

<b>Johns Hopkins Safety Manual</b>	<i>Policy Number</i>	<b>HSE 501</b>
<i>Subject</i>	<i>Last Review Date</i>	09/23/08
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## **HOTLINES**

### **Stuck or Splashed?**

**If exposed, IMMEDIATELY call:**

- **East Baltimore campus:** 5-STIX (410-955-7849), 24hr/7days a week hotline
- **Homewood and Wyman Park campuses:** Occupational Health (410-516-0450) during office hours and Security (410-516-7777) during off-hours.
- **Bayview:** Bayview employees and JHU employees at the Bayview campus call Bayview Employee Health (410-550-0477)

**For More Details See Section J of this Policy:  
Post-Exposure Evaluation and Follow Up**

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## **I. INTRODUCTION**

The Johns Hopkins Institution (JHI), which comprises Johns Hopkins Hospital, Johns Hopkins Medicine, and Johns Hopkins University, is committed to the delivery of quality healthcare to all patients including those with Human Immunodeficiency Virus (HIV), Acquired Immune Deficiency Syndrome (AIDS), Hepatitis B & C (HBV, HCV), and other bloodborne diseases. JHI will not deny care to any patient who (a) is known or found to be infected by bloodborne disease or, (b) refuses to be tested for bloodborne infections.

Furthermore, JHI is committed to minimizing the risk of exposure or infection to bloodborne pathogens. JHI will provide training, resources, engineering controls, and personal protective equipment to promote safe work practices and reduce hazards in the workplace. Anyone working at JHI must adhere to the policies and procedures set forth regarding precautionary measures to be taken to minimize the risk of bloodborne pathogen (BBP) transmission. The use of Standard Precautions is required in the treatment of every patient under the guidelines set forth by the Centers for Disease Control and Prevention (CDC) and has been approved by the Joint Committee for Health, Safety and Environment.

The Bloodborne Pathogen exposure control plan has been developed for the prevention and control of diseases caused by bloodborne pathogens. It represents the measures which are required for implementation of and adherence to the Maryland Occupational Safety and Health Administration (MOSH) / Federal Occupational Safety and Health Administration (OSHA) 1910.1030 Bloodborne Pathogens Standard. This plan addresses how the employer will: (1) identify exposed employees; (2) reduce or eliminate potential exposure through engineering and work practice controls, personal protective equipment, and housekeeping; (3) provide the information on bloodborne pathogen hazards that must be communicated to all potentially exposed employees; (4) meet the special training and work practice requirements in HIV, HBV and HCV research laboratories and production facilities; (5) provide Hepatitis B vaccination to all potentially exposed employees and post-exposure follow-up to employees exposed during incidents; and (6) meet the recordkeeping requirements.

A copy of this plan is available upon request from The Johns Hopkins Institutions Department of Health, Safety and Environment, 2024 E. Monument Street, Baltimore, MD 21205-2223, Phone 410-955-5918. This policy can also be found online at [www.hopkinsmedicine.org/hse/](http://www.hopkinsmedicine.org/hse/)

In the unlikely event that a patient or visitor is exposed to the blood or body fluids of a patient, visitor or employee where there is a possibility of transmission of a bloodborne pathogen (HIV, HBV, HCV, CMV, Malaria, etc.) the event should be reported through the Exposure Hotline 955-STIX and the management of the possible exposure should be as described in Section I of this policy and in consultation as appropriate with HEIC and the Infectious Disease Services (Medicine and Pediatrics).

## **II. DEFINITIONS**

- **Blood**--means human and some non-human primate blood, human and some non-human primate blood components, and products made from human and some non-human primate blood.
- **Bloodborne Pathogens**--means pathogenic microorganisms that are present in human and some non-human primate blood and can cause disease in humans. These pathogens include, but are not limited to, Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), Human Immunodeficiency Virus (HIV), and Herpes B Virus.
- **Contaminated**--means the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.
- **Contaminated Laundry**--means laundry that has been soiled with blood or other potentially infectious materials or may contain sharps.
- **Contaminated Sharps**--means any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, edges of dirty animal cages, and exposed ends of dental wires.
- **Decontamination**--means the use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

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- **Engineering Controls**--means controls (e.g., sharps disposal containers, self-sheathing needles, safer medical devices, such as sharps with engineered sharps injury protections and needleless systems) that isolate or remove the bloodborne pathogens hazard from the workplace.
- **Exposure Incident**--means a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.
- **HIV/HBV/HCV Research Laboratory**--means a laboratory producing or using research-laboratory-scale amounts of HIV, HBV or HCV. Research laboratories may produce high concentrations of HIV, HBV or HCV but not in the volume found in production facilities.
- **Non-Human Primate**--refers to those organisms capable of transmitting bloodborne pathogens to humans through infected body fluids or tissues. This includes both experimentally and naturally infected animals. For example, all members of the genus *Macaca* (macaques) should be considered potentially infected with herpes B virus; chimpanzees and several other non-human primate species are capable of being infected with both Hepatitis A and Hepatitis B viruses; macaques and African green monkeys are both susceptible to SIV infection.
- **Occupational Exposure**--means 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.
- **Other Potentially Infectious Materials**--means (1) The following human and some non-human primate body fluids: semen, breast milk, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; (2) Any unfixed tissue or organ (other than intact skin) from a human and some non-human primate (living or dead); and (3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.
- **Personal Protective Equipment**--is specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.
- **Regulated Waste**--means liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.
- **Standard Precautions**--is an approach to infection control. According to the concept of Standard Precautions, all blood and body fluids are treated as if known to be infectious for HIV, HBV, HCV and other bloodborne pathogens.
- **Work Practice Controls**--means controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

### **III. EMPLOYEE EXPOSURE DETERMINATION**

- A. This policy applies to all individuals of JHI who may be occupationally exposed to a bloodborne pathogen. This includes all contract employees; all Nursing students and other students at JHI; all physicians with JHI privileges who are not employees of JHI, and other non-JHI healthcare providers at JHI whether they are employees, researchers, animal caretakers, independent contractors, volunteers or persons in training (students) for the healthcare professions at JHI or at non-JHI institutions. Exposures of patients or visitors will use the above definitions of exposures and that all diseases that could be transmitted by blood or body fluids should be considered for prophylaxis or treatment in accordance with the best evidence based medical practice.
- B. **Appendix A** of this policy lists job codes/titles in which all employees have been determined to have potential occupational exposure to blood or other potentially infectious materials. These individuals shall participate in this program. The Department of Health, Safety and Environment maintains an updated list of these job codes.

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- C. **Appendix B** of this policy lists employee job codes/titles in which some employees perform tasks that may generate an occupational exposure to blood or other potential infectious materials. These employees will also be covered by this Exposure Control Plan and must participate in the vaccination, training and all other aspects of the Bloodborne Pathogens Exposure Control Plan.
- D. **Appendix C** of this policy lists the job tasks that routinely involve a potential for mucous membrane or skin contact with potentially infection materials.
- E. Those who are covered by this policy must adhere the following:
1. Complete a Hepatitis B vaccination notification form and receive the Hepatitis B vaccination from Occupational Health if desired.
  2. Know what tasks they perform that have the potential of occupational exposure to bloodborne pathogens.
  3. Attend annually the bloodborne pathogen training sessions.
  4. Consistently use all the engineering controls, work practices, and appropriate personal protective equipment set forth in this policy.

#### **IV. METHODS OF COMPLIANCE**

- A. **ENGINEERING CONTROLS** Engineering controls shall be used to eliminate or minimize employee exposure. Where occupational exposure remains after implementation of these controls, personal protective equipment shall also be used. Supervisors will monitor compliance with implemented engineering controls at regular intervals.
- B. **SELECTION OF ENGINEERING CONTROLS** Johns Hopkins will evaluate and implement devices which have the potential to reduce exposure of individuals to biological, chemical, and physical hazards. The Protective Devices Committee, which meets on a monthly basis, will formulate recommendations for the implementation of protective devices and/or protective equipment. These engineering controls will be trialed and evaluated by non-managerial employees. Based upon employee feedback, recommendations will be made by the Protective Devices Committee as to which product was chosen for implementation, guidelines for product usage, personnel affected, cost impact, and an implementation schedule. All employees are required to implement protective safety equipment and procedures as approved by the Joint Committee for Health, Safety and Environment and the JHMI Product Issues Committee. Upon approval protective devices shall be implemented by all applicable employees, unless it has been demonstrated that implementation of the device in a specific medical procedure interferes with proper patient care, or unfavorably impacts on other patient care systems or research. Exemptions from use of an approved protective device may be granted by the Chairman, Joint Committee on Health, Safety and Environment, or designee, upon written request. Once an engineering control has been implemented, it will be reevaluated on a regular basis to determine if it is still the best product to be using for a particular type of procedure. The following items have been approved for implementation:
1. **Sharps containers** shall be leak-proof, puncture resistant, labeled with the biohazard label, secured, and closeable. They shall be available in all locations where sharps are used.
  2. **Handwashing facilities** are available in soiled utility rooms, patient rooms; clean utility rooms, exam room, laboratories, restrooms and other areas as necessary.
  3. **Medical waste containers** shall be used to discard medical waste. They are to be labeled leak-proof containers, bags, or biohazard boxes lined with a red plastic bag liner.
  4. **Specimen Containers** shall be used to store blood or other potentially infectious materials. These containers must leak-proof and labeled with a biohazard symbol on the outside.
  5. **Protective shields**, mechanical pipettes, biological safety cabinets or other controls are used in laboratories to prevent exposure to blood or other potentially infectious materials. Biological safety cabinets (BSC) must be certified annually. Contact the Biosafety Office for scheduling at 410-955-5918.
  6. **Safety sharps/Needleless** systems shall be evaluated, trialed, and implemented as approved by the Protective Devices Committee, Product Issues Committee, and the Joint Committee on Health, Safety and Environment. A list of approved protective devices is found in Appendix D of this plan.

