



BLOODBORNE PATHOGEN PROGRAM

Exposure Control plan

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1.0 PURPOSE

The Purpose of the Kent State University (KSU) Bloodborne Pathogen (BBP) Program is to protect employee, faculty and students from exposure to human blood and other potentially infectious material. During normal work activities, the possibility of exposure to bloodborne pathogens exists when they:

1.1 Treat injures or ill individuals who are infected with or carry a bloodborne pathogen.

1.2 Handle blood, or other potentially infectious materials (OPIM) during laboratory examinations or tests

1.3 Clean up spills of blood, blood products, vomit, stool or other infectious materials (Indirect Incidental Exposure)

1.4 Research faculty and students work with human blood, human blood products and human tissue and human cell lines

The program is in place to ensure affected University employees and students get all necessary help to manage potential exposures to bloodborne pathogens. The University must fully comply with environmental health and safety standards and improve the overall safety of University faculty, staff and students.

2.0 INTRODUCTION

Kent State University is committed to protect employees and students from exposure of bloodborne pathogens and other potentially infectious materials. This program has been developed in accordance with adopted Ohio Public Employment Risk Reduction program to comply with OSHA's bloodborne pathogen standard 29 CFR 1910.1030, "Occupational exposure to Bloodborne pathogens".

As per OSHA standard's University's exposure control plan (ECP) comprised of

- a. Approval
- b. Background
- c. Identification of exposed employees
- d. Implementation of universal precautions
- e. Use of engineering and work practice controls
- f. Use of personal protective equipment
- g. Access to bloodborne pathogen exposure information
- h. Offering Hepatitis B Vaccination and post exposure evaluation
- i. Annual training of bloodborne pathogen
- j. Annual review of ECP
- k. Housekeeping procedures
- l. Appropriate record keeping

3.0 APPROVAL

Kent State University's Bloodborne pathogen program is approved by the Director, Environmental Health and Safety (DEHS). DEHS also serves as an administrator of this program and is responsible for developing, updating and revising the exposure control plan. DEHS oversees providing revised copies to the Master Holder for distribution. The Administrator must establish a review schedule for this program to ensure the procedure contains up-to-date information regarding bloodborne pathogens and its Exposure Control Plan.

Individual departments, whose employees are exposed to blood or other potentially infectious materials during work responsibility must write department specific exposure control plan or change sections of this exposure control plan to fulfill the requirements of OSHA standards. The department specific plan must be reviewed by department of Environmental Health and Safety. DEHS must approve the exposure control plan and approved copy must be maintained in the department.

An official hard copy of this bloodborne pathogen exposure control plan is maintained at the EHS office. An electronic version is available on the Environmental health and safety homepage.

4.0 BACKGROUND

Certain pathogenic microorganisms found in the blood of infected individuals can be transmitted to other individuals by blood or other body fluids. University employees and students whose occupational duties expose them to blood and to other potentially infectious materials are at risk of contracting any one of these bloodborne pathogens. Hepatitis B and C and HIV are three of the most significant of these diseases although other emerging and reemerging infectious agents can be transmitted via blood and body fluids.

Bloodborne pathogens are microscopic organisms that are transmitted through blood or other body fluids. They do not survive well outside of the human blood stream or a specifically engineered environment. Bloodborne pathogens are spread through several routes a) Contact with mucous membranes, such as eye, nose or mouth, vagina, and rectum b) Non-intact skin and puncture wounds c) Organ transplants and blood transfusions d) Sexual contact (including oral, vaginal, and rectal intercourse; and direct skin contact) e) Mother to unborn child through the placenta f) Mother to child through the breast milk.

Hepatitis B and C

Hepatitis is a descriptive term meaning inflammation of the liver. The diagnosis of hepatitis does not automatically mean an infection. Hepatitis can also be caused by hazardous chemicals, medications, drugs, alcohol, and a faulty immune system. However, the most common cause of

hepatitis is infection with the hepatitis B hapadnavirus (HBV) or the hepatitis C flavivirus (HCV). HBV and HCV are the major infectious occupational health hazards in the healthcare industry. The Centers for Disease Control and Prevention (CDC) reports that as many as 18,000 healthcare workers may be infected by HBV each year. Nearly 10% of these become long-term carriers of the virus and may have to give up their profession.

Several hundred healthcare workers have become actively ill or jaundiced from Hepatitis B. Hepatitis C has similar etiology and symptoms, with a higher chance of developing chronic disease. It is more prevalent in the United States than Hepatitis B. There is currently no vaccine for HCV. Symptoms of HBV may include jaundice, anorexia, nausea, arthritis, rash, and fever. Patients may have no overt liver symptoms, may present with flu-like symptoms, or experience a more severe course with classic symptoms.

Human Immunodeficiency Virus (HIV)

Infection with HIV in the workplace represents a small but real hazard specially to healthcare workers. Only blood, semen, pre-seminal fluid, rectal fluids, vaginal fluids, and breast milk from a person who has HIV can transmit HIV. These fluids must come in contact with a mucous membrane, or damaged tissue, or be directly injected into the bloodstream (from a needle or syringe) for transmission to occur. Approximately 50% of HIV-infected individuals may exhibit one or more of the following symptoms within 2-4 weeks of initial infection: febrile illness resembling mononucleosis or influenza, which resolves spontaneously; malaise; body aches; maculopapular rash (similar to measles); lymphadenopathy; headache. Presently it is not understood why some people develop symptoms faster than others. It is thought that certain co-factors, such as stress, poor nutrition, alcohol or drug abuse, and certain other sexually transmitted diseases (syphilis), may trigger the virus to begin replication. The CDC reports that the risk of healthcare worker-associated (occupational) HIV exposure is very low, especially if protective practices and personal protective equipment to prevent HIV, and other bloodborne infections, are used. For health care workers on the job, the main risk of HIV transmission is from being stuck with an HIV-contaminated needle or other sharp object. However, even this risk is small. Scientists estimate that the risk of HIV infection from being stuck with a needle used on a person with HIV is less than 1%. However, because of job-related risks and their profound negative impact on healthcare personnel, considerable interest has focused on the possible prevention of HIV infection after an exposure incident. While there currently is no cure for HIV, several drugs are available as effective treatments. With proper treatment, people infected with HIV now live productive lives, similar to those with other chronic diseases. Nonetheless, fear of HIV infection is still a significant concern of healthcare personnel. Therefore, we provide post-exposure prophylaxis, testing, and counseling for any employee receiving a healthcare-associated HIV exposure. The importance of participating in an organized program with immediate counseling available cannot be overemphasized. The decisions involved are extremely complex, and healthcare workers who suffered an exposure often need emotional support as well as medical advice.

5.0 DEFINITIONS

Blood: Human blood, human blood components and products made from human blood.

Bloodborne Pathogens: Pathogenic microorganisms present in human blood and can cause disease in humans. These pathogens include, but are not limited to, Hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Clinical Laboratory: A workplace where diagnostic or other screening procedures are performed on blood or OPIM.

Contaminated: The presence or the reasonably anticipated presence of blood or OPIM.

Contaminated Laundry: Laundry, which has been soiled with blood, or OPIM.

Contaminated Sharps: Any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes and exposed ends of dental wires.

Decontamination: The use of physical or chemical means to remove, inactivate or destroy bloodborne pathogens on an item to the point they cannot transmit infectious particles and the surface is safe for handling, use or disposal.

Employer: Kent State University

Engineering Controls: Controls that isolate or remove the bloodborne pathogen hazard from the workplace. Examples are sharps disposal containers, self-sheathing needles and needleless systems.

Exposure Control Officer: Director, Environmental Health and Safety

Exposure Determination: A list of job titles and tasks where occupational exposure to bloodborne pathogens might occur. The determination is made without regard to the use of personal protective equipment (PPE).

Category I: Employees who, through the course of their delegated work activities are reasonably suspected to encounter contact with blood or OPIM.

Category II: Employees who may periodically or infrequently encounter blood or OPIM during the performance of their delegated work activities.

Exposure Incident: A specific eye, mouth, other mucous membranes, non-intact skin contact with blood or OPIM.

Handwashing Facility: A facility providing an adequate supply of clean running water, soap, single use towels or hand drying machines.

Indirect Incidental Exposure: Exposure to blood or OPIM other than by direct contact. This type of exposure usually occurs during the clean-up of blood or OPIM.

Infectious Waste: Waste contaminated with blood or other potentially infectious material (OPIM), cultures and stocks of infectious agents from laboratory work, or waste from patients in isolation wards and equipment (e.g. swabs, bandages and disposable medical devices)

Licensed Healthcare Professional: A person whose legal scope of practice allows them to independently perform the activities required by paragraph (f) Hepatitis B Vaccination and Post Exposure Evaluation and Follow Up.

