



EXPOSURE CONTROL PLAN

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INTRODUCTION

Florida Atlantic University (FAU) has developed an Exposure Control Plan in accordance with the OSHA **Bloodborne Pathogens Standard, 29 CFR§1910.1030**. The Exposure Control Plan includes mandated implementation of exposure determination and risk assessment, training, notification of employees' rights, Universal Precautions, engineering controls, personal protective equipment, and medical surveillance. For specific information regarding compliance with the Exposure Control Plan, contact Environmental Health and Safety (**EH&S**).

SCOPE

The Bloodborne Pathogens Standard mandates the scheduled implementation of the following:

- Exposure determination and risk assessment (job classification/tasks and procedures).
- Annual training of covered employees.
- Dissemination of information (notification of employees' rights).
- Implementation of safe work practices and procedures (including Universal Precautions).
- Use of safe engineering controls (sharps containers, biosafety cabinet, etc.).
- Use of personal protective equipment (protective clothing, gloves, goggles, etc.).
- Preventative and post-exposure medical intervention (HBV vaccination, counseling and medical surveillance).

DEFINITIONS

Blood. Blood refers to human blood, human blood components and products made from human blood.

Bloodborne Pathogens. Bloodborne Pathogens are pathogenic microorganisms and viruses that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV), hepatitis C virus (HCV) and human immunodeficiency virus (HIV).

Decontamination. 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.

Engineering Controls. Engineering controls are those controls (e.g. sharps disposal containers, self-sheathing needles, and 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 Determination. An evaluation of each position (individual employee) and job tasks to determine occupational exposure.

Exposure Incident. An exposure incident is a specific eye, mouth, other mucous membrane, non-intact skin or parenteral contact with blood or other potentially infectious materials that result from the performance of an employee's duties.

HBV. Acronym for Hepatitis B Virus.

HCV. Acronym for Hepatitis C Virus.

HIV. Acronym for Human Immunodeficiency Virus.

Needleless systems. A device that does not use needles for: (1) The collection of bodily fluids or withdrawal of body fluids after initial venous or arterial access is established; (2) The administration of medication or fluids; or (3) Any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps.

Occupational Exposure. 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 work duties.

OSHA. Occupational Safety and Health Administration

Other Potentially Infectious Materials. This refers to: (1) the following human body fluids: semen, 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, cell or organ (other than intact skin) from a human (living or dead); and (3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture media or other solutions; and blood, organs, or other tissues from experimental animals infected with bloodborne pathogens.

Parenteral. Parenteral means piercing mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts or abrasions.

Personal Protective Equipment. Personal protective equipment is specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes, (e.g., uniforms, pants, shirt or blouses) not intended to function as protection against a hazard, are not considered to be personal protective equipment.

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

Source Individual. Any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.

Standard. Refers to OSHA's Bloodborne Pathogen Standard, **29 CFR§1910.1030 (Appendix D)**.

Universal Precautions. Practice or approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as potentially infectious for HIV, HBV and other bloodborne pathogens.

Work Practice Controls. Work Practice Controls are those practices that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles).

RESPONSIBILITIES

The Exposure Control Plan (ECP) applies to all who are, or may be, exposed to blood or other potentially infectious materials (OPIM) as defined in the OSHA Bloodborne Pathogens Standard. This plan is designed to eliminate or minimize employee exposure to bloodborne pathogens or OPIM. It is the responsibility of department Chairpersons or Directors to ensure that individual departments, units and divisions are in compliance with the regulation. It is the responsibility of departmental supervisors, designated supervisors or the Principal Investigators to ensure that the requirements and procedures outlined in the ECP that are appropriate to the individual work areas are carried out. Employees are responsible for reporting exposures to their supervisors and complying with all components of the ECP.

Environmental Health and Safety

The following summarizes the responsibilities of **EH&S** for the enforcement and administration of this program.

Administration Procedures

EH&S will make a diligent effort to identify covered employees and departments within the University community and will make them aware of the requirements of the Standard.