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C. **WORK PRACTICE CONTROLS** Work practice controls are controls that reduce the likelihood of exposure by altering the manner in which a task is performed.

1. **Standard Precautions** (supersedes Universal Precautions) is designed to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection in the hospital. It applies to all blood and body fluids regardless of their diagnosis. Standard Precautions expands the coverage of Universal Precautions by recognizing any internal body fluid and unfixed tissue as potentially infectious material. Standard Precautions shall be implemented when contact with any of the following are anticipated:
  - a. Blood, human and some non-human primate
  - b. All human and some non-human primate body fluids (including breast milk), tissues, secretions, and excretions except sweat, regardless of whether they contain visible blood
  - c. Non-intact skin
  - d. Mucous membranes
  - e. IV access
2. **Handwashing**
  - a. Handwashing with JHI approved antimicrobial soap and water for at least ten seconds is required immediately or as soon as feasible after removal of gloves or other personal protective equipment and when otherwise indicated to avoid transfer of microorganisms to other patients, staff, or environments.
  - b. Hands must be washed, promptly after touching blood, body fluids, secretions, excretions, and contaminated items, whether or not gloves are worn.
  - c. Hands must be washed between tasks and procedures on the same patient to prevent cross-contamination of different body sites.
  - d. When handwash sinks are unavailable, use of approved alcohol-based hand rubs are permitted. When alcohol-based hand cleansers or towelettes are used, hands are to be washed with soap and water as soon as feasible.
3. **Handling Sharps** (needles, blades, broken glass, etc.)
  - a. Minimize the handling of all sharps.
  - b. Never recap used needles or use any other technique that involves directing the point of a needle or sharp toward any part of the body.
  - c. If recapping is clinically necessary, use a one-handed “scoop” technique or a mechanical device designed for holding the needle sheath. Two-handed recapping is prohibited.
  - d. Do not remove used needle from syringe or blade from handle by hand.
  - e. Shearing, breaking or bending of contaminated needles is prohibited.
  - f. Needles and other sharps shall be promptly discarded into approved sharps containers. Sharps Containers for use at JHI are approved by the Department of Health, Safety and Environment.
  - g. JHI approved sharps containers shall be readily available in all areas where sharps are used. A supply of approved containers shall be kept in Central Supply, Meyer B2, University Supply Store in basement of PCTB, and in the supply store on the ground floor of Mudd Hall on the Homewood campus. See Appendix D for a list of sharps containers available.
  - h. Needles and other sharps must not be jammed into the containers in such a way as to overfill them. Fill only to the indicated line on the container.
  - i. Employees should never insert their fingers or hand into any sharps container. If absolutely necessary to open or enter a sharps container, call the Department of Health, Safety and Environment at (410) 955-5918.
  - j. All sharps containers must be closed securely before removal or disposal. Sealed sharps containers shall be discarded as medical waste.
  - k. A utensil such as tongs, forceps, or dustpan and broom shall be used to pick up contaminated broken glass, needles, or other sharps that have fallen to the floor or to another surface.
  - l. Sharps that are contaminated with blood or other potentially infectious materials shall not be stored or processed in a manner that requires employees to insert hands or fingers into the containers where these sharps have been placed.
  - m. Syringes, needles or sharps must be kept in a closed puncture-resistant leak-proof container labeled with a biohazard warning symbol for transport to the reprocessing area.

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4. **Handling Specimens**

- a. Specimens of blood, tissue or other potentially infectious materials shall be kept in leak-proof primary containers during collection, transport, handling and storage.
- b. Specimens of blood, tissue or other potentially infectious materials transported outside of the immediate area for diagnostic purposes shall be placed inside a secondary container (e.g. specimen bags) with the requisition slip outside of the secondary container. These containers will be marked with biohazard labels.
- c. Blood or other potentially infectious materials that must be transported/shipped shall be clearly marked with a biohazard label.

5. **Equipment Repair**

- a. Potentially contaminated equipment shall be decontaminated by the user before it is repaired.
- b. Patient-care and other equipment that has been soiled with blood, body fluids, secretions, and/or excretions must be handled in a manner that prevents skin and mucous membrane exposure, contamination of clothing, and transfer of microorganisms to other patients and environments.
- c. Reusable equipment in contact with non-intact skin, blood, body fluids, or mucous membranes, must be cleaned with a hospital approved disinfectant before it is used for the care of another patient.
- d. Equipment that cannot be fully decontaminated shall be labeled with a biohazard warning prior to transport/shipment. The person responsible for repairing the equipment or a representative from the repair company shall be notified of the possible contamination. Do not relocate this equipment to other patient rooms or clean utility areas until it has been properly cleaned.
- e. Any patient care equipment that is sent from the department for repair or service shall be cleaned with a hospital-approved disinfectant.

6. **Protective Coverings:** Coverings, such as impervious-backed absorbent paper, used to protect equipment or surfaces shall be replaced as soon as feasible when they become contaminated, or at the end of each work shift.

7. **Patient Placement:** Provide a private room for any patient who contaminates the environment, or who does not or cannot be expected to assist in maintaining appropriate hygiene or environmental control.

8. **Other Work Practice Controls**

- a. Mouth pipetting is prohibited. All pipetting will be done with mechanical pipettes.
- b. Eating, drinking, storing of food, applying cosmetics or lip balm, and handling contact lenses are prohibited in patient care areas, laboratories, or any other contaminated work areas.
- c. Food and drinks may only be stored in a refrigerator intended for food storage and separated from clinical or research materials.
- d. Use mouthpieces, resuscitation bags, or other ventilation devices as an alternative to mouth-to-mouth resuscitation.
- e. All procedures involving blood or other potentially infectious materials must be performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances.

D. **PERSONAL PROTECTIVE EQUIPMENT:** All necessary personal protective equipment (PPE) is provided at no cost to employees. All PPE shall be available in appropriate sizes within each department. Supervisors are responsible for determining the appropriate PPE required for a specific procedure. Contaminated gloves, masks, and disposable gowns will be discarded into a red-bag lined receptacle after each use and between patients. PPE must be repaired or replaced regularly to maintain effectiveness. Home laundering of personal protective equipment is prohibited. PPE must be removed immediately or as soon as feasible if it is penetrated by blood or other potentially infectious materials and prior to leaving the work area. Removed PPE must be placed in an appropriately designated area or container for storage, washing, decontamination, or disposal.

1. **Gloves**

- a. Whenever contact with blood or other potentially infectious material is reasonably anticipated, personal protective equipment must be worn. Protective gloves (non-sterile examination gloves, sterile gloves, or utility gloves) are used to protect the hands.
- b. Clean gloves must be worn when touching blood, body fluids, secretions, excretions, and contaminated items and when performing venipuncture and other vascular procedures.