HBV: Hepatitis B virus

HIV: Human Immunodeficiency virus

KSU: Kent State University

Occupational Exposure: Reasonably anticipated skin, eye, mucous membrane or parenteral contact with blood or OPIM that may result from the performance of an employee's duties.

Other Potentially Infectious Materials (OPIM): Human body fluids, other than blood that may contain pathogens enough to cause illness in humans. They include:

1. Semen, Vaginal secretions, Cerebrospinal fluid, Pleural fluid, Synovial fluid, Pericardial fluid, Peritoneal fluid, Amniotic fluid, Saliva, in dental procedures, Body fluids visibly contaminated with blood, all body fluids in situations where it is difficult to distinguish between body fluids
2. Any unfixed tissue or organ (other than intact skin) from a human, living or dead.
3. HIV-containing cell or tissue cultures, organ cultures and HIV- or HBV-containing cultures and blood, organs or tissue from experimental animals infected with HIV or HBV.

Parenteral: Piercing mucous membranes of the skin barrier through such events as needlesticks, human bites, cuts and abrasions.

Personal Protective Equipment (PPE): Specialized clothing or equipment worn for protection against a hazard. General work clothes not intended as a protection against a hazard are not considered PPE.

Regulated Waste: Liquid or semi-liquid blood or OPIM; contaminated items that would release blood or OPIM if compressed, items that are caked with dried blood or OPIM and are capable of releasing its contents during handling, contaminated sharps, pathological and microbiological wastes containing blood or OPIM.

Research Laboratory: A laboratory producing or using research laboratory quantities of OPIM and/or generates infectious waste. Research laboratories may produce high concentrations of OPIM or infectious waste, but not in the volume found in production facilities.

Sharps with Engineered Sharps Injury Protection: A non-needle sharp or a needle device for withdrawing body fluids, accessing a vein or artery with a built-in safety feature that effectively reduces the risk of an exposure incident.

Sterilize: The use of a physical or chemical procedure to destroy microbial life, including highly resistant bacteria.

Universal Procedures: An approach to infection control using the concept that all human blood and body fluids are treated as if known to be infectious for HIV, HBV and other bloodborne pathogens.

6.0 EXPOSURE CONTROL PLAN

6.1. OBJECTIVES

This plan establishes the following policies and procedures:

- An exposure determination plan lists job titles, and tasks with potential of bloodborne pathogens (Category I and Category II)
- Category I employees are trained with bloodborne pathogen training and exposure control plan is reviewed annually with these employees.
- Only employees properly trained in the use of Universal Precautions must be allowed to clean blood spills and OPIM.
- Bloodborne pathogen spill clean-up kits are provided and stored in a predetermined location in required building. Contact your supervisor for its location.
- University affected personnel and other employees must receive training in Universal Precautions and the safe clean-up of spills of blood and OPIM.
- Kent State University provides access to Hepatitis B vaccines through University Health Services at no cost to employees identified having exposure to occupational bloodborne pathogens (Category I) and to those employees exposed to bloodborne pathogens.

6.2. SCOPE

- This policy applies to all Kent State University employees and students identified as having the potential to be exposed to blood or OPIM during their work activities. A copy of the ECP will be made available to the employee, within 15 days, upon request.

- DeWeese Health Center, University Facility management, Recreational Services, Public Safety department, University Police department and academic laboratories are responsible for preparing their own written programs that addresses responsibilities, compliance, exposure control plans and work practices specific to those departments. For academic research laboratories, principal investigators are responsible for preparing and implementing laboratory specific exposure control plan.
- The written programs prepared by above mentioned departments must be submitted to the Director of Environmental Health and Safety and the Biosafety officer for review.

6.3 RESPONSIBILITIES

Environmental Health and Safety (EHS)

Director of Environmental Health and safety

- Act as exposure control officer and is responsible for approval, coordination and implementation of Exposure control plan for the entire university.
- keep updates of current legal requirements concerning bloodborne pathogens.

Biosafety officer (BSO)

- Work with department heads, administrators to develop and implement additional bloodborne pathogen related policies and practices needed to accommodate employee and their work practices.
- Provide technical assistance for evaluations of the workplace and answer biological safety questions.
- Investigate all exposure or potential exposure incidents to infectious materials to determine the cause and recommend procedures or engineering controls such as safer sharps as necessary to prevent future incidents.
- Review regulated waste policy to ensure proper packaging, labeling and decontamination before disposal
- Review and update this program annually as required by the Standard.

Environmental Health and Safety Coordinator (EHSC)

- Provide bloodborne pathogen annual training
- Review and update training annually as required by the OSHA Standard
- Investigate all exposure or potential exposure incidents to infectious materials to determine the cause and recommend procedures or engineering controls such as safer sharps as necessary to prevent future incidents.

Department Directors, Department Heads, Principal Investigators, Safety coordinators and ManagersDepartment Directors, Department Heads, Immediate supervisor

- Responsible for developing and implementing Exposure Control plan
- Access exposure determination for each position annually and incorporate finding in department specific bloodborne pathogen exposure control plan
- Provide all employees with training 1) at the time of assignment to the task where occupational exposure may occur and 2) annually thereafter. Departments may utilize online training tools or facilitator led training seminars presented by EHS to fulfill this requirement.
- Responsible for providing and maintaining required personal protective equipment (PPE), engineering controls, universal biohazard signs, biohazard disposal boxes and red biohazard collection bags.
- Ensure that all who are exposed or injured immediately wash the affected area for 15 minutes in an eyewash for facial mucous membrane exposures or wash skin and wounds with soap and water for 15 minutes
- Ensure that exposed or injured staff immediately contact their physician or go to emergency medical services.
- Kent State employees at Kent Campus can contact DeWeese Employee Health services (KSU Kent Campus) for follow-up after an injury or exposure during work hours. After hours employee should go to emergency medical services.
- Ensure the exposed employee completes the Employee Report of Injury Form.

Principal Investigators, Safety coordinators and Managers

- Acquire the knowledge and information needed to recognize and control bloodborne pathogen hazards, develop and implement laboratory specific Exposure Control plan
- Select laboratory practices and engineering controls to reduce the potential for exposure to bloodborne pathogens
- Supervise the performance of his/her staff to ensure the required work practices are followed and ensure appropriate controls (engineering and personal protective equipment) are used and in good working order.
- Ensure that all who are exposed or injured immediately wash the affected area for 15 minutes in an eyewash for facial mucous membrane exposures or wash skin and wounds with soap and water for 15 minutes
- Ensure that exposed or injured staff contact KSU DeWeese Employee Health for follow-up after an injury or exposure.
- Ensure the exposed employee completes the Employee Report of Injury Form.

University Health Services

- Provide pre-exposure access to the Hepatitis B vaccine at no cost to KSU employees identified as having a risk of occupational exposure to bloodborne pathogens and are subject by this program (Section 6.4, category I). Cost of the vaccines shall be the responsibility of the employee's department.
- Provide post-exposure access to the Hepatitis B vaccines at no cost to University employees who had an exposure incident to bloodborne pathogens as identified in this program. Cost of the vaccines shall be the responsibility of the employee's department.
- University Health Services must create a site-specific Bloodborne Pathogens Exposure Control Policy for employees

Employees covered by Bloodborne pathogen exposure control plan

- Complete appropriate training and complete a Hepatitis B vaccination form
- Contact your personal care physician's office to schedule an appointment to receive vaccination (if desired)
- KSU Kent Campus employees can contact University Health services (1500 East way drive, Kent campus. Phone: 330-672-2322) to schedule an appointment to receive the vaccination (if desired).
- Acquire knowledge about duties that have the potential for occupational exposure to bloodborne pathogens.
- Annually complete bloodborne pathogens training sessions.
- Use all the engineering controls, work practices and appropriate personal protective equipment consistently to conduct all operations in accordance with their departmental exposure control plan
- Report to their supervisor, any bloodborne pathogens exposure incidents, near miss situations and all unsafe conditions.

6.4. EMPLOYEE EXPOSURE DETERMINATION

OSHA defines occupational exposure as any reasonably anticipated skin, eye, mucous membrane or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties. Exposure determination must be made without considering the use of personal protective equipment.

Exposure determinations are made by the Biosafety Officer in conjunction with departmental directors, departmental heads, safety coordinators, principal investigators and business managers. Research laboratory personnel exposure is viewed closely by departmental safety coordinator and principal investigators. Exposure determinations of personnel working in non-laboratory areas is reviewed by biosafety officer and departmental administrators prior to conducting annual retraining. University jobs are classified as follows:

Category I: These positions are routinely exposed to blood or other potentially infectious materials. Use of proper personal protective equipment and engineering controls are required for every employee under this category

- Director of Public Safety
- Associate Director of Public Safety
- Police Lieutenant
- Police Sargent
- Police Officer 2
- Police Officer 1
- Head Athletic Trainer
- Assistant Head Athletic Trainer
- Athletic Trainer
- Lifeguards
- Aquatics Supervisors
- Aquatics Coordinator
- Researcher working with Human blood and OPIM
- Researchers working with HCV, HIV
- Custodians
- University Health Center employees
- University Pipe Fitters and Working Supervisors
- ACPM
- MRW
- Plumbers
- MRW Crew Leaders
- Custodial Crew Leaders

Appendix A lists the criteria for determining the risk of occupational exposure to bloodborne pathogens in research work area.