EH&S will routinely inspect areas where covered employees work to ascertain that the manner in which activities are conducted conforms to the provisions set forth in this ECP and the Standard. **EH&S** will also provide departments with the following services:

- ◆ A copy of the Standard and the Exposure Control Plan.
- ◆ Initial and annual training
- ◆ Review of training provided by other departments to ensure that this training meets the criteria set forth in the Standard.
- ◆ Inspection of departments covered by the Standard to ensure compliance with the regulations.
- ◆ Investigation of all exposures incidents involving potentially infectious materials.
- ◆ Medical Approval forms for immunization against HBV.

Training Program

EH&S will provide OSHA Bloodborne Pathogens training for all covered employees. This training will include, but not be limited to, the following:

- ◆ A discussion and explanation of this policy and the OSHA **Bloodborne Pathogens Regulation (29 CFR§1910.1030)**, including a review of their contents.
- ◆ An explanation of the services available through the FAU Occupational Health Program. This information will include an offer of vaccination for HBV by the respective departments at no cost to the employee, and will emphasize the fact that employees at risk must sign a consent/declination form upon receiving the required medical/vaccination information.
- ◆ The basis for selection, use, location and disposal of personal protective equipment, and ways in which the

employee can recognize and minimize or eliminate exposures.

- ◆ The procedures for handling contaminated items including the use of biohazard signs, labels, and color-coding used in their work area.
- ◆ The methods used for cleaning and disinfecting the work areas.
- ◆ Who to contact in the event of a needle stick or other exposure and a discussion of the medical follow up and counseling available from the FAU Occupational Health Program.
- ◆ A discussion of the individual departmental exposure control plans which work in conjunction with the FAU Exposure Control Plan and instructions that all employees with potential exposures must follow Universal Precautions.
- ◆ An opportunity for interactive questions and answers with the person conducting the training session.

EH&S will also provide required refresher training for all covered employees on an annual basis. Records of this training will be maintained by **EH&S**. These records will be available for inspection and review to the appropriate authorities.

The Laboratory Use of Infectious Materials

In addition to those items mentioned above, **EH&S** will provide departments having laboratories where human immunodeficiency virus (HIV), hepatitis B virus (HBV) are used or stored with the following:

- ◆ Notices required to be posted inside laboratories informing employees of their rights and obligations under the Standard and this Manual.
- ◆ Additional safety training in the handling and use of these infectious agents.
- ◆ Annual inspections to ascertain compliance with the Standard and the ECP.

Departments Covered by the Standard

Each Department or Unit covered by the Standard must comply with OSHA regulations and establish a compliance program to include employee training, record keeping of required forms, and compliance with the Exposure Control Plan. Department Chairs, Principal Investigators, or other lead authorities will also have the following responsibilities:

Exposure Control Plan

Each department, unit or laboratory having employees with occupational exposure shall establish a written Exposure Control Plan (ECP) designed to eliminate or minimize employee exposure. The ECP shall be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures and changes in technology that eliminate or reduce exposure to bloodborne pathogens. An employer, who is required to establish an ECP, shall solicit input from non-managerial employees who are potentially exposed to injuries from contaminated sharps in the identification, evaluation, and selection of effective engineering and work practice controls and shall document the solicitation in the ECP.

Exposure Determination

All covered departments, laboratories, and clinics must conduct an exposure determination for each position (individual employee) and identify those positions, which may have exposure to potentially infectious human

material. This exposure determination must be done without regard to the use of personal protective equipment (PPE). Records will be kept of the names of affected employees, their job titles, and their duties and procedures that may expose them to blood and OPIM.

The following list may be used as a guideline in the development of exposure determination for covered employees performing the listed tasks and procedures. In addition, this policy will cover any listed tasks performed on animals which may be determined to be a vector for transmission of bloodborne pathogens. Exposure determination should be done on activities which include:

- ◆ Surgical/Clinical procedures.
- ◆ Laboratory procedures that include handling of blood/body fluids/unfixed tissue.
- ◆ Handling of contaminated or potentially contaminated sharps.
- ◆ Physical exams that include genital/rectal/other mucosal examinations.
- ◆ Receiving/transporting/handling of blood/body fluids/unfixed tissue, except urine/feces unless visibly contaminated by blood.
- ◆ The administering or assisting in the administering first aid to the ill or injured, including administering emergency respiratory resuscitation if required by job description. **NOTE: If first aid is provided on a Good Samaritan basis and if an exposure occurs, the employee will be covered under the Post Exposure Evaluation and Follow up section of this manual.**
- ◆ Handling of contaminated (with potentially infectious materials) linens, clothing, or other articles.
- ◆ Cleaning of any patient care or clinical laboratory area(s).
- ◆ Handling/transporting/embalming unfixed human remains.
- ◆ Performing any task within the University area when evidence of contamination with potentially infectious material is present (i.e., plumber, carpenter, housekeeper, etc).

Hand Washing Facilities

Departments 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, hand sanitizers must be provided. When antiseptic solution is used, hands shall be washed with soap and running water as soon as feasible. Supervisors will ensure that employees are trained to wash their hands immediately after removing gloves and following procedures where exposure to potentially infectious materials could have occurred.

Personal Protective Equipment (PPE)

Personal protective equipment must not be used as a substitute for proper engineering and work practice controls. Departments must provide, at no cost to the employee, personal protective equipment when appropriate. This equipment must be readily available and accessible to users, and must include, but not be limited to, the following:

Disposable gloves shall be worn to protect hands from contact with blood or OPIM. The gloves shall be replaced when contaminated, torn or punctured. Persons allergic to latex shall be offered alternatives such as latex free or nitrile gloves. Non-disposable utility gloves can also be used when appropriate (these may be decontaminated for reuse as long as the integrity of the glove is not compromised).

Protective clothing (gowns, laboratory coats, aprons, etc.) appropriate to the task being performed and the degree of exposure anticipated. In situations when gross contamination can reasonably be anticipated, surgical caps and shoe covers must be provided and used. When other than disposable protective clothing is provided; cleaning, and laundering must be performed according to the section on *Laundry* and must be provided by the department at no cost to the employee.

Face protection sufficient to shield the eyes, nose, and mouth from splashes, sprays, splatters, or droplets of potentially infectious materials, must be worn when contamination can be reasonably anticipated.

Repair or replacement of the items listed above needed to maintain their effectiveness must be paid by the department.

Safer Medical Devices

Safer medical devices must be available to employees such as needleless systems or sharps with engineered sharps injury protection. Employers must document annually the consideration and implementation of appropriate commercially available medical devices designed to eliminate or minimize occupational exposure. Employers must solicit input on these devices from the employees using them in the workplace.

Sharps Injury Log

The departments or units under this standard shall establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps (see Appendix H). The information in the sharps injury log shall be recorded and maintained in such manner as to protect the confidentiality of the injured employee. The sharps injury log shall contain, at a minimum: the type and brand of device involved in the incident, department or work area where the exposure incident occurred, an explanation of how the incident occurred and recommendations to prevent the injury from reoccurring.

Training

All covered departments must promptly provide to affected employees an initial training program specific to the worksite. New employees will be trained at the time of their employment and prior to their working with regulated materials. Training must be provided at no cost to the employee and during work hours. All training will be appropriate in content and vocabulary to the educational level, literacy and language of the employee.

The training shall cover and explain the regulatory contents of the Standard, epidemiology and symptoms of BBP disease, modes of disease transmission, appropriate engineering controls, safe work practices and personal protective equipment, HBV immunization, emergency and post exposure procedures, and hazard communication. The participants must have the opportunity for interactive questions and answers with the person conducting the training session. The department will ensure the employee's participation in a training session a least annually and within one year of their previous training.

Employers must provide additional training to clinical and laboratory employees to ensure knowledge and proficiency in standard microbiological practices and techniques and in the practices and operations of the facility.

Vaccination, Post Exposure Evaluation and Follow-up

- ◆ Departments must make available to all covered employees, at no cost to the employee, the HBV vaccination series during work hours. The Departments must cover the cost of the vaccine, subsequent titer and any booster dose that may be recommended by the FAU Occupational Health program. Each Department or supervisor must determine the amount of funds that are needed for the vaccination cost of all covered employees and have the money allocated for such purpose. The vaccination must not be decline due to lack of funding.