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- c. Clean gloves must be put on before touching mucous membranes and non-intact skin.
  - d. Gloves must be changed between tasks and procedures on the same patient, and after contact with material that may contain a high concentration of microorganisms.
  - e. Gloves will be replaced as soon as practical when contaminated or when their ability to function as a barrier has been compromised. Gloves must not be washed or decontaminated for re-use.
  - f. Gloves must be removed promptly after use, before touching items and surfaces that are not contaminated, and before going to another patient. Gloves must never be worn outside of the immediate work area.
  - g. If an employee exhibits allergic symptoms to the disposable gloves provided, the employee shall report the condition to his/her supervisor and proceed to the Occupational Injury Clinic (see HSE 004). Gloves made of an alternative material will be provided.
  - h. Utility gloves that are non-disposable may be decontaminated for re-use if the integrity of the glove is not compromised. However, they 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.
2. **Face Masks and Eye Protection**
- a. Mask and eye protection or a face shield must be worn to protect mucous membranes of the eyes, nose, and mouth during all procedures/tasks that are likely to generate splashes or sprays of blood, body fluids, secretions, and excretions.
  - b. Visibly contaminated goggles, glasses and face shields will be cleaned and disinfected with the cleaning and disinfecting agents provided before leaving the work area.
3. **Protective Clothing**
- a. Lab coats, gowns, scrubs, and surgical caps must be worn during a procedure if infectious materials might splash, spatter, or spray.
  - b. Personal protective coverings such as gowns, scrub suits, laboratory coats, aprons, surgical caps, hoods, and shoe covers shall not be worn outside the area of potential exposure.
- E. **HOUSEKEEPING**
1. **Cleaning and Disinfecting**
- a. Cleaning is the physical removal of organic material or soil from objects. It must be accomplished with water, mechanical action, and detergents. One must visually inspect an object after the process to assure that cleaning has been accomplished.
  - b. Disinfecting is the killing or inactivation of all microorganisms, except for some spore forms, on inanimate objects. The efficacy of disinfecting is affected by a number of factors, including the type and level of microbial contamination, the activity of the disinfectant, and the disinfectant contact time. Organic material and soil can block disinfectant contact and may inhibit disinfectant activity. Therefore, cleaning must precede all disinfecting processes.
2. **Categories of Disinfectants**
- a. Disinfectants can be divided into hierarchical categories of antimicrobial activity.
  - b. Low-level disinfectants kill most bacteria and some fungi, and inactivate some viruses. They do not reliably kill *Mycobacterium tuberculosis* or bacterial spores.
  - c. Intermediate-level disinfectants kill most bacteria including *Mycobacterium tuberculosis*, and most fungi. They inactivate most viruses and kill some bacterial spores.
  - d. High-level disinfectants destroy or inactivate all microorganisms, including most bacterial spores.
3. **Categories of Patient Care Item Disinfecting Requirements**
- a. Noncritical items are those that come into contact with intact skin but not with mucous membranes; for example, blood pressure cuffs. Low-level disinfectants may be used for these items.
  - b. Semi critical items are those, which come into contact with mucous membranes or non-intact skin. Most of these items require high-level disinfecting; for example, respiratory therapy equipment and endoscopes. Some semicritical items may require only intermediate-level disinfecting; for example, hydrotherapy tanks and thermometers.
  - c. Critical items are those that enter sterile tissue or the vascular system. Most of these items must be sterilized. Examples are surgical instruments and cardiac catheters. A few types of critical items, such as arthroscopes and laparoscopes, may be disinfected with high-level disinfectants.

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4. **Disinfecting of Environmental and Medical Equipment Surfaces (Non-Critical Item)**

- a. Environmental surfaces, such as floors, walls, and tables, are usually not involved in the infectious transmission. A detergent, with or without low-level disinfectant activity, is sufficient for the usual, general cleaning of these surfaces.
- b. When such a surface is significantly contaminated by large quantities of blood, an absorbent drape or paper towel should be placed over the contaminated material and an intermediate level disinfectant should be sprayed or poured over the paper towel. After 10 minutes of exposure, the drape/paper towel should be discarded. An intermediate-level disinfectant should then be applied to the surface.
- c. Medical equipment surfaces, such as those on the switches and knobs of patient monitoring equipment, may potentially play a role in the transmission of infectious diseases. Although these surfaces do not come into direct contact with patients, they may become contaminated with patient material via the hands of health care personnel; personnel who subsequently touch the contaminated surfaces may transmit microorganisms by touching other patients. Medical equipment surfaces should be disinfected with a low-level or intermediate-level disinfectant.

5. **Approved Products for Cleaning and Disinfecting**

- a. Products have been approved by the Hospital Epidemiology and Infection Control Committee for use at The Johns Hopkins Hospital. Refer to The Johns Hopkins Hospital Interdisciplinary Clinical Practice Manual, Policy Cleaning and Disinfection.
- b. To use another agent that is not listed in the above Policy, you must contact the Departments of Hospital Epidemiology and Infection Control (HEIC) for approval of use and Health, Safety and Environment (HSE) for procedures on proper use and exposure limits.

6. **Procedure to clean spills of blood and body fluids**

- a. Secure the area and notify the area supervisor.
- b. Promptly remove any contaminated garments.
- c. Put on liquid barrier gloves, promptly cover the spill with paper towels and flood the spill with an approved disinfectant.
- d. After allowing the disinfectant to act for 10 minutes, clean up the spill with additional paper towels.
- e. If broken glass or other sharp materials may be present, use a dustpan, forceps or other mechanical devices for cleanup; and discard the waste into a biohazard box lined with a red bag.
- f. Discard towels, gloves and other waste from the cleanup in a red bag.
- g. An approved intermediate-level disinfectant should then be applied to the surface.

F. **LINEN**

1. Contaminated linen will be placed in soiled laundry receptacles. Lab coats need not be changed between each patient, but must be changed whenever visibly contaminated. Contaminated clothing will be removed in a manner to avoid skin contact.
2. Linen soiled with blood, body fluids, secretions, or excretions must be handled in a manner that prevents skin or mucous membrane exposure, contamination of clothing, and transfer of microorganisms to other patients and environments.
3. Never place soiled linen on the floor or any clean surfaces.
4. Contaminated laundry is placed in fluid resistant laundry bags that contain the biohazard symbol. The bags shall not allow leakage or soak-through.

G. **HIV, HBV and HCV RESEARCH LABORATORIES AND PRODUCTION FACILITIES** - HIV, HBV and HCV agents are covered under the Biosafety Level 2 Guidelines as outlined in U.S. Department of Health and Human Services, Biosafety in Microbiological and Biomedical Laboratories (BMBL), 4th edition, May 1999. The following requirements apply:

1. Access to HIV/HBV/HCV research laboratories must be limited to authorized individuals. Only persons who have been advised of the potential biohazard, who meet any specific entry requirements, and who comply with all entry and exit route procedures shall be allowed to enter the work areas and animal rooms.
2. Laboratory doors shall be kept closed when work involving HIV, HBV, or HCV is in progress.

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3. A caution sign containing the international biohazard symbol and the word "BIOHAZARD" must be posted at all entrances to work areas. The sign must also contain: (1) the name of the infectious agent; (2) any special requirements for entering the area; and (3) name and telephone number of the person(s) responsible for the area.
4. All activities involving potentially infectious materials must be conducted in a biosafety cabinet and not on an open bench. The biosafety cabinet must be certified: (1) when originally installed; (2) following repairs; (3) when moved; or (4) annually.
5. Certified biological safety cabinets (CLASS I, II, or III) or other appropriate 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, shall be used for all activities with other potentially infectious materials that pose a threat of exposure to droplets, splashes, spills, or aerosols.
6. Supervisors must strictly enforce the use of personal protective equipment by all persons in the work area. PPE includes but is not limited to uniforms, smocks, gowns, laboratory coats, or any other appropriate clothing. Gloves must be worn when handling infected animals and when making hand contact with potentially infectious materials is unavoidable. Under no circumstances will personnel be allowed to leave the work area prior to removal or decontamination of protective clothing.
7. All spills must immediately or as soon as feasible be cleaned up by laboratory staff properly trained and equipped to work with concentrated infectious materials. A spill or accident that results in an exposure incident shall be immediately reported to the laboratory director or other responsible person.
8. Where vacuum lines are used, they must be equipped with liquid disinfectant traps and fluid/aerosol excluding filters. These filters should be checked and maintained routinely.
9. 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 disposal syringe-needle units (the needle is integral to the syringe) will be used for the injection or aspiration of other potential infectious materials.
10. Hand and eyewash facilities must be installed in each laboratory, within the work area.
11. Autoclave facilities must be available for decontamination of regulated waste. Before disposal, all waste from these work areas and from animal rooms must be decontaminated by a method known to effectively destroy bloodborne pathogens. Contaminated materials that are to be decontaminated at a site away from the work area must be placed in a durable, leak proof, labeled, or color-coded container that is closed before being removed from the work area.
12. Staff is required to be advised of all potential hazards and shall be required to read instructions on practices and procedures set forth in the JHI Biosafety manual.

#### **H. Hepatitis B Vaccination**

1. All current employees whose work involves occupational exposure to bloodborne pathogens shall be offered the Hepatitis B Virus (HBV) vaccine. All new employees covered under this program will be offered the HBV vaccine after completion of training and within one week of hiring.
2. If the HBV vaccination is declined, the employee is required to sign a statement, which indicates that the vaccine was offered at no cost, and that the employee may elect to receive the vaccine at any future time while he or she is an employee of the Institution and is still covered by the Bloodborne Pathogens Standard.
3. All employees, whose work involves occupational exposure to bloodborne pathogens, requesting the HBV vaccine shall be started on the vaccination regimen in a timely manner.
4. There will be no charge to any employee covered under this program requesting the hepatitis B vaccination.
5. All vaccinations will be administered during regular working hours by:
  - a. Occupational Health Services (OHS), (410) 955-6211 on the East Baltimore campus
  - b. Occupational Health Services (OHS), (410) 516-0450 on the Homewood campus.
6. Post exposure HBV vaccine and immune globulin will also be offered to employees through the following offices:
  - a. East Baltimore--Occupational Injury Clinic (OIC), Room 139, Blalock Building, (410) 955-6433.
  - b. Homewood—Occupational Health Services, (410) 516-0450
  - c. Bayview—Employee Health Services (for JHU/JHH employees at Bayview), (410) 550-0477.