Category II: These positions and tasks are not at risk of an occupational exposure to bloodborne pathogens like category I positions however these positions may have unplanned exposure to bloodborne pathogens

- Resident Advisors, House and Hall Directors, and other staff of Student Housing and Residential Programs who would respond to injuries occurring within University residential buildings
- Academic Personnel who aid injured students or staff
- Child Development Specialist with the Child Development Center responsible for assisting injured children enrolled at the Center

- Maintenance staff who periodically encounter blood and/or OPIM as part of their job duties
- Office workers, graduate students
- Any other University employee who respond as Good Samaritans to assist individuals who are injured

6.5. METHODS OF COMPLIANCE AND CONTROL

This section describes methods of implementation and control to minimize the blood borne pathogen exposure

6.5.1. Universal Precautions

All employees must follow universal precautions during activities involving contact with human blood or other potentially infectious materials (including the handling of contaminated or potentially contaminated equipment). In circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids must be treated as potentially infectious materials. When performing activities involving potential contact the following standard or Universal practices shall be followed:

- Wear gloves when working with human blood or other potentially infectious materials.
- Wash hands with soap and water immediately after removal of personal protective equipment, after glove contamination, prior to leaving the contaminated work area and after using the restroom.
- Wear an impervious gown, apron or lab coat if contamination of clothing by splash or splatter of blood or other potentially infectious materials is possible.
- Wear full face protection if liquids or tissues are handled. Full face protection may be achieved with a fullface shield or safety glasses/goggles and a surgical mask.
- Employees with breaks in the skin should not handle blood or other potentially infectious materials.
- Employees should consult with immediate supervisors and the Biosafety Officer for an evaluation of breaks in the skin to determine if waterproof bandages and double gloving can serve as a barrier to exposure.
- Handle Sharps carefully (See sharp disposal policy below).

6.5.2. Engineering Controls

Engineering controls are the devices that eliminate or reduce the risk of exposure to employees either by removing or isolating hazard away from the employee. Engineering controls are mostly used in clinical facilities or research laboratories. Engineering controls include biosafety cabinets, sharps disposal containers, self-sheathing needles, needless systems etc.

6.5.2.1. Safe Sharp

Criteria for Safer Sharps

- Allows/requires employees' hands to stay behind the needle after use
- Safety feature an integral part of the device, present before the device is contaminated
- Safety feature stays in place throughout the waste system
- Easy to use with little instruction
- Does not interfere with patient care
- Safety feature activated with a one-handed technique

Policy for Safer Sharps

The use of safer sharps or sharp devices in the workplace setting must be an integral part of your exposure control plan. Follow OSHA guidelines to:

- Evaluate safer devices currently available on the market
- Include employees who use these devices for evaluation purposes
- Document these evaluations and choices
- Choose those safer devices that meet your needs
- Reevaluate as new devices become available at least annually

Exceptions to using safer sharps:

- No safer sharps are available for the procedure (have not been developed yet)
- Temporarily unavailable on the market (must continue attempting to obtain)
- Sharp interferes with patient care
- Poses greater safety risk to patient or employee
- Sharp is produced by only one manufacturer

Use engineered sharps injury protection devices wherever feasible. If safer sharps are not available, evaluate other methods to reduce the chance of injury, such as devices used to permanently cover the contaminated point.

Recapping needles is not recommended in workplaces, although when recapping of contaminated needles is medically necessary, a one-handed technique or a mechanical device will be used. Tube/needle holders used for collecting blood specimens will be discarded into the sharps container with the needle attached.

All sharps injuries involving contaminated sharps must be documented on a Sharps Injury Log that must be maintained for thirty years past the last day of employment. The injury will also be documented in the same manner as all exposures.

Re-evaluate the effectiveness of your plan each year. This will include a review of our Sharps Injury Log. Also evaluate new safer medical devices each year and revise your choices if better devices come on the market.

Safe sharp evaluation procedure

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

- Each year review your reported sharps injuries and/or device failures for the past year to determine if additional personnel training is required or if certain devices should be replaced.
- If training is needed, contact the manufacturer or appropriate training resources. Provide and document the additional training.
- If certain devices seem problematic, initiate an effort to find safer replacements by contacting:
 - Our supplier
 - The device manufacturer
 - Other appropriate sources for suggestions
- Even if there are no sharps injuries or device failures, each year evaluate new safer devices that are available by:
 - Requesting information from our supplier
 - Contacting manufacturers
 - Searching the internet
- When improved devices are available, determine if they would be useful in your setting and request samples from our supplier and/or the manufacturer.
- Evaluate these devices and document your findings. Employee-users must be included in the evaluation process.

6.5.2.2. Sharps Containers

Sharp containers must be easily accessible where sharps are stored, handled or reasonably anticipated to be encountered. These containers must meet the following criteria: 1) Puncture resistant 2) leakproof on sides and bottom 3) closable 4) properly marked. Infectious waste sharp containers must be disposed through the designated infectious waste vendor.

6.5.2.3. Sharp Handling

Handling and disposing of sharps must follow safe work practices outlined below

- Reduce use of all sharps and try to use plastic alternatives whenever possible
- Dispose of the needle and syringe as an intact unit immediately after use. Do not remove needles from syringes
- Never recap needles.
- Never pick up broken glass by hand; use mechanical means (brush and dustpan, tongs, or forceps). Dispose broken glass in glass disposal container.

- Dispose of sharps promptly in properly labeled and colored sharps container
- Sharp containers must be kept in the immediate vicinity of use
- Sharps container must never be opened, emptied or cleaned manually, which would expose employee to the risk of percutaneous injury.
- The containers must remain upright and not be overfilled. Replace sharps containers when they are 3/4 full to prevent overfilling. The container must be closed prior to removal from the area to prevent spillage or protrusion of contents. Appropriate secondary containment must be used if leakage is possible.
- Reusable laboratory needles, scalpels, blades and knives contaminated with potentially infectious materials are handled as follows
 - Place them in a puncture-resistant container that is leak-proof on the sides and bottom and is labeled with the biohazard symbol
 - The containers used for transporting contaminated sharps will be closed during transport in preparation for cleaning and sterilization, instruments will be retrieved from the container by mechanical means only
 - Anytime these instruments need to be scrubbed prior to sterilization, the employee will wear appropriate personal protective equipment. A long-handled brush will be used.
 - Instruments will be processed for patient use according to manufacturer guidelines based on the intended use of the instrument

Other than clinical and research laboratories, some employees may use sharp devices at work to manage their medical conditions. These sharps include 1) **Needles** – hollow needles used to inject drugs (medication) under the skin 2) **Syringes** – devices used to inject medication into or withdraw fluid from the body 3) **Lancets**, also called “fingerstick” devices – instruments with a short, two-edged blade used to get drops of blood for testing. Lancets are commonly used in the treatment of diabetes. 4) **Auto Injectors**, including epinephrine and insulin pens – syringes pre-filled with fluid medication designed to be self-injected into the body 5) **Infusion sets** – tubing systems with a needle used to deliver drugs to the body.

These sharps must be disposed immediately in approved sharps container but if sharps container is not available, heavy-duty plastic household container, such as a laundry detergent container can be used as an alternative (FDA Be Smart with Sharps, Appendix B).

6.5.2.4. Biosafety cabinets

Most of the activities involving potentially infectious materials must be conducted in biosafety cabinets (BSC) unless you are planning to work with very small volume of human blood or human blood products. Small volume less than 500µl of human blood, serum, plasma must be handled on a open counters or benches with proper precautions A standard operating procedure must be

written for laboratory specific procedures and every lab personnel must be trained with this Standard operating procedure before starting work with biological material. Biosafety cabinets must be certified when originally installed, following repairs or when moved. Biosafety cabinets used for BSL2 work in the laboratories must be certified annually. BSCs in combinations of personal protection or physical containment devices, such as special protective clothing, respirators, centrifuge safety cups, sealed centrifuge rotors and containment caging for animals, must be used for all activities with "other potentially infectious materials" that pose a threat of exposure to droplets, splashes, spills or aerosols.

