potentially infectious materials.

Additional training shall be provided to UMBC personnel when there are any changes of tasks or procedures affecting the personnel's occupational exposure.

XI. RECORD KEEPING

Training records shall be maintained for three years from the date of training. The following information shall be documented. The employees department is responsible for maintaining training documentation:

- The dates of the training sessions.
- An outline describing the material presented.
- The names and qualifications of persons conducting the training.

Any applicable medical records shall be maintained in accordance with OSHA Standard 29 CFR 1910.1020. These records shall be kept confidential, and must be maintained for at least the duration of employment, studies, or volunteer effort plus 30 years. The records shall include the following:

- The name and social security number of the individual.
- A copy of the individual's HBV vaccination status, including the dates of vaccination.
- A copy of all results of examinations, medical testing, and follow-up procedures.
- A copy of the information provided to the health care professional, including a description of the individual's duties as they relate to the exposure incident, and documentation of the routes of exposure and circumstances of the exposure.

ESH shall maintain a sharps injury log for recording percutaneous injuries from contaminated sharps. The information in the log shall be recorded and maintained in a manner that will protect the confidentiality of exposed UMBC personnel to the extent permitted by law. The log will serve as a tool for ESH to identify high risk areas and devices. It shall contain at least:

- The type and brand of device involved in the incident.
- The department or work area where the exposure incident occurred.
- An explanation of how the incident occurred and the circumstances surrounding the exposure incident (procedure being performed, the body part affected, objects or substances involved, and how they were involved).
- The forms contain information on the type and brand of the device involved.

- Employee medical records in the possession of UMBC shall be made available to the employee in accordance with 29 CFR 1910.1020. Medical records shall be made available to the Assistant Secretary of Labor for the Occupational Safety and Health Administration and the Director of the National Institute for Occupational Safety and Health (NIOSH) upon request.

Transfer of Records

If UMBC has closed and there is no successor employer to receive and retain the medical records for the prescribed period, the Director of NIOSH shall be contacted for final disposition.

Evaluation and Review

This program and its effectiveness will be reviewed every year by ESH and updated as needed.

APPENDIX A

University of Maryland, Baltimore County
Employee Hepatitis B Vaccine Declination Form
(MANDATORY)

I understand that due to 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 the hepatitis B vaccine, at no charge to myself. However, I decline the hepatitis B vaccine 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 the hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Employee Name (Print): _____

Employee Signature: _____

Date: _____

Campus ID Number : _____

Witness Name (Print): _____

Witness Signature: _____

APPENDIX B

The following is a table listing the UMBC job classifications that have been identified as possibly having occupational exposure to Bloodborne Pathogens or OPIM.

Group	Task
Retriever Integrated Health staff	Handling contaminated sharps, biomedical waste, and patient samples
Facilities Management Plumbing Shop staff	Maintaining pipes used for sewer disposal of infectious and OPIM waste
Environmental Safety & Health staff	Handling contaminated sharps, biomedical waste, and conducting emergency biological spill cleanup
Police & Security personnel	Handling contaminated sharps, emergency medical response
Animal Husbandry staff	Handling animals treated with infectious material or OPIM
Biological researchers, laboratory managers/supervisors and laboratory members	Handling contaminated sharps, biomedical waste, patient samples, and animals treated with infectious material or OPIM
Athletics Trainers and Recreational Staff	Providing first aid or medical assistance, handling contaminated sharps and biomedical waste