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7. Occupational Health Services shall maintain the current vaccination status of all employees.
  8. JHI policy recommends that all non-JHI students and/or contract employees who may reasonably anticipate exposure to blood and body fluids while performing duties at JHI be immunized prior to their working within the JHI. These individuals may receive immunization through the OHS, but they or their institution/employer may be charged a fee to cover the cost.
  9. All individuals who complete their Hepatitis B vaccine series will have a Hepatitis B antibody determination performed thirty days after the last injection.
- I. **VOLUNTARY HBV/HIV/HERPES B TESTING:** Any JHI employee who wishes to be tested for HBV, HIV, or Herpes B may arrange to do so, at no cost, by contacting Occupational Health Services (OHS), (410) 955-6211 on the East Baltimore Campus or Occupational Health Services, (410) 516-0450 on the Homewood Campus. The individual will be informed confidentially of the test results and evaluation/guidance will be provided as required.
- J. **POST-EXPOSURE EVALUATION & FOLLOW-UP**
1. If any JHI employee's eye, mouth, mucous membrane, non-intact skin or parenteral surface comes into contact with blood or other potentially infectious material, this "exposure incident" must be reported by calling immediately the exposure hotline, (410) 955-STIX [410-955-7849] at the East Baltimore Campus, (410) 516-0450 during office hours and (410) 516-7777 during off hours at the Homewood Campus, and (410) 550-0477 at the for JHU/JHH employees at the Bayview Campus in order to secure medical advisement and initiate evaluation procedures. When the Occupational Injury Clinic is closed, a detailed message will direct the healthcare worker to the Infectious Disease Specialist on call.
  2. The exposure must also be reported to the exposed person's supervisor or director immediately (HSE 004). The supervisor/director and the employee will promptly complete the Report of Incident form. The employee must take this report and be evaluated at the Occupational Injury Clinic/Occupational Health Services Clinic on their campus.
  3. All exposed JHI employees will be offered any necessary post-exposure evaluation, treatment, and follow-up free of charge.
  4. Attempts will be made to identify the source individual after exposure. Upon consent, the source individual's blood will be tested for HIV, HBV, HCV and Herpes B virus as soon as possible and in accordance with current state and local laws.
  5. In the event the exposure occurred from a non-human primate, all applicable areas are to be stocked with a Monkey Splash/Injury Kit. The location of the building is to be recorded, the type of monkey, the ID number of the monkey that caused the exposure, and Animal Services is to be notified.
  6. An individual may refuse blood collection and testing. An individual may also consent to blood collection, but refuse testing. In this case, the blood sample will be held for 90 days to allow time for the individual to elect for testing. The HIV Laboratory will be responsible for maintaining the blood sample during this 90-day period.
  7. The test results for both the individual and the source patient are confidential medical information and will be handled accordingly.
  8. An occupational health professional will provide the exposed individual with a written opinion regarding the individual's vaccination status and post-exposure evaluation within 15 days of a review of all test results and medical records.
  9. HBV immune globulin and/or HBV vaccine and/or Herpes B post-exposure prophylaxis will be offered to exposed individuals when indicated. HIV post-exposure prophylaxis will be offered when indicated after discussion of potential risks and benefits.
  10. Department management must assess the circumstances surrounding the incident and take appropriate remedial action, including initiating modifications of the physical environment and providing instruction regarding proper work practices where appropriate.
  11. All needlestick incidents will be investigated by the Department of Health, Safety, and Environment to determine the type of sharp involved, how the incident occurred, and if any corrective actions need to be implemented.

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#### K. MANAGEMENT HEALTHCARE WORKERS EXPOSED TO BLOODBORNE PATHOGENS

##### 1. If exposed, IMMEDIATELY call:

**East Baltimore campus: 5-STIX** (410-955-7849), 24hr/7days a week hotline

**Homewood and Wyman Park campuses:** Occupational Health (410-516-0450) during office hours and Security (410-516-7777) during off-hours.

**JHU employees at the Bayview campus:** Bayview Employee Health (410-550-0477)

2. Exposures evaluated during clinic hours will be managed according to protocols contained in the Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Post-exposure Prophylaxis. If there is a possibility that post-exposure antiviral therapy for HIV is a consideration, the Clinic will offer Post Exposure Prophylaxis (PEP) to the healthcare worker.
3. On nights and weekends, the Infectious Disease Specialist on-call for bloodborne pathogen exposures will be contacted via the 24-hour Needlestick Hotline (5-STIX) [410-955-7849] for the East Baltimore campus, 410-516-777 for the Homewood Campus, and 410-510-0477 for the Bayview Campus to discuss the type and degree of exposure with the affected healthcare worker. The Specialist will also assess the status of the healthcare worker and the source patient with respect to HIV, HBV, HCV and other bloodborne pathogens, with the assistance of the source patient's physician.
4. If immediate wound assessment or post-exposure immunotherapy (e.g., Hepatitis B Immunoglobulin - HBIG) is indicated, the Infectious Disease Specialist will contact the attending physician in the Emergency Department. If post-exposure antiviral therapy for HIV is a consideration, the Infectious Disease Specialist will proceed according to Section 4 below.
5. Post-Exposure Antiviral Therapy for HIV and Herpes B (PEP):
  - a. The Infectious Disease Specialist on call will provide counseling to the exposed healthcare worker regarding the use of antiviral agents for HIV prophylaxis following an exposure. This counseling will conform to the CDC Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Post-exposure Prophylaxis”, MMWR, June 29, 2001/50(RR11);1-42.
  - b. If it is determined that a parenteral exposure has possibly occurred and the post-exposure antiviral therapy is the informed choice of the healthcare worker after a discussion of potential risks and benefits, the drugs will be prescribed by the Infectious Disease Specialist. If treatment is needed the Infectious Disease Specialist will call in the needed prescription to the pharmacy. Beyond the starting doses, antiviral therapy and monitoring of healthcare workers on therapy will be carried out in the Occupational Injury Clinic.
6. Initial Dose Antiviral Therapy:
  - a. Optimally, post-exposure prophylaxis should be initiated, as soon as possible (within 2 hours of exposure). However, PEP will be administered even if exposure occurred more than 36 hours previously. For healthcare workers unable to report to the clinic at the time of exposure, i.e., an irreplaceable individual such as in a significant case at a critical part of procedure (e.g., surgery, delivery) or the only healthcare worker in a critical care area, the following will occur:
    7. Between the hours of 7:30 am and 4:00 pm, the Occupational Injury Clinic will deliver one dose of PEP after reviewing the PEP information sheet with the affected healthcare worker.
    8. On nights and weekends, a representative of the healthcare workers' department can be sent to the Carnegie 6 satellite pharmacy, room 684, to obtain the first dose of PEP after review by the Infectious Disease Specialist.
    9. Documentation--Communication of all exposures evaluated by the Infectious Disease Specialist will be completed and forwarded via fax (410) 614-9579 to the Occupational Injury Clinic as soon as possible or the next standard work day or to (410) 516-0452 on the Homewood campus, or to (410) 550-0732 on the Bayview Campus.

#### L. RESPONSE TO A KNOWN INFECTED INDIVIDUAL

1. This policy applies to any known HIV, HBV OR HCV infected Johns Hopkins attending, resident, clinical fellow, student, staff member, or employee (i.e. individuals) regardless of whether or not the verification testing has been performed at JHI.

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2. When an individual becomes aware that he or she is HIV, HBV or HCV positive, and communicates this information to their superior (i.e., residency director, supervisor, department head, etc.), the individual shall be referred to Occupational Health Services (OHS) for evaluation only if there is a question regarding his/her ability to perform his/her job duties without risk to the individual or others. The individual should also be advised that OHS at (410) 955-6211 at the East Baltimore Campus, (410) 516-0450 at the Homewood Campus, and (410) 550-0477 at the Bayview Campus is available if medical assistance or counseling is required.
3. The superior shall advise the infected individual that information regarding his/her health benefits or other benefits and leave programs can be obtained through the appropriate Human Resources Office or Dean's Office.
4. An individual who has tested positive for HIV or is Hepatitis B or C antigen positive, may continue to work in his/her current job, as long as he/she is physically and mentally able to perform their duties in a way that does not pose a health or safety risk to themselves or to others. In making its placement recommendations, OHS will utilize an Expert Advisory Committee. The Expert Advisory Committee will consist of the Vice President for Medical Affairs, Johns Hopkins Hospital, (Chairperson of the Committee), the Chairman of the Joint Committee on Health Safety and Environment, Director of the Johns Hopkins Hospital, Epidemiology and Infection Control, a faculty member or residency director from the individual's clinical department, a representative from the appropriate Legal Office and an expert in the disease process in question.
5. Each situation will be evaluated on a case-by-case basis, and will include the following considerations:
  - a. The employee's ability to perform the essential duties and responsibilities of his/her position;
  - b. The risk of exposure and transmission to other employees and patients;
  - c. The possible risk to the individual in continuing in his/her work/training;
  - d. Other relevant medical information.
6. The Committee will inform OHS of its recommendations and appoint an institutional official to inform the infected individual of the Committee's recommendations with regards to current and continued job placement and restriction of clinical duties. All reasonable efforts will be made by JHI to limit the disclosure of information regarding an individual's health status and job placement recommendations.
7. If no reasonable accommodation can be made, the individual may be granted a leave of absence or laid off for medical reasons in accordance with established personnel policies.
8. Benefits programs that may be available to the infected individual include sick leave, short and long-term disability programs, disability retirement and workers' compensation.