6.5.3. General work Practices in laboratories

Researchers must follow good work practices when working in research laboratories

- Activities like eating, drinking, smoking, applying cosmetics or lip balm and handling contact lenses are prohibited in laboratories
- Do not store food and drink in refrigerators, freezers, shelves, cabinets or on countertops or benchtops in the laboratory or where blood or other potentially infectious materials are stored.
- Remove personal protective equipment worn in the laboratory and wash hands before entering offices, lunch area or break area. Protective clothing worn in the laboratory is not to be worn outside the laboratory or patient care area.
- All procedures involving blood or other potentially infectious materials must be performed with precautions to minimize splashing, spraying, spattering, and generation of droplets of these substances.
- All shippers of infectious material must be trained on DOT/IATA shipping regulations. IATA training is required every two years and DOT training every three years. For information on where to receive training, contact the EHS office.

6.2.4. Hand washing

Employees must wash their hands and any other body part potentially contaminated with blood or other potentially infectious materials with soap and running water immediately. Employees must also wash their hands immediately after removing gloves. Each department must provide all covered employees and students with readily accessible hand washing facilities. If this is not possible due to the nature and location of the activity being conducted, antiseptic towelettes/cleansers must be provided. When antiseptic hand cleansers or towelettes are used, hands must be washed with soap and running water as soon as feasible and should be dried with forced air or disposable paper towel.

6.2.5. Specimen handling and processing

Departments and laboratories involved handling specimens of blood and potentially infected material must maintain standard operating procedures for handling, processing, spill control and decontamination of these materials. These specimens must be stored in a leak-proof container during collection, handling, processing and storage. When transporting specimens between labs or buildings, following requirements must be followed a) A sealed primary container b) A sealed secondary container c) secondary container lined with absorbent material d) a biohazard sticker on the outside of secondary container with agent name listed and e) name and phone number of the contact person's information.

6.2.6. Equipment decontamination

Cleaning equipment, Laboratory equipment may become contaminated with blood and other potentially infectious materials during cleaning, sample processing, must be examined for contamination after each use. Routine decontamination and cleaning protocol must be established for such equipment. A readily observable biohazard label must be attached to the laboratory equipment. Principal Investigator must ensure this information is conveyed to all students, technicians and employees, prior to handling, and processing samples with these equipments so that appropriate precautions must be taken.

6.2.7. Personal Protective Equipment (PPE)

Personal Protective Equipment (PPE) is specialized clothing worn by employees for protection against potential exposure hazard. Individual departments are responsible for ensuring that employees with potential exposure of bloodborne pathogen during their daily responsibilities are trained and understand the appropriate use of PPE needed to perform specific tasks or procedures. Departments and principal investigators must provide necessary PPE to category I employees and students and when required to category II employee. PPE storage location and individual responsible for maintaining the stock, must be listed in individual department exposure control plan.

The following PPE must be used when appropriate:

- **Gloves:** Gloves shall be worn when it is reasonably anticipated that employees may have hand contact with blood, OPIM non-intact skin and mucous membranes, 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 feasibly possible after contamination, or if they are torn or punctured. Utility gloves may be decontaminated for reuse provided their integrity is not compromised. Gloves must be discarded if they show signs of cracking, peeling, tearing, puncturing or deterioration.
- **Masks:** Masks are required to be worn to shield nose and mouth whenever splashes, spray, splatter or droplets of blood or OPIM may be generated. The disposable surgical

mask must be used while working with blood or OPIM. Do not use washable cloth mask during the activities with blood work.

If work requires the use of a respirator, employees must participate in the University's respiratory protection program. Personnel must have prior medical clearance to wear a respirator and must consult with EHS on the selection and use of respiratory protection equipment. Annual fit testing is also required.

- **Lab coats:** Lab coats are required to be worn in research laboratories where research activities involve work with blood or other potentially infectious material.
- **Face shields or Safety goggles:** Safety goggles are required during laboratory research activities whenever splashes, spray, splatter or droplets of blood or OPIM may be generated.

6.2.8. Housekeeping

- All areas of the facility where there is the potential for bloodborne pathogens or other potentially infectious material exposure must be cleaned in accordance with protocols and methods developed by Custodial Services. Custodial staff supervisors must determine and implement appropriate written schedules for cleaning and method of decontamination.
- For research laboratories, Principal Investigators must provide methods of cleaning and decontamination of laboratory work area to students, technical or professional staff who are involved in housekeeping activities.
- Regulated infectious (biohazardous) waste must be placed in leak proof, appropriately labeled or color-coded containers, lined with plastic bags that are closable, constructed to contain all contents and prevent leakage (as specified in section 6.2.12, "Labeling and Signage"), and closed prior to removal to prevent spillage or protrusion of contents during handling. Research laboratories must include specific infectious waste handling in laboratory Exposure Control plan.
- Employees must use mechanical means, such as tongs or a broom and dustpan, to pick up contaminated sharps, including contaminated glassware and must dispose of these items in a sharps disposal container.
- All equipment and work surfaces are cleaned and decontaminated as soon as feasible after contamination and after completion of work procedures. Principal Investigators or area supervisors must ensure that all equipment and work surfaces are cleaned and decontaminated after contact with blood or other potentially infectious materials.

6.2.9. Regulated Waste

All infectious (regulated) waste, including but not limited to blood and OPIM must be handled, packaged, transported and disposed of in accordance with Ohio Administrative Code Chapter

3745-27: Chapter 3745-27: Solid and Infectious Waste Regulations. If you have any question about regulated waste, you must reach out to Environmental Health and Safety office.

6.2.10. Laundry

- Contaminated clothing is never taken home for laundering. Contaminated laundry must be handled as little as possible, with minimal agitation.
- DeWeese Health Center, University Facility management, Recreational Services, Public safety department, University Police department must establish protocol to handle contaminated laundry. The protocol must be part of department specific exposure control plan.
- Individual research departments must use onsite laundry facility to clean contaminated clothing. A protocol must be part of individual laboratory's exposure control plan. Research departments, who do not have onsite laundry facility must establish a contract with commercial cleaning services to clean contaminated clothing and this information must be included in individual laboratory's exposure control plan.

6.2.11. Bloodborne Pathogen Cleanup Procedure

Blood or other potentially infectious material (OPIM) spill cleanup procedure outlined below, however individual departments and research laboratories with category I employees must modify this procedure to fit best to their work responsibilities

- Notify your supervisor of the need for a body fluid clean up. Give the exact location and wait for the supervisor to arrive before cleaning the spill.
- Don all required Personal Protective Equipment (PPE) required for use during a body fluid spill clean-up.
- Apply coagulant or an absorbent compound to the body fluid spilled. Use enough absorbent to soak up the spill completely. The spill must be completely absorbed for decontamination.
- Pick up the absorbent material using the scraper provided in the spill kit, or a broom and dustpan.
- Place all spill material in a trash bag for disposal.
- Place the dustpan and broom in the janitor's sink for decontamination.
- Clean and disinfect the spill area using a suitable disinfectant, following the label instructions.
- After mopping the area with disinfectant, empty the mop bucket down the sink. Rinse the mop bucket and mop well. Fill the mop bucket with water and one cup of vinegar. Let the mop soak overnight in the solution.

- Rinse the broom and dustpan with clear water to remove any material on them. Spray the dustpan and broom with disinfectant and allow to air dry.
- Rinse the vinyl gloves in running water to remove any residual material. Carefully remove the gloves and place them in the trash bag.
- Wash your hands completely with soap and water.
- Remove any other PPE and dispose in the trash bag.
- The supervisor is responsible for restocking the body fluid spill cleanup kit, if necessary.

Blood & Bodily Fluid Clean-up Kit

Blood and bodily fluid cleanup kit must contain absorbent material, appropriate disinfectant solution, proper personal protective equipment and instruction sheet. Individual departments and laboratories with category I employees must maintain detailed information about clean up kit in their exposure control plan.

6.5.12. Labeling and Signage

Appropriate labelling and signage must be used to advise employees about the presence of blood or/and other potentially infectious materials.

Labeling

Universal biohazard labels must be attached to containers of regulated waste, refrigerators, freezers containing blood or other potentially infectious materials. Warning labels must be attached to other containers used to store and transport blood or other potentially infectious materials. Labels must be attached to equipment used for processing of these samples. Warning labels must contain international biohazard symbol in fluorescent orange or orange red with lettering or symbols in contrasting color. Labels must be attached with adhesive or other methods that prevent their loss or unintentional removal.

Signage

All clinical laboratories and research laboratories (working with blood or other potentially infectious material) must have door sign containing universal biohazard symbol at all entrances to work areas. The sign must contain "BIOHAZARD" and must include: 1) name of infectious agent, 2) special requirements for entering the area and 3) name and telephone number of the laboratory director or another responsible person(s). (Appendix C)

SECTION 7 HIV AND HBV RESEARCH LABORATORIES

In addition to the other protective measures outlined in this exposure control plan, HIV and HBV

research laboratories must follow stringent protective measures. Work practice regulations are listed as follows. Currently there are no HIV and HBV laboratories on KSU Kent Campus and other regional campuses.

- Laboratory access must be restricted to authorized personnel who have been trained for potential hazard, specific entry and exit requirements, PPE requirements, decontamination procedure and incident reporting protocols. (Specify all protective measures in laboratory specific ECP.)
- All laboratory doors must be kept closed when work involving HIV or HBV is in progress.
- All contaminated materials must be decontaminated at a site away from the work area and must be packaged in durable, leak proof, labeled or color-coded containers that are closed prior to removal from the work area.
- When OPIM or infected animals are present in the work area or containment module, door signage must be posted at all entry ways of the work area. Door signs must include universal biohazard symbol (must be fluorescent orange-red or predominantly so, with lettering and symbols in a contrasting color); the name of the infectious agent; special requirements for entering the area; and the name and telephone number of the laboratory supervisor/investigator or other responsible person.
- All activities involving HIV, HBV and OPIM must be conducted in biological safety cabinets or other physical-containment devices within the containment module.
- Protective clothing must be decontaminated prior to laundering.
- All vacuum lines must be protected with liquid disinfectant traps and high- efficiency particulate air (HEPA) filters or filters of equivalent or superior efficiency. These must be checked routinely and maintained or replaced as often as necessary. Glass disinfectant traps must be placed in appropriate secondary containment.
- Hypodermic needles and syringes must be used only for parenteral injection and aspiration of fluids from laboratory animals and diaphragm bottles. Only needle- locking syringes or disposable syringe-needle units (i.e. the needle is integral to the syringe) must be used for the injection or aspiration of OPIM.
- All spills must be immediately contained and cleaned by appropriate professional staff or others properly trained and equipped to work with potentially concentrated infectious materials. A spill or accident that results in an exposure incident must be immediately reported to the laboratory director or other responsible person.
- A biosafety manual has been adopted, is reviewed and updated at least annually and is incorporated into lab practices and procedures.
- All activities with OPIM that pose a threat of exposure to droplets, splashes, spills, or aerosols must be conducted in a certified biological safety cabinet or other appropriate combinations of personal protection of physical containment devices. Biological safety cabinets must be certified when installed, whenever they are moved, and at least annually.
- An eye wash and hand washing facility, autoclave for decontamination process must be readily available within the work area.
- Work areas must be separated from areas of unrestricted traffic flow within the building. Passage through two sets of doors must be the basic requirement for entry into the work area from access corridors or other contiguous areas. Access doors to the work area or containment module shall be self-closing.

- A ducted exhaust-air ventilation system with directional airflow that draws air into the work area through the entry area must be installed in the work area. The exhaust air must be dispersed away from occupied areas and air intakes. The proper direction of airflow must be verified.
- Employees in HIV or HBV research laboratories must receive initial training in addition to training requirements listed above. Employees must demonstrate proficiency in standard microbiological practices and techniques, as well as proficiency in practices and operations specific to the facility before permitting to laboratory.
- A training program will be provided to employees who have no prior experience in handling human pathogens. Initial work activities shall not include the handling of infectious agents. A progression of work activities shall be assigned as techniques are learned and proficiency is developed. The employers shall assure that employees participate in work activities involving infectious agents only after proficiency has been demonstrated.

SECTION 8 MEDICAL SURVEILLANCE

8.1. Hepatitis B Vaccination Policy

Kent State University complies with OSHA's guidelines for Hepatitis B immunization, medical evaluations and procedures and post-exposure follow-up to covered employees as well as employees experiencing an exposure incident. University Health Services (UHS) at Kent campus offer the Hepatitis B vaccine to each occupationally exposed employee from category I, before his/her initial assignment, however employees can contact their primary care physician to receive Hepatitis B Vaccine. Employees whose duties are entirely administrative and are not at risk for exposure to bloodborne pathogens are not subject to the Bloodborne Pathogen Standard. However, UHS must offer Hepatitis B vaccine to these employees using the same guidelines as is used for the occupationally exposed employee.

Employees from category I must complete Hepatitis B Vaccination consent/ declination form (Appendix D) before their first assignment. For employees who accept the offer of immunization, can receive the first injection within the first 10 days of assignment. This must be done at no cost to the employee. It must be done during the normally scheduled work time.

Students exposed to blood or other potentially infected material because of their coursework or research activities, must be provided with bloodborne pathogen trainings and Hepatitis B vaccination information. Students involved in this kind of work must sign student consent/declination form for Hep B vaccination. (Appendix E)

The immunization must be three shots of the standard dose administered in the deltoid by a licensed healthcare worker who is authorized to administer such injections within his/her scope of practice. A pre-vaccination titer for Hepatitis B antibody is not required unless 1) employee has been previously immunized 2) vaccination is medically contraindicated.

The employee may decline the immunization, in which case he/she must be required to sign the approved declination form. If the employee initially declines the Hepatitis B vaccination but later decides to accept the vaccination while still employed with the same employer, it must be provided under the same conditions.

Documentation of the Hepatitis B immunization series and titer results will be documented at respective health clinics.

In accordance with the *Health Insurance Portability and Accountability Act* or HIPPA, effective April 2003, all patient-related medical information must be kept confidential.

8.2. Post Exposure Follow Up

Under the Bloodborne Pathogen Standard, an occupational exposure incident is defined as “a specific eye, mouth, or other mucous membrane, non-intact skin, contaminated needle stick or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee’s duties.” When such an incident occurs, certain follow-up activities must be performed. These follow-up activities must be provided by the employer at no cost to the employee and must be conducted in a confidential manner.

Employees can contact their primary care physician, other clinics or emergency room for post incidental exposure follow up. KSU health services at the Kent campus offers post incidental exposure follow up during the working hours to employees. It is a responsibility of health care provider to offer post exposure follow up as per blood borne pathogen exposure standard.

As part of the post exposure follow up, the Individual department of the incident employee must complete the following

- Document all details of the incident in “Exposure Incident Report Form”.
https://www.kent.edu/sites/default/files/file/employee-report-of-injury_2.pdf
- Have employee sign declination form if no follow-up is desired (Appendix H). If this is the case, you may stop here. Otherwise, you should recommend employee to seek medical help for blood borne pathogen exposure.

8.3. Post Exposure Follow Up Documentation

- Department should maintain exposure incident report form and follow up declination form for 30 years beyond the end of the employee’s employment.
- Document summarized information on the Sharps Injury Log and PERRP300 (Bureau of Workers Compensation’s (BWC) Public Employer Risk Reduction Program (PERRP) has adopted OSHA’s Private industry recordkeeping standards.) log form if applicable.

Healthcare professional who offered post exposure follow up care should maintain a copy of medical record and make it available to employee on request.

8.4. Evaluating Circumstances Surrounding an Exposure Incident

Departmental supervisors are responsible for collecting and reviewing circumstances surrounding of exposure incidents with the help of the office of Environmental Health and Safety. The following items must be considered while evaluating exposure incident.

- Work practices in use at time of the exposure incident
- Personal protective equipment or clothing used at the time of the exposure incident (gloves, eye shields, etc.)
- Location of the incident
- Procedure being performed when the exposure incident occurred
- Employee's training
- Engineering controls in use at time of the incident (if available at the location of incident)
- A description of the device being used, if applicable (name and model)

If the review of the circumstantial surrounding of an exposure incident results in a need for changes in procedures or protocols to reduce the occupational exposure, then Exposure Control Plan (ECP) must be revised to incorporate new changes. Revisions must be reviewed by departmental directors, biosafety officer and principal investigators to ensure appropriate changes are made to ECP.

SECTION 9 RECORDKEEPING

9.2. Training Records

EHS must maintain all training records. Individual departments must maintain training certificates and Hepatitis b vaccination consent/declination for employees from category I, and post exposure follow up declination form. EHS must ensure all required training records are maintained for 5 years from the date on which the training occurred. Departments performing their own training are responsible for maintaining records at their departments.

9.3. Availability of Training and Medical Records

EHS must ensure all required training records are made available upon request for examination and copying to employees, to employee representatives, to the Assistant Secretary of Labor for Occupational Safety and Health (or designated representative) and the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services (or designated representative) in accordance with 29 CFR 1910.20. Medical records can be obtained

from respective clinics, for examination and copying to the subject employee, anyone having written consent of the subject employee, the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services (or designated representative) and the Assistant Secretary of Labor for Occupational Safety and Health (or designated representative) in accordance with 29 CFR 1910.20.