#### **M. COMMUNICATION OF HAZARDS / TRAINING**

1. Appropriate warning labels must be affixed to containers of regulated waste, refrigerators, and freezers containing blood or other potentially infectious materials and other containers used to store, transport, or ship blood or other potentially infectious material. Exceptions to this requirement are: red containers; containers of blood, blood contents, or blood products that are labeled as to other contents and have been released for transfusion or other clinical use; and individual containers of blood or other potentially infectious materials that are placed in a labeled container during storage, transport, shipment, or disposal.
2. Labels required for the above must consists of the international biohazard symbol in fluorescent orange or orange red with lettering or symbols in contrasting color.
3. Labels must be affixed as close as feasible to the container by string, wire, adhesive, or other methods that prevents their loss or unintentional removal.
4. Labels required for contaminated equipment must be in accordance with this policy and must indicate which portions of the equipment are contaminated.
5. A sign containing the international biohazard symbol in fluorescent orange red with lettering or symbols in a contrasting color must be posted at all entrances to work areas covered under Section G of this policy. The sign will read "BIOHAZARD" and must include: name of infectious agent; special requirements for entering the area; and name and telephone number of the laboratory director or other responsible person(s).
6. All approved training will be conducted or pre-approved by The Johns Hopkins Institutions Department of Health, Safety and Environment (HSE).

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7. All individuals covered by this Exposure Control Plan must attend annual bloodborne pathogen training, as required by OSHA regulations and JHMI policy.
8. Bloodborne Pathogen training will be offered routinely on every second and third Tuesday of the month at the 2024 East Monument Street Building, B-600, at 10:45 AM. Training will include a question and answer period. See appendix E for list of trainers.
9. The JHI training program includes discussions of HIV, HBV, HCV, and other bloodborne diseases, modes of transmission, engineering controls, safe work practices, personal protective equipment, and the HBV vaccine as well as information regarding post exposure procedures to be followed. The Exposure Control Plan and the MOSH / OSHA Standard 1910.1030 will be made available during the training.
10. Vice presidents and department management will work in conjunction with the Health, Safety and Environment (HSE) to develop and make available bloodborne pathogen education programs and related resource materials.
11. Department management will schedule training programs regarding bloodborne pathogens; maintain documentation on those trained (identified by Social Security Number or Employee badge number), the date of training and the content of the training programs; and monitor work practices to determine the need for individual or group retraining.
12. Healthcare workers employed by other agencies who are contracted to work on-site at the JHI -- on a temporary basis -- will be provided with orientation material that includes a review of Standard Precautions. Contracts for temporary employment services of healthcare workers shall require prior training in the use of Standard Precautions based on current CDC Guidelines. The contracted agency is responsible for educating contractual employees on the CDC Guidelines regarding the transmission of bloodborne pathogens before beginning work at JHI.
13. A failure on the part of a contractual employee to demonstrate adequate knowledge of safe work practices will result in temporary or permanent removal of the contractual employee.
14. Trainees (including medical and nursing students, interns, residents and fellows) or any other individual pursuing a medically-related training program will receive orientation and training to insure familiarity with JHI policies regarding Standard Precautions and bloodborne pathogens. Trainees must comply with all JHI policies regarding Standard Precautions and bloodborne pathogens, and demonstrate, through work practices, a familiarity with those policies and guidelines. Failure to comply with the policies may result in a temporary or permanent removal of the student/trainee from JHI premises.

**N. RECORDKEEPING**

1. All medical records maintained under this program are confidential. The record will meet all requirements of the OSHA Access to Employee Exposure and Medical Records standard, 29 CFR 1910.20. Each employee has the right to access his or her personal medical records as well as any exposure records. Records are available to MOSH/OSHA, as requested by state/federal regulators.
2. All medical records will be kept for the duration of employment plus 30 years thereafter. Should the facility close; MOSH shall be informed at least 3 months before disposal of any records.
3. Training records will be maintained for three years by the Department of Health, Safety and Environment.
4. A sharps Injury log will be maintained by the Occupation Injury Clinic on the East Baltimore Campus and Occupational Health Services on the Homewood Campus. The sharps injury log contains: the type and brand of device involved in the incident, the department or work area where the exposure incident occurred, and an explanation of how the incident occurred. The sharps injury log will be maintains as outlined in 29 CFR 1904.6.

**O. IMPLEMENTATION SCHEDULE** -- The dates set forth by OSHA for implementation of the components of the OSHA regulation on Occupational Exposure to Bloodborne pathogens are as follows:

1. May 5, 1995—exposure control plan
2. June 4, 1992—training and recordkeeping
3. July 6, 1992—engineering and work practice controls, personal protective equipment, Hepatitis B vaccination, and Post-exposure evaluation and follow up.
4. April 18, 2001—sharps with engineered sharps injured protection and needless system

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## V. REFERENCES

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- The Johns Hopkins Hospital *Interdisciplinary Clinical Practice Manual*, Policy No. IFC-014, *Cleaning and Disinfection*, July 1998.
- The Johns Hopkins Hospital *Interdisciplinary Clinical Practice Manual*, Policy No. IFC-015, *Standard Precautions*.
- The Johns Hopkins Hospital *Interdisciplinary Clinical Practice Manual*, Policy No MEL 002, *Informed Consent*
- The Johns Hopkins Health System Corporation Human Resources Policy and Procedures manual, policy number ELR603.
- CDC Fact Sheet, *Hand Hygiene Guidelines Fact Sheet*, <http://www.cdc.gov/handhygiene/>
- U.S. Department of Health and Human Services, Biosafety in Microbiological and Biomedical Laboratories (BMBL), 4<sup>th</sup> edition, May 1999.

## VI. RESPONSIBILITIES

- |                                     |         |   |
|-------------------------------------|---------|---|
| JHI Employee/Student,               | Non-JHI | Report immediately all incidents, exposures and potential exposures.                |
| Employee/Student, Healthcare Worker |         | Report all conditions that may endanger the health of staff, students and patients. |

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<p>Department Management/Shift Supervisor/Charge Nurse</p>	<p>Determine the circumstances of an exposure to a bloodborne pathogen and complete a Report of Incident form.</p> <p>Monitor work practices to determine the need for training/retraining and to ensure compliance with policy. Discipline JHH employees according to the Johns Hopkins Health System Corporation Human Resources Policy and Procedures manual, policy number ELR603 for failure to use safe work practices, as appropriate. Discipline JHU employees according to the Personnel Policy Manual, Section 9, and paragraph B-1.</p> <p>Train and/or retrain all appropriate employees/students as needed.</p>
<p>Department Management</p>	<p>Direct employee/student exposed to bloodborne pathogens to OIC for confidential evaluation and counseling.</p> <p>Keep documentation on exposures to bloodborne pathogens confidential.</p>
<p>Health, Safety and Environment (HSE)</p>	<p>Develop, schedule, coordinate, disseminate and document the training process and education programs. Include in documentation: program content, individuals trained (identified by Social Security Number or Employee badge number), date of training, and name of the trainer</p> <p>Work with Department Heads, other administrators and employees to develop and administer any additional bloodborne pathogens related policies and practices needed to support the effective implementation of this plan.</p> <p>Review, evaluate and assist in the selection of proper personal protective equipment.</p> <p>Review legal requirements and new legislation concerning bloodborne pathogens.</p> <p>Routinely inspect to ensure activities are conducted in accordance with the provisions set forth in this policy.</p> <p>Review and update this policy annually</p> <p>Investigate all exposure or potential exposure incidents.</p>
<p>Occupational Health Services</p>	<p>Make available HIV, HBV, and/or Herpes B testing for staff or students who request such testing.</p> <p>Determine the ability of an employee or student to perform their job or to participate in training without endangering the health and safety of patients, other employees or themselves.</p> <p>Manage HBV education and prevention programs, including employee vaccinations. Offer HBV vaccination to all employees included in the JHI Bloodborne Pathogen Exposure Program</p>

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Occupational Injury Clinic	<p>Evaluate all incidents involving potential exposure to bloodborne pathogens by staff and students.</p> <p>Coordinate efforts to determine the serostatus of the source patient.</p> <p>Provide consultation and treatment services through the 5-STIX line.</p> <p>Initiate treatment, counseling and referral of the exposed individual.</p> <p>Monitor employee satisfaction with PEP and 5-STIX Programs.</p>
Hospital Epidemiology and Infection Control	<p>Confer with the Division of Infectious Disease - AIDS Service and the Department of Hospital Epidemiology and Infection Control to determine treatment guidelines, medical oversight, and coordination of all activities related to medical management of employees/students who have sustained an exposure to bloodborne pathogens.</p> <p>Conduct follow-up internal testing, and maintain documentation as required.</p>
Infectious Disease Specialist on call	<p>Serve as a resource for issues related to infectious diseases.</p> <p>Director to serve as a representative on the Expert Advisory Committee.</p> <p>Evaluate all incidents of potential bloodborne pathogen exposure reported via the 24-hour Needlestick Hotline. Refer to Emergency Department if immediate post-exposure immunotherapy (e.g., HBIG) is indicated.</p> <p>Contact the attending physician of the source patient for assessment of status with respect to bloodborne infections.</p> <p>Discuss treatment options with affected healthcare worker per established protocol: "Post-exposure Anti-Viral Therapy for HIV".</p>

## **VII. CONTROL**

Executive Director of Health, Safety and Environment, Edward J. Bernacki, M.D., M.P.H.