10. SHARPS INJURY LOG

Kent State University has established and maintains a sharps injury log for the recording of percutaneous injuries from contaminated sharps maintained as outlined in 29 CFR 1904.6. Compliance and Risk Management is responsible for determining whether an exposure or Sharps injury meets the recordkeeping requirements of the State of Ohio Public Employment Risk Reduction Program (PERRP). Environmental Health and Safety (EHS) Maintains and records for all injuries provides this information to the applicable college/department OSHA Log Coordinator. Environmental Health and Safety (EHS) is responsible for recording applicable cases on PERRP 300P Logs as required by PERRP; records must be kept for 5 years. This information is compiled in a University wide PERRP 300P summary by EHS and is submitted annually to PERRP. In addition to the PERRP 300P recordkeeping requirements, all percutaneous injuries from contaminated sharps are recorded on a PERRP Sharps injury and Needlestick Reporting. All incidences must include at least the following:

- date of the injury
- type and brand of the device involved (syringe, suture needle)
- department or work area where the incident occurred
- explanation of how the incident occurred

All PERRP sharps injury and needlestick reporting forms are reviewed as part of the annual program evaluation and maintained for at least five years following the end of the calendar year covered. All needlesticks are reported to PERRP by Environmental Health and Safety.

APPENDIX A

Criteria for Determining the Risk of Occupational Exposure to Bloodborne Pathogens

Please answer the following questions. If the answer for any of the following questions is “yes”, then the lab personnel is at occupational risk of contracting bloodborne pathogens.

Does job responsibilities in your work area involve work with

- Human blood
- Human blood components, or products (Plasma, serum, platelets)
- Human body fluids (semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures)
- All other human body fluids in situations where it is difficult or impossible to differentiate between body fluids
- Human-derived materials that may be contaminated with blood.
- Unfixed human organs or tissues. (Tissues and organs fixed in formaldehyde or chemical preservative such as alcohol are called “fixed)
- Primary human cells or cultures (Monocyte, T lymphocytes)
- Established Human cell lines that have not been screened against all human bloodborne pathogens
- Animals that have been experimentally infected with HIV, HBV or HCV.
- Blood and tissues from experimental animals infected with HIV, HBV or HCV.
- Cell lines or tissue cultures containing HIV, HBV or HCV.
- Culture media or other solutions which contain HIV, HBV or HCV.
- Unfixed human tissue or organs, animals and tissues of animals known to be infected with HIV, HBV, or HCV, known to contain HIV, HBV, or HCV.

*If a research lab receives blood or blood tissue which has already been tested for the agents and has been deemed to be bloodborne pathogen negative, then lab do not need to have a lab specific exposure control plan

APPENDIX B

Use a Sharps Container

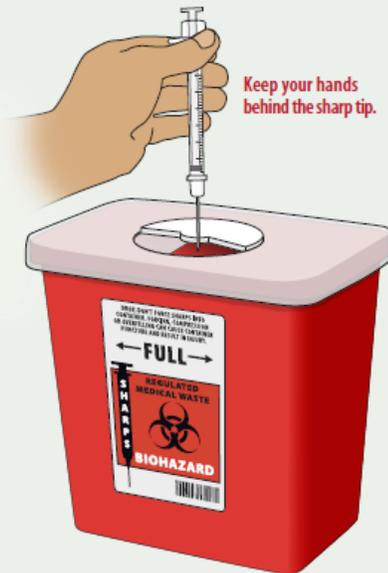
1 Visually check sharps container for hazards before handling. Read all labels.

MAKE SURE
container is not overfilled or damaged.

CHECK
that container is large enough to fit your sharp.



2 Put sharp in container immediately after use.



Discard a Sharps Container

Stop using sharps container when 2/3 full or filled to FULL line.



1 Close sharps container as instructed on label. Different containers have different closures.



2 Bring sharps container to a sharps disposal program.



Find a program through your local waste or public health department, your doctor, veterinarian, hospital or pharmacist.

TYPES OF SHARPS DISPOSAL PROGRAMS:

- Mail-back program
- Drop box or supervised collection site
- Special waste pick-up service
- At-home needle destruction device
- Syringe exchange program (SEP)
- Hazardous waste collection site

For information about rules and laws in your community, contact the Coalition for Safe Community Needle Disposal at 800.643.1643. For more information on sharps visit fda.gov/safesharpsdisposal or safeneedledisposal.org.

If You Cannot Get a Sharps Container...

FDA RECOMMENDS ALWAYS USING FDA-CLEARED CONTAINERS

If you do not have a sharps container, use an empty household container with these features:



DO NOT USE

These containers can break or puncture easily.



Dispose of a household sharps container when it is 2/3 full:

1 Close lid and tape shut. Label container.



2 Bring container to a sharps disposal program.

If you cannot find a disposal program, put container in center of full trash bag and discard in regular trash.*



* In some areas it is illegal to dispose of sharps in the trash. Please follow your community guidelines.

Appendix C



WARNING

**BioSafety
LEVEL 2**

Authorized Personnel Only

Moderate Contaminant / Moderate Risk

Biological Agents:	
Special Instructions, PPE or Requirements Pre-Entry or Exit:	<ul style="list-style-type: none"> Standard Microbiological Practices Long Pants, Closed Toed Shoes, Lab Coats, Safety Glasses and Gloves must be worn during all procedures. No Food or Drink is permitted. All personal protective equipment must be removed before leaving the laboratory.

<https://www.kent.edu/compliance/biological-safety>



APPENDIX D

Employee Consent to Hepatitis B Vaccination

I understand that because of my position I may have exposure to the Hepatitis B virus through exposure to blood or other potentially infectious materials. I hereby give my consent to receive the Hepatitis B vaccination series.

I have received information that because of the vaccination, I may experience some side effects such as

- | | |
|-----------------------------------|--------------------|
| 1. Soreness at the injection site | 5. Local reaction |
| 2. Fatigue | 6. Rash |
| 3. Fever | 7. Headache and/or |
| 4. Joint pain | 8. Dizziness |

I certify that I have received training on Hepatitis B infection and immunization, and I understand the potential hazards. I have received information on the procedure for obtaining the Hepatitis B series, at no charge, at the Kent State University Health Services. I will schedule an appointment at a suitable time.

Employee Name

Employee Signature

Date

.....

Employee Declination to Receive 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 received the opportunity for vaccination with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future, I continue to have occupational exposure to blood or other potentially infectious materials and I want to the vaccination with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Date

Signature – Employee

Date

Signature – Witness

* Maintain signed form in the department and send a copy of this form to EHS office at [EHS @kent.edu](mailto:EHS@kent.edu)

APPENDIX E

Student Consent to Hepatitis B Vaccination

I am 18 years of age or older, and I understand that because of my coursework or research activities, I may have an exposure to the hepatitis B virus through exposure to blood or other potentially infectious materials. I hereby give my consent to receive the hepatitis B vaccination series.

I have received all or part of the hepatitis b vaccination series: YES NO

If yes, provide month and year for each vaccination: _____

I have received information that because of the vaccination and I have had the opportunity to ask questions. I understand that there is no guarantee that I will become immune from hepatitis b and that I may experience some side effects such as

- | | |
|-----------------------------------|--------------------|
| 1. Soreness at the injection site | 5. Local reaction |
| 2. Fatigue | 6. Rash |
| 3. Fever | 7. Headache and/or |
| 4. Joint pain | 8. Dizziness |

I certify that I have received training on Hepatitis B infection and immunization, and I understand the potential hazards. I have received information on the procedure for obtaining the hepatitis B series, at the Kent State University Health Services. I will schedule an appointment at a suitable time.

Student Name

Student Signature

Date

.....
Student Declination to Receive Hepatitis B Vaccination

I understand that due to my exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have received information on the procedure for obtaining the hepatitis B series, at the Kent State University Health Services. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I will be at risk of acquiring hepatitis B, a serious disease. If in future, if I continue to have occupational exposure to blood or other potentially infectious materials and I want the hepatitis B vaccine, I can obtain the vaccination series at Kent State University Health Services.

Date

Signature – Student

Date

Signature-Witness



Instructions: This form is to be used to report needlestick or sharps injuries by personnel in your organization responsible for reporting such incidents to the Public Employment Risk Reduction Program. It is preferred that the public employer submit all forms via the Internet.

Public employer information

1) Employer: _____ 2) Facility: _____ Risk #: _____

3) Address: _____

4) City: _____ 5) State: OH 6) ZIP code: _____ 7) County: _____

Address of reporter if different from facility where injury occurred (no P.O. boxes): _____

8) Date reported: _____ By: _____ Phone: _____

Injury information

9) Date of injury: _____ 10) Time of injury: _____ 11) Age of injured: _____ 12) Sex of injured: Male Female

13) Type of Sharp: Needle

- Blood gas syringe Insulin syringe with needle IV catheter- loose Needle connected to IV line
 Needle factory-attached to syringe Other nonsuture needle Other syringe with needle
 Prefilled cartridge syringe (i.e. Tubex-type) Syringe- other Tuberculin syringe with needle Vacuum tube collection
 Winged steel needle

Surgical instrument (non glass)

- Lancet Other non-glass sharp Scalpel Staples Suture needle Trocar Wire

Glass

- Ampule Blood tube Other glass Other tube Slide

14) Brand (write brand name or "unknown"): _____ 15) Model number: _____

16) Job classification of injured person: Aide (e.g. CNA/HHA) Chiropractor CRNA/NP EMT/paramedic Firefighter
 Housekeeper/laundry LPN Maintenance MD/DO Other PA Phlebotomist/lab tech
 Respiratory therapist RN Road crew School personnel (not nurse) Sewer & Sanitation Surgery assistant/OR tech

17) Employment status of injured person: Contractor/contract employee Employee Other Student Volunteer

18) Type of location/facility/agency where sharps injury occurred: Bloodbank/center/mobile Clinic Correctional facility EMS/fire/police
 Home health Hospital Laboratory (freestanding) Other Outpatient treatment (e.g. dialysis -infusion therapy)
 Radiology Residential facility (e.g. MHMR-shelter) School

19) Work area where sharps injury occurred (select best choice): Autopsy/pathology Blood bank/center/mobile Central sterile
 Critical care unit Dialysis room/center Emergency dept. EMS/fire response Field (non EMS)
 Floor - not patient room Home Infirmary Laboratory L&D Medical/outpatient clinic OR
 Patient/resident room Pre-op or PACU Procedure room Radiology Roadside park Seclusion room
 Service/utility area (e.g. laundry) Sewage treatment facility Other

20) Original intended use of sharp: Contain specimen/pharmaceutical Cutting (surgery) Draw arterial sample Draw venous sample
 Drilling Electrocautery Finger stick/heel stick Heparin or saline flush Injection - IM Injection - SC/ID
 Obtain body fluid/tissue sample Other injection/aspiration IV Start IV or set up heparin lock Suturing - deep
 Suturing - skin Unknown/NA Wiring Other

Injury information - continued

- 21) When did injury occur? Before After During ...the sharp was used for its intended purpose.
- 22) If the exposure occurred "during" or "after" the sharp was used, was it: Because the injured was bumped during the procedure
 Because the item was placed in an inappropriate place (e.g. table/bed/trash)
 During OR procedure reaching for or passing instrument While disassembling
 While the sharp was being placed in a container While recapping Other
- 23) Involved body part: Arm (but not hand) Face/head/neck Hand Leg/foot Torso (front or back)
- 24) Did the device being used have any engineered sharps injury protection? Yes No Don't Know
- 25) Was the protective mechanism activated? Yes No Don't Know
- 26) Was the injured person wearing gloves? Yes No Don't Know
- 27) Had the injured person completed a hepatitis B vaccination series? Yes No Don't Know
- 28) Was there a sharps container readily available for disposal of the sharp? Yes No Don't Know
- 29) Had the injured person received training on the exposure control plan in the 12 months prior to the incident? Yes No Don't Know
- 30) Exposed employee: If sharp had no engineered sharps injury protection, do you have an opinion that such a mechanism could have prevented the injury?

Yes No

Explain: _____

- 31) Exposed employee: Do you have an opinion that any other engineering, administrative, or workpractice control could have prevented the injury?

Yes No

Explain: _____



Bureau of Workers' Compensation

Public Employment Risk Reduction Program

State of Ohio

Division of Safety and Hygiene

13430 Yarmouth Drive
Pickerington, Ohio 43147

614-644-2246 or 800-671-6858

Fax: 614-621-5754

APPENDIX G**Informed refusal of post exposure medical evaluation**

I, _____, am an employee of Kent State University. My employer has provided me training regarding blood borne pathogens and the risk of disease transmission during my work responsibilities.

On _____, 20_____. I was involved in an exposure incident

My employer has offered to provide follow-up medical evaluation for me in order to assure that I have full knowledge of whether I have been exposed to blood borne pathogen causing infectious disease from this incident. However, I, of my own free will and volition, and despite my employer's offer, have elected not to have a medical evaluation. I have personal reasons for make this decision.

Employee	Signature
	Date
Witness/ supervisor	Signature
	Name
	Address
	_____/_____/_____
	City State Zip Code
	Date

*Please complete the form and send an electronic copy of this form to HR or EHS office at Ehs@kent.edu

APPENDIX H

Departmental exposure control plan template

Departments with Category I employees must abide Kent State University blood borne pathogen program and develop suitable exposure control plan for their department.

This Exposure control plan is for the following department.

Department	
Preparation Date:	
Person(s) responsible for implementation and maintenance of departmental exposure control plan:	
Location(s) where a copy of this plan can be found (Campus, Building, Room #):	

Procedures

To complete the requirements of the BBP standard, complete the following steps:

- Review this document and edit to adapt the plan to meet your departmental needs. The departmental plan must be reviewed or revised if necessary, at least annually.
- Departmental personnel who may occupational expose to blood or other potentially infectious material (OPIM) must complete Flash train Bloodborne Pathogens training and review exposure control plan annually.
- New Hired employees must complete online Flash train Bloodborne Pathogens training and review exposure control plan within one month of hire date if they may expose to blood other potentially infectious material (OPIM) during their job responsibilities.
- Ensure that exposed personnel have read and completed the Hepatitis B vaccination/declination form
- Ensure that a copy of this plan be readily accessible in the department at the designated location above for reference and/or review.

The Purpose of the Kent State University (KSU) Bloodborne Pathogen (BBP) Program is to protect employee, faculty and students from exposure to human blood and other potentially infectious material. During normal work activities, the possibility of exposure to bloodborne pathogens exists when they:

- 1.1. Treat injures or ill individuals who are infected with or carry a bloodborne pathogen.
- 1.2. Clean up spills of blood, blood products, vomit, stool or other infectious materials (Indirect Incidental Exposure)
- 1.3. Handle blood, or other potentially infectious materials (OPIM) during laboratory examinations or tests
- 1.4. Research faculty and students work with human blood, human blood products and human tissue and human cell lines

The program is in place to ensure affected University employees get all necessary help to manage potential exposures to bloodborne pathogens. The University must fully comply with environmental health and safety standards and improve the overall safety of University faculty, staff and students.

1. PROGRAM ADMINSTATION

(Name of responsible person or department with contact Location and phone number) _____ is (are) responsible for the implementation of the ECP. *(Name of responsible person or department)* _____ will maintain, review, and update the ECP at least annually, and whenever necessary to include new or modified tasks and procedures.

(Name of responsible person or department with contact Location and phone number) _____ will maintain and provide all necessary personal protective equipment (PPE), engineering controls (e.g., sharps containers), labels, and red bags as required by the standard. *(Name of responsible person or department with contact Location and phone number)* _____ will ensure that adequate supplies of the equipment are available in the appropriate sizes.

(Name of responsible person or department with contact Location and phone number) _____ will be responsible for ensuring that all medical actions required are performed and that appropriate employee health and OSHA records are maintained.

(Name of responsible person or department with contact Location and phone number) _____ will be responsible for training, documentation of training, and making the written ECP available to employees, OSHA, and NIOSH representatives.

2. EMPLOYEE EXPOSURE DETERMINATION

OSHA defines occupational exposure as any reasonably anticipated skin, eye, mucous membrane or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee’s duties. Exposure determination must be made without considering the use of personal protective equipment.

Provide a list of all job classification in your department with occupational bloodborne pathogen.

Job Classification	Location

Provide job tasks for job classification for department which could have occupational exposure.

Job Classification	Task/Procedure

3. METHODS OF COMPLIANCE AND CONTROL

This section describes methods of implementation and control to minimize the blood borne pathogen exposure

Universal Precautions

All employee must follow universal precautions during the activities involving contact with human blood or other potentially infectious materials (including the handling of contaminated or potentially contaminated equipment). In circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids must be treated as potentially infectious materials.

Describe Universal precautions followed in your department when performing activities involving potential contact with bloodborne pathogen.

3.1 Engineering Controls

Engineering controls are the devices that eliminate or reduce the risk of exposure to employees either by removing or isolating hazard away from the employee. The specific engineering controls and work practice controls used are listed below:

Engineering Control	Workplace controls

3.2 Sharps Containers

Sharp containers must be easily accessible where sharps are stored, handled or reasonably anticipated to be encountered. These containers must meet the following criteria: 1) Puncture resistant 2) leakproof on sides and bottom 3) closable 4) properly marked.

Sharps disposal containers are inspected and maintained or replaced by *(Name of responsible person or department with contact Location and phone number)* _____ every ____ *(list frequency)* _____ or whenever necessary to prevent overfilling.

Both front line workers and management officials are involved in this process: *(Describe how employees will be involved)* *(Name of responsible person or department)* will ensure effective implementation of these recommendations.

3.3 Hand washing

Employees must wash their hands and any other body part potentially contaminated with blood or other potentially infectious materials with soap and water immediately. Employees must also wash their hands immediately after removing gloves. Each department must provide all covered employees with readily accessible hand washing facilities. If this is not possible due to the nature and location of the activity being conducted, antiseptic towelettes/cleansers must be provided. When antiseptic hand cleansers or towelettes are used, hands must be washed with soap and running water as soon as feasible.