## **VIII. REVIEW CYCLE**

The Exposure Control Plan will be reviewed and updated under the following circumstances: (1) annually; (2) when new or modified tasks or procedures are implemented that have potential for occupational exposure; (3) when employees' jobs are revised such that a new potential for occupational exposure may exist; (4) when new positions are established that may involve exposure to bloodborne pathogens.

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## Appendix A

### **Occupations that have been determined to have an Occupational Exposure to Bloodborne Pathogens**

AIDS CLIN CARE COORD	DENTAL ASSISTANT	LAB SERV SUPERVISOR
ALLERGEN LAB COOR	DIR AMBUL SURG/SPEC	LAB TECHNICIAN
ANESTHESIA ASSISTANT	DIR IMMUN LAB	LABORATORY AIDE
ANESTHESIA CLINIC TECH	DIR NURS PROF PRGMS	LABORATORY HELPER
ANESTHESIA CRITCARE TECH	DIR NURSG RES/EDUC	LABORATORY MGR
ANESTHESIA EQUIP COORD	DIR NURSING	LABORATORY SPECIALIST
ANESTHESIA EQUIP SPECIAL	DIR NURSING/MEDICINE	LABORATORY SVCS SUPV
ANESTHESIA SUPV/EQUIP MGR	ECHOCARDIOGRAM TECH	LABORATORY TECH
AUTO BLOOD PROG COORD	ED & DEV COOR PATHOLOGY	LICENSED PRACTICAL NURSE
AUTOPSY ASSISTANT	EEG TECH	MAG RES IMAG TECHN
AUTOPSY SECTION LDR	EKG/STRESS TECH	MAMMOGRAPHY SPEC
BIOMEDICAL EQ TECH SUPV	ELECTROPHYSIOLOGY TECH	MANAGER RESP CARE SVCS
BIOMEDICAL EQUIP TECH	EMERG RESPONSE TRNG SPEC	MATERIALS HANDLER
BLOOD GAS TECHN	EMERGENCY MED NURS AIDE	MED ASSIST (CERT)
CARD RAD/EQUIP SPEC	EMERGENCY TECHNICIAN	MED NURSE STAFF ASST
CARDIAC SURGICAL ASST	EMG TECH	MED TECHN
CARDIOPULM TECHN	EMPLOYEE HEALTH NURSE	MEDICAL ASSISTANT
CARDIOVAS RAD TECHN	ENVIRONMENTAL SVCS WORKER	MEDICAL LAB TECH
CAT SCAN TECHNICIAN	EVOKED POTENTIAL TECH	MEDICAL STUDENT
CENTRAL STER SUPPLY SUPVR	FELLOW	MEDICAL TECHNOLOGIST
CHIEF CARD TECHN-HS	FELLOW CHIEF RES	MEDICINE OPS MGR
CHIEF OCCUP THER	GENETICS TECH	MEDICINE STAFF ASST
CHIEF PHYSICAL THER	GOR SUPPORT SERVC SUPV	MLT PLANER RECON TECHN
CHIEF ULTRASOUND TECHN	GOR TECHNICIAN	MRI RECH
CLIN/NURSE SUPERVSR	GROSS ROOM TECH	MRI TECHN
CLINIC ASSIST	HEALTH NURSE	NEONATAL TRANSPORT NURSE
CLINIC MGR/COMT	HEMA CRYOPREV TECHN	NEURO RAD TECH
CLINIC NURSE MIDWIFE	HEMA DONASMT EVA CORD	NICU-RESP THER MGR
CLINIC PHYSICIAN	HEMA DONOR RECRUITER	NRSE PRACT/PROG COORD
CLINIC RESEARCH ASST	HEMA STAFF DEVEL COORD	NUCLEAR MED SUPV
CLINIC TECH	HEMA TECHNOLOGIST	NUCLEAR MED TECH
CLINICAL ASSOC	HEMA THER PROC COORD	NUCLEAR MED TECHN
CLINICAL ASST	HISTO SPEC PROC TECH	NURS CLIN SPECIALIST
CLINICAL ENGINEER	HISTOLOGY TECH	NURS PRAC/PROG COOR
CLINICAL INSTRUCTOR	HISTOLOGY TECH SUPV	NURSE ADMIN MNGR
CLINICAL NU SPC/PRG COOR	HISTOPATH TECH	NURSE ANESTHETIST
CLINICAL NURS /MGR	HISTOPATHOLOGY MGR	NURSE CLINICIAN
CLINICAL NURSE	HISTORY LAB COORD	NURSE EDUCATOR
CLINICAL NURSE INTERN	HOLTER TECHNICIAN	NURSE MANAGER
CLINICAL NURSE MGR	HOUSEKEEPING COORD	NURSE PRAC/CLIN PROG
CLINICAL NURSE SPEC	I.V.THERAPY TECHNICIAN	NURSE PRACT C/S MGR
CLINICAL NURSE/PRGM COOR	IMAGING EQUIP SERVICE	NURSE PRACTITIONER
CLINICAL NURSE/PROG	IMAGING EQUIPMENT SUPV	NURSE PRACTITIONER
CLINICAL NURSE/PROG SUPV	IMMUNO LAB MGR	NURSE PRCT/PRG COORD
CLINICAL NURSE/REVIEWER	IMMUNO TECH TRAIN	NURSE RESEARCHER
CLINICAL PHYSICIST	IMMUNO TECHNOLOGIST	NURSE SUPERVISOR
CLINICAL PROG COORD	INCINERATOR OPER	NURSING ADMIN MGR
CLINICAL QUAL CTRL COORD	INCINERATOR OPS TECH	NURSING AIDE
CLINICAL RES PROG COORD	INFEC CONTROL EPID	NURSING ASSISTANT
CLINICAL RES PROG MGR	INSTRUMENT PROCESSOR	NURSING CLIN SPC
CLINICAL SKILLS COORD	INTRAOPER MONITOR TECH	NURSING GRAD ASSOC
CLINICAL SOC WKR/PRG CRD	LAB AIDE	NURSING SHIFT COORD
CLINICAL SOC WORKER	LAB COMM/TRAINING PO SUP	NURSING SPECIALTY TECH
CLN NURSE/CL CRD	LAB COORD/RES TEC	NURSING STAFF ASST
COLLECT SPEC	LAB COORD/SUPERVISOR	NURSING SUPPORT TECH
CRITICAL CARE TRANS NURSE	LAB COORD/TECH	NURSING TECHNICIAN
CUSTODIAN	LAB COORDINATOR	NURSING UNIT CLERK
CYTOGEN TEC/LAB CORD	LAB MED PUR/INV COORD	NURSING UNIT COORD
CYTOGENETIC MED TECH	LAB MEDICINE MGR	OB/GYN OR TECHNICIAN
CYTOGENETICS TECH	LAB MEDICINE SUPERVISOR	OCC HEALTH NURSE
CYTOPREPARATORY TECH	LAB QUALITY ASSURANCE SUP	OCCUP HEALTH SVCS MGR
CYTOTECHNOLOGIST	LAB QUALITY/CON TECHN	OCCUP HEALTH TECHNICIAN

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OCCUP THERAPY SUPRV  
OCCUPATIONAL THERAPIST  
ONCOL TUMOR REG SUPVR  
ONCOL UNIT AIDES SUPVR  
ONCOLOGY DIETIAN TECH  
ONCOLOGY NUTR ASST  
ONCOLOGY OPERATIONS MGR  
ONCOLOGY P A  
OPD NURSING ASST  
OPHTHAL TECH  
OPHTHAL TECH SPECIALIST  
OPHTHAL TECH/SUPV  
OPHTHALMIC OR TECHNICIAN  
OPHTHALMIC TECH  
OR NURSING AIDE  
OR NURSING ASST  
ORTHOP/OPHTH TECH  
OSTOMY NURSE SPEC  
OUTPT LAB SVCS SUPV  
OXYGEN TECHNICIAN  
PA/PROG COORD  
PA/RES & STUDNT COOR  
PATROLMAN  
PERFUSIONIST  
PHERESIS TECHNICIAN  
PHLEBOTOMIST  
PHLEBOTOMY SUPERVISOR  
PHY MED & REHAB THER AIDE  
PHYS ASST/PROG COORD  
PHYSICALTHERAPY