3.4 Equipment decontamination

Describe decontamination process in detail for contaminated equipments. Also outline how this information is conveyed to all employee with potential exposure

3.5 Personal Protective Equipment (PPE)

Personal Protective Equipment (PPE) is specialized clothing worn by employees for protection against potential exposure hazard. Individual departments are responsible for ensuring that employees with potential exposure of bloodborne pathogen during their daily responsibilities are trained and understand the appropriate use of PPE needed to perform specific tasks or procedures.

The types of PPE available to employees are as follows:

Available PPE	Location

PPE is provided to our employees at no cost to them. Training is provided by (*Name of responsible person or department*) _____ for the use of the appropriate PPE for the tasks or procedures employees will perform.
 (Specify how employees are to obtain PPE, and who is responsible for ensuring that it is available.)

Describe precautions, employees following While using PPE. Outline the procedure for handling used PPE.

3.6 Housekeeping

All areas of the facility where there is the potential for bloodborne pathogens or other potentially infectious material exposure must be cleaned in accordance with protocols and methods developed by Custodial Services. Custodial staff supervisors must determine and implement appropriate written schedules for cleaning and method of decontamination.

Describe the procedure for handling regulated waste

Describe the procedure for handling sharp disposal containers

Describe the procedure for handling contaminated sharps

3.7 Laundry

Contaminated clothing is never taken home for laundering. Contaminated laundry must be handled as little as possible, with minimal agitation.

Describe how contaminated clothing will be laundered, where the cleaning process will take place, how the contaminated clothing will be handled and carried to cleaning facility, who will be responsible for laundering contaminated clothing.

3.8 Bloodborne Pathogen spill Cleanup Procedure

Outline detail bloodborne pathogen spill cleanup procedure followed by employees of your department.

3.9 Blood & Bodily Fluid Clean-up Kit

Blood and bodily fluid cleanup kit must contain absorbent material, appropriate disinfectant solution, proper personal protective equipment and instruction sheet. Individual departments must provide detail information about clean up kits including their storage location.

3.10 Labeling and Signage

Appropriate labelling and signage must be used to advise employees about the presence of blood or/and other potentially infectious materials. Universal biohazard labels must be attached to containers of regulated waste, refrigerators, freezers containing blood or other potentially infectious materials.

Equipments to be Labeled	Label Type

Name of responsible person or department) _____ will ensure warning labels are affixed or red bags are used as required if regulated waste or contaminated equipment is brought into the facility. Employees are to notify _____ if they discover regulated waste containers, refrigerators containing blood or OPIM, contaminated equipment, etc. without proper labels.

4. MEDICAL SURVEILLANCE

4.1 Hepatitis B Vaccination

Kent State University complies with OSHA’s guidelines for Hepatitis B immunization, medical evaluations and procedures and post-exposure follow-up to covered employees as well as employees experiencing an exposure incident.

(Name of responsible person or department) _____ will provide training to employees on hepatitis B vaccinations, addressing the safety, benefits, efficacy, methods of administration, and availability.

The immunization must be three shots of the standard dose administered in the deltoid by a licensed healthcare worker who is authorized to administer such injections within his/her scope of practice. A pre-vaccination titer for Hepatitis B antibody is not required unless 1) employee has been previously immunized 2) vaccination is medically contraindicated.

The employee may decline the immunization, in which case he/she must be required to sign the approved declination form. If the employee initially declines the Hepatitis B vaccination but later decides to accept the vaccination while still employed with the same employer, it must be provided under the same conditions.

(Name of responsible person or department) _____ will maintain documentation for declination of the vaccination at _____ *(List location for this recordkeeping)*.

Documentation of the Hepatitis B immunization series and titer results will be documented at respective health clinics.

In accordance with the *Health Insurance Portability and Accountability Act* or HIPPA, effective April 2003, all patient-related medical information must be kept confidential.

4.2 Post Exposure Follow Up

As part of the post exposure follow up, the Individual department of the incident employee must complete the following

- Document all details of the incident in “Exposure Incident Report Form”.
https://www.kent.edu/sites/default/files/file/employee-report-of-injury_2.pdf
- Have employee sign declination form if no follow-up is desired. If this is the case, you may stop here. Otherwise, you should recommend employee to seek medical help for blood borne pathogen exposure.

Provide stepwise outline of the post exposure follow up procedure for your department.

(Name of responsible person or department) _____ will help employee complete exposure incident report form and maintain a copy of the report at _____
(List location for this recordkeeping).

(Name of responsible person or department) _____ will have employee sign declination form if no post exposure follow-up is desired. *Name of responsible person or department)* _____ will maintain documentation for post exposure follow-up declination at _____ *(List location for this recordkeeping).*

4.3 Post Exposure Follow Up Documentation

Department should maintain exposure incident report form and follow up declination form for 30 years beyond the end of the employee’s employment.

- Document summarized information on the Sharps Injury Log and PERRPS 300 log form if applicable.

Healthcare professional who offered post exposure follow up care should maintain a copy of medical record and make it available to employee on request.

4.4 Evaluating Circumstances Surrounding an Exposure Incident

Departmental supervisors are responsible for collecting and reviewing circumstances surrounding of exposure incidents with the help of the office of Environmental Health and Safety.

(Name of responsible person or department) _____ will review the circumstances of all exposure incidents to determine: Work practices in use at time of the exposure incident

- Personal protective equipment or clothing used at the time of the exposure incident (gloves, eye shields, etc.)
- Location of the incident

- Procedure being performed when the exposure incident occurred
- Employee's training
- Engineering controls in use at time of the incident (if available at the location of incident)
- A description of the device being used, if applicable (name and model)

(Name of Responsible Person) _____ will record all percutaneous injuries from contaminated sharps in the Sharps Injury Log.

If it is determined that revisions need to be made, _____ (Responsible person or department) will ensure that appropriate changes are made to this ECP. (Changes may include an evaluation of safer devices, adding employees to the exposure determination list, etc.)

If the review of the circumstantial surrounding of an exposure incident results in a need for changes in procedures or protocols to reduce the occupational exposure, then Exposure Control Plan (ECP) must be revised to incorporate new changes. Revisions must be reviewed by departmental directors, biosafety officer and principal investigators to ensure appropriate changes are made to ECP.

5. RECORDKEEPING

5.1 Training Records

Departments performing their own training are responsible for maintaining records at their departments. (Name of responsible person or department) _____ will maintain departmental training records.

5.2 Availability of Training and Medical Records

(Name of responsible person or department) _____ will maintain records for exposure control plan, hepatitis B vaccination acceptance/ declination form, post exposure follow-up documentation form for departmental employees. Departmental specific training records will be made available upon request for examination and copying to employees, to employee representatives, to the designated representative of Public Employee Risk Reduction program in accordance with 29 CFR 1910.20.103

6. SHARPS INJURY LOG

All percutaneous injuries from contaminated sharps are recorded on a PERRP Sharps injury and Needlestick Reporting.

Environmental Health and safety will complete Sharps injury and Needlestick Reporting form and forward it to office of Environmental Health and Safety.

APPENDIX I

All researchers bloodborne pathogen research work must abide Kent State University blood borne pathogen program and develop suitable exposure control plan for their laboratory

This Exposure control plan is for the Research Laboratory

Principal investigator	
Department/College:	
Preparation Date:	
Person(s) responsible for implementation and maintenance of departmental exposure control plan:	
Location(s) where a copy of this plan can be found (Campus, Building, Room #):	

Procedures

To complete the requirements of the BBP standard, complete the following steps:

- Complete this document to adapt the plan to meet your laboratory needs. The laboratory plan must be revised upon the hiring of new personnel identified as having occupational exposure to human blood, body fluids, or other potentially infectious materials (OPIM), or at least annually.
- Require all laboratory personnel who may be exposed to blood or other potentially infectious material to complete the CITI Bloodborne Pathogens training.
- Ensure that exposed personnel have read and completed the Hepatitis B vaccination/declination form (KSU BBP: Appendix C & Appendix D)
- Ensure that a copy of this exposure control plan be readily accessible in the laboratory for reference and/or review.

7. Describe the procedure for handling contaminated/soiled, non-disposable personal protective equipment (i.e. laundering lab coats, etc.).

8. List procedures that require the use of gloves.

9. List situations that require the use of facial protection (masks, face shields, protective eyewear).

10. List situations that require the use of respiratory protection and specify PPE required.

11. List situations that require the use of protective clothing (lab coats, gowns, aprons, clinic jackets, etc.).

12. Describe decontamination and spill clean-up procedures.

13. For employees NOT located at the KENT campus:

In the event of an exposure incident, where do employees report for medical evaluation/treatment?