PHYSICIAN ASSISTANT  
PHYSICIAN ASST/LEAD  
PHYSICIAN ASST/MAGER  
PHYSICIAN'S ASST  
PNP/PROG COORD  
POLYSOMNOGRAPHY TECH  
PROFESSOR OF MEDICNE  
PSYCHIATRIC NURSING  
PSYCHIATRIC NURSING AIDE  
PSYCHIATRIC SPEC TECH  
PSYCHOMETRIC TECHNICIAN  
PULM FUNC LAB SUPV  
PULM FUNC TECH  
PULMONARY FUNC TECH  
PULMONARY TECH  
RAD CLIN EDUC COORD  
RAD ENGR  
RAD ENG-VASCULAR SYS  
RAD FILM AREA SUPRV  
RAD QUAL CONTR TECHN  
RAD THERAPY TECHN  
RADIATION ONCOL MGR  
RADIATION THERAPIST  
RADIOLOGIC TECHNOL  
RADIOLOGY AIDE  
RADIOLOGY CLIN INSTR  
RADIOLOGY TECH INTERN  
REG NURSE/PROG COORD  
REHAB MED ASSES COORD  
REPRO ENDO NURSE

RESP CARE CLINICAL COORD  
RESP CARE PRACT INTERN  
RESP CARE PRACTITIONER  
RESP CARE SUPERVISOR  
RESP THERAPIST FP  
RESPIRATORY CARE TECH DIR  
RESPIRATORY TECH  
RN REHAB CASE MANGER  
RN/CLINIC MANAGER  
RN/PROG COORD  
SECURITY INVESTIGATOR  
SECURITY SYSTEMS MGR  
SECURITY TRAINING COORD  
SOCIAL WORKER  
STAFF NURSE  
SUPPORT ASSOCIATE  
SURGICAL EQUIPMENT SPEC  
TECH SVC/QA TECHN  
TECHNICAL SPECIALIST  
TRANSPLANT COORD  
TRANSPLANT NURSE COORD  
ULTRASOUND TECHN  
UNIT AIDE  
UNIT ASSISTANT  
UNIT COORDINATOR  
VASCULAR LAB MANAGER  
VENIPUNCTURE TECH  
WORKERS COMP CLINIC MGR

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## **Appendix B**

**Occupations that may have an Occupational Exposure to Bloodborne Pathogens. Please see APPENDIX C for job tasks and procedures that would determine exposure.**

A/C Maint Supervisor	Genome Data Speclst	Pharmacy Associate
Addiction Therapist	Grad Student	Pharmacy Clerk
Addictions Counselor	Graduate Assistant	Pharmacy Manager
Adm Cardiovas Ser	Grants Contract Coord	Pharmacy Pkg Technician
Admin Lab Medicine	Grounds Superv	Pharmacy Student
Admin Neuro	Groundskeeper	Pharmacy Technician
Admin Oncology	Health Educator	Phys Ed Worker
Admin Radiology Svcs	Health Physicist	Plumber
Admiss Lab Tech	Hvac Maint Mech	Plumbing Maint Mech
Animal Care Coord	Industrial Hygienist	Plumbing Maint Supv
Animal Caretaker	Industrial Hygienist	Polysom Tech Sup
Animal Research Tech	Instructor	Polysomn Tech
Animal Surg Tech	Instructor In Med	Polysomnogram Tch
Athletic Equip Asst	Investigations Coord	Predoc Trainee
Biosafety Officer	Lecturer	Predoctoral Fellow
Building Maint Tech	Life Safety Maint Mech	Predoctoral Student
Building Supert-Acb	Life Safety Supervisor	Prof Med Psycho
Campus Police Offcr	Liver Program Coord	Prof/Asst Dean
Carpenter Constr Supv	Maint Mech Ldr	Prof/Asst Direc
Carpenter Maint Suprv	Maint Worker	Professor
Carpentry Maint Mech	Maintenance	Professor/Chair
Cdng/Chg Ent Spec	Maintenance Mech	Prog Asst
Chairman	Maintenance Worker	Prog Devel/Proj Coord
Chief Onc Ther Nutr Sv	Manager Safety Admin	Project Coordinator
Child Care Asst	Mat Trans Nurse Coord	Project Designer
Clerical Associate	Mechanical Maint Mech	Psych Therapist
Clin Social Worker	Mechanical Maint Supv	Pt Serv Coord
Clinic Pharmacist	Mechanical Superintendent	Rad Safety Officer
Clinical Dietitian	Med Photographer	Rad Safety Tech
Clncl Dosimetrst	Med/Asst Resch Intv	Radiology Clerk
Comm Outrch Coord	Med/Res Tech	Radiology Film Clerk
Compliance Specialist	Medical Office Coord	Referral Coord
Constr Safety Coord	Medical Photographer	Referral Svcs Coord
Contact Lens Spec	Medical Secretary	Refrigeration Maint Mech
Control Registrar	Medtrans	Refrigeration Supv
Coord For Education	Mgr Custdl Serv/Oper	Research Assistant
Coord Regulator Affrs	Mgr Environ System	Research Associate
Coord Of Prof Programs	Mgr Maint & Oper	Research Clinic Asst
Critical Paths Proj Dir	Mgr Memory Clinic	Research Data Assit
Daycare Center Teacher	Mgr Res Prg Coord	Research Field Coord
Dir Facilities Planning	Mgr Tech Devel	Research Int Lead
Director Athletics	Mgr/Core Bioprod Fac	Research Interv
Director Cis	Mngr Cust Svcs	Research Kitchen Supv
Dosimetrist	Neurorad Coding Spec	Research Lab Coordinator
Drug Info Pharmacist	Np Prog Coord	Research Nurse
E M Lab Mgr	Np/Clin Res Supvr	Research Nurse Prog Sup
Electrical Maint Mech	Nurse Recruiter Nutritional Home Supt	Research Nurse Supv
Electrician	Nutritionist	Research Nurse/Clin Coord
Electronics Maint Mech	Occp Safety Offc	Research Nurse/Prog Coord
Em Lab Coord Supv	Occup Safety Manager	Research Nurse/Study Coord
Em Tech	Occupational Safety Off	Research Nurse/Supervisor
Emp Asst Clinician	Off Clerk/Lab Ast	Research Prgm Intrvwr
Emu Tech	Ophthal Photo/Sup	Research Pro Coord
Engin/Maintenance Tech	Ophthalmic Photo	Research Prog
Environ Hlth Officer	P/F Asst	Research Prog Asst
Escort Messenger	Painter	Research Prog Coord
Escort/Mail Svcs Sup	Painting Maint Mech	Research Prog Cord/Spvr
Escort/Operator	Pat Reg Asst	Research Proj Coord
Facs Lab Administrat	Patient Study Coord	Research Safety Specialist
Family Service Worker	Pharm Resident	Research Scientist
Field Worker	Pharmacist	Research Tech Lab Coord
General Clerk	Pharmacy Aide	Research Tech Supervis

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Research Technican  
 Research/Lab Adminstr  
 Research/Study Coord  
 Roof/Water Maint Mech  
 School Rad Educ Coord  
 School Rad Educ Dir  
 Scientist  
 Sec/Fieldworker  
 Security Dispatcher  
 Sheetmetal Maint Mech  
 Site Supervisor  
 Sleep Lab Manager  
 Sleep Program Mgr

Spec Asst/Res Assoc  
 Staff Chaplain  
 Student  
 Student Activities  
 Student Resh Asst  
 Substance Abuse Spec  
 Superv Plumbing Shop  
 Supervisor Cust Serv  
 Supervisor Bldg Maint  
 Supr Bs/Medicid Pynt  
 Supv Cust Sv  
 Teaching Asst  
 Technical Syst Coord

Technical Temp  
 Tissue Cult Tech  
 Undergrad Asst  
 User Sys Spec/Pf Tch  
 Vest Animal Res Tech  
 Visiting Lecturer  
 Visiting Scholar  
 Visual Func Lab Coor  
 Watch Engr/Mech  
 Zone Maint Mech  
 Zone Maint Supervisor

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### Appendix C

#### **Tasks and Procedures**

1. Processing, handling, or removing waste contaminated with human or some non-human primate blood or other potentially infectious material.
2. Performing vascular access procedures.
3. Processing or handling human some non-human primate blood or other potentially infectious material for research or clinical use.
4. Transporting human some non-human primate blood or other potentially infectious material.
5. Manipulating blood or other potentially infectious material from patients.
6. Cleaning-up blood or body fluid spills in common areas.
7. Responding to waste-line repairs and cleaning wastewater floods.
8. Repairing/servicing drains used for the disposal of blood or body fluids.
9. Arresting injured suspects.
10. First Aid response procedures.

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## Appendix D

### Protective Devices Available at Johns Hopkins

Description	ESI Number	Description	ESI Number
<b>CATHETERS</b>		<b>BUTTERFLY</b>	
Protect IV Wings 24G x 5/8"	33311	Butterfly 25g X 3/4"	86834
Protect IV Wings 22G x 1"	33316	Butterfly 23g X 3/4"	86831
Protect IV Plus 14G x 1 1/4"	19568	Butterfly 21g X 3/4" W/Adapt	86833
Protect IV Plus 20G x 1"	19569		
Protect IV Plus 20G x 1 1/4"	19570	<b>LANCETS</b>	
Protect IV Plus 18G x 1 1/4"	19571	Lancet, Peds AD Saf-T-Stix	21804
Protect IV Plus 24G x 3/4"	19572	Lancet, Quickheal (NICU lab)	50776
Protect IV Plus 16G x 1 1/4"	19573		
Protect IV Plus 22G x 1"	19574	<b>HUBER NEEDLES</b>	
Protect IV Plus 22g x 1"	38961	Huber Plus 20G x 3/4"	49376
Protect IV Plus 20g x 1"	39739	Huber Plus 20G x 1"	31552
Protect IV Plus 24g x 5/8"	39812	Huber Plus 22G x 1"	58959
Protect IV 14g x 1 1/4"	4327	Huber Plus 22G x 1/2"	58958
Protect IV 16g x 1 1/4"	4328	Huber Plus 22G x 3/4"	58957
Protect IV 18g x 1 1/4"	4329	Huber Plus 22G x 1 1/2"	58960
Protect IV 20g x 1"	4330	Huber Plus 20G x 1 1/2"	34550
Protect IV 20g a 1 1/4"	4833		
Protect IV 22g x 1"	4331	<b>DISPOSABLE SCALPELS</b>	
Protect IV 24g x 1 3/4"	4332	Safety Scalpel Size 10	50874
Insyte Autoguard 14g (ACCM)	53051	Safety Scalpel Size 11	101183
Insyte Autoguard 16g	53053	Safety Scalpel Size 15	50875
Insyte Autoguard 18g	52586		
Insyte Autoguard 20g	52587	<b>NEEDLELESS IV ACCESS</b>	
Insyte Autoguard 22g	53046	Connector, "Y" w/Clave LS	2107
Insyte Autoguard 24g	53045	Connector, Extension "T"	2280
Introducer Safety 3fr 20g	44557	Connector, Double Female LS	6124
Introducer Safety 4fr 18g	44558	Set, Tubing Primary w/Smartsite	25697
Introducer Safety 5f 16g	44559	Cap, Sterile LS Male	5991
Kit PICC 26 x 1.9fr	44560	Clave Micro ext set w/ valve 6"	21879
Kit PICC 20 x 3fr	44561	Clave 8.5" Macrobore Ext. Set	71624
Kit PICC 18 x 4fr	44562		
Kit PICC 16g x 5fr	44563	<b>NEEDLELESS VIAL ADAPTORS</b>	
Kit PICC 16g x 5fr d/1	44564	Single Dose Dispensing Pin	55811
NeoPICC Tray Cath 1.9	24597	Adapter Valve w/Clave LS	1920
Introcan 16g x 1 1/4" (Peds)	59466		
Introcan 20g x 1"	59467	<b>SAFETY NEEDLES</b>	
Introcan 20g x 1 1/4"	59468	25g x 5/8"	53343
Introcan 22 g x 1"	48615	22g x 1 1/2"	53344
Introcan 24g x 3/4"	48614	20g x 1 1/2"	53348
		18g x 1 1/2"	53349
<b>BLOOD DRAW</b>		20g x 1"	53350
Eclipse Needle, 22g	101161	22g x 1"	53351
Eclipse Needle, 21G	101162	23g x 1"	53352
Cap, Adapter Blood Collection	21779	25g x 7/8"	53422
Adapter, Blood Collect	8263	19g x 1 1/2"	53424
BD Transfer Device	33463	19g x 1"	53425
BD Luer Loc Access Device	59087		

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Description	ESI Number	Description	ESI Number
<b>NEEDLE COMBOS</b>		<b>NON-LATEX Sterile Powder free Procedure Gloves</b>	
1cc 28g x 1/2"	53355	Exam, Nitrile, Large	8311
3cc 25g x 5/8"	53353	Exam, Nitrile, Medium	8310
3cc 22g x 1 1/2"	53354	Exam, Nitrile, Small	8309
3cc 22g x 1"	53426		
3cc 20g x 1 1/2"	53428		
Integra Insulin 29g x 1/2"	70410		
Pro-Vent 22g Arterial Blood Needle	2043		
Novalog Insulin Ndle w/autocover	83491		
<b>FISTULA NEEDLES</b>		<b>NON-LATEX PROCEDURE GLOVES</b>	
18g	51238	Nitrile, Large	48513
17g	72103		
<b>BLUNT SUTURE NEEDLES</b>		<b>NON-LATEX POWDER FREE GLOVES FOR HAZARDOUS DRUGS</b>	
1 Maxon BTP-X 5x18"	80406	Nitrile, Small	36533
1 Maxon BGS-29 60"	80407	Nitrile, Medium	38512
1 Surgipro BGS-25 40"	80408	Nitrile, Large	70472
		Nitrile, X-Large	71576
<b>SHARPS CONTAINERS</b>		<b>NON-LATEX STERILE SURGEON'S GLOVES</b>	
Bio-Max Large Vol floor model	25523	Neolon 2g 5 1/2	89855
18 gallon Sage floor model	6134	Neolon 2g 6	89837
8 gallon Sage floor model	3704	Neolon 2g 6 1/2	89841
4 gallon Sage	46039	Neolon 2g 7	89845
3 gallon Sage	24387	Neolon 2g 7 1/2	89847
3 gallon Sage red rotor top	25115	Neolon 2g 8	89848
2 gallon Sage	1975	Neolon 2g 8 1/2	89853
5 qt Post	24386	Neolon 2g 9	89854
1 qt Sage	4768	Polyisoprene 6 sensicare aloe	81900
Biohazard Box, w/Red Bag	6090	Polyisoprene 6 1/2 sensicare Aloe	81298
18 gallon w/ hinged lid (chemo)	75275	Polyisoprene 7 sensicare Aloe	81246
Phlebotomy sharps container	20400	Polyisoprene 7 1/2 sensicare Aloe	81245
		Polyisoprene 8 sensicare Aloe	51562
		Polyisoprene 8 1/2 sensicare Aloe	81856
		Polyisoprene 9 sensicare Aloe	89836
		Neoprene 5-1/2 skinsense	39402
		Neoprene 6 skinsense	39403
		Neoprene 6 1/2 skinsense	39404
		Neoprene 7 skinsense	39405
		Neoprene 7 1/2 skinsense	39406
		Neoprene 8 skinsense	39407
		Neoprene 8 1/2 skinsense	39408
		Neoprene 9 skinsense	39409
		Polyisoprene 6 biogel skinsense	54939
		Polyisoprene 6 1/2 biogel skinsense	54941
		Polyisoprene 7 biogel skinsense	54986
		Polyisoprene 7 1/2 biogel skinsense	54987
		Polyisoprene 8 biogel skinsense	54988
		Polyisoprene 8 1/2 biogel skinsense	54989
		Polyisoprene 9 biogel skinsense	54990
<b>CATHETER SECUREMENT</b>			
PICC Statlock Device	53302		
<b>NON-LATEX POWDER FREE EXAM GLOVES</b>			
Nitrile, X-Small	25500		
Nitrile, Small	25501		
Nitrile, Medium	25502		
Nitrile, Large	25503		
Nitrile, Ex Large	25504		
Vinyl, XL Cuff, X-Large	8316		
Vinyl, XL Cuff, Medium	8315		
Vinyl, XL Cuff, Small	8314		
Mediguard, Small*	89419		
Mediguard, Medium*	89417		
Mediguard, Large*	89418		
Mediguard, X-large*	89729		

\*Mediguard gloves are for phlebotomist use only

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<b>Description</b>	<b>ESI Number</b>
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**NON-LATEX GLOVE LINERS**

6 universal skinsense	54992
6 1/2 universal skinsense	54993
7 universal skinsense	54994
7 1/2 universal skinsense	54995
8 universal skinsense	54996
8 1/2 universal skinsense	54997
9 universal skinsense	54998

**EYE AND FACE PROTECTION**

Eyewear—Challenger II	5241
DeRoyal Eyeshield Frame	87135
DeRoyal Eyeshield Lens	87136
Goggles, Chemical Splash	20580
Face Shield	1397
Mask, Fluid Resistant w/visor	101086
Mask, Fluid Resistant, no visor	35511
Mask, with ties (for ORs only)	3290
Mask, Cone	3289
Mask Surgical Particulate N95	75927
N95 Mask	4725
N95 mask size small	4743

**GOWNS**

Fluid resistant yellow	60504
White Disp/Cancer	3651
Standard Disposable XL	4164
Surgical Sterile Large	2057
Surgical Sterile X-Large	33974
White Tissue Exam	5015

**OTHER**

Ampule Breakers	101193
Chemo Spill Kit	21554

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Appendix E

**Employees from the Health, Safety, and Environment Department Responsible for Bloodborne Pathogen Training:**

- Jack Barrett
- Stephen Dahl
- Elise Hopkins
- Richard Kolish
- Fred Morgan
- Brian Schott
- Laurie Sneed
- Anita Stone

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