- ◆ Vaccination must be offered after the employee has received the training required under this Standard, and within 10 working days of initial assignment. The employee has the right to except or decline the HBV vaccination. Employees who decline HBV the vaccine can receive it at a later date.
- ◆ Departments must make available to all employees who have had an exposure incident, post exposure evaluation and follow-up at no cost to the employee. Following the report of an exposure incident, the head of the department or supervisor must notify **EH&S**, who will perform a risk assessment to ensure measures are in place to prevent or reduce workplace exposure.
- ◆ Vaccination, evaluation, and follow-up must be: 1) performed by, or under the supervision of, a licensed healthcare professional, and 2) provided in accordance with the recommendations of the US Public Health Service in affect at the time these evaluations and procedures occur. All laboratory tests conducted for evaluation and follow-up must be performed by an accredited laboratory and remain confidential.
- ◆ Departments must ensure that, for each covered employee, either the HBV Vaccination Consent or Declination Form is signed by the employee and supervisor. The original signed HBV Consent Form must be delivered by the employee to the Healthcare Provider administering the HBV vaccination for their signature. A copy of the completed forms must be maintained in the Exposure Control Plan.

Employees Covered by the Standard

Rights

Employees who are covered by the Standard must be entitled to the following:

- ◆ A copy of the Exposure Control Plan and the OSHA CFR 1910.1030 Bloodborne Pathogens from EH&S.
- ◆ Training, provided during working hours and at no cost to the employee.
- ◆ Vaccination against HBV, and the right to decline vaccination.
- ◆ Personal protective equipment appropriate to the tasks being performed.
- ◆ Post exposure evaluation and follow-up, including medical evaluation and counseling.
- ◆ Availability of engineering controls including sharps with engineered sharps injury protections.

When applicable, employees must adhere to accepted practices and procedures and departmental directives which specifically outline the manner in which tasks should be performed.

Employee must not perform activities where contamination by potentially infectious materials may occur without 1) training, 2) the use of engineering controls and approved work practices, and 3) appropriate personal protective equipment.

WORK PRACTICE CONTROLS

Handling of Sharps

Sharps must be disposed or transferred only in the appropriate, labeled sharps container. The containers must remain upright and not be overfilled. Removal of full sharps containers must take place as soon as possible. The container must be closed and sealed prior to removal and disposal to prevent spillage or protrusion of contents. Appropriate secondary containment must be used if leakage is possible. **Please note that all needle/syringes must be placed in sharps containers whether contaminated or not for disposal.**

Employees should follow these procedures when handling sharps:

- ◆ Minimize handling (do not attempt to bend or break needles).
- ◆ Dispose of sharps as a unit immediately after use (do not separate needles from syringes or blades from handles).
- ◆ Do not recap needles or re-sheath blades by hand (see engineering controls).
- ◆ Do not pick up contaminated broken glass by hand; use mechanical means (brush and dustpan, tongs, or forceps).

When reusable sharps that are contaminated with potentially infectious materials are either stored or processed, they must not be handled in a manner that requires employees to reach by hand into the containers where these sharps have been placed. In addition, no container must be opened, emptied, or cleaned manually, or in any other manner, which would expose employees to the risk of percutaneous injury.

Personal Exposure

Employees must not expose themselves to blood or other potentially infectious materials by using other than approved work practices and/or equipment. Employees will report to their supervisors, immediately, all defective, malfunctioning, or missing equipment including biosafety cabinets, pipetting devices, etc. Immediately report any incident involving needle-sticks, cuts, splashes, or contamination of wounds or broken skin with blood or other potentially infectious materials. Employees must include the following procedures to limit personal exposure:

- ◆ Employees must wash their hands immediately after removing gloves. If no soap and water are available in the immediate area, antiseptic hand sanitizer must be used until a sink is available.
- ◆ Employees must remove immediately (or as soon as feasible) any garment that becomes contaminated with potentially infectious materials.
- ◆ All personal protective equipment, including laboratory coats, must be removed prior to leaving the work area, and must be placed in an appropriately designated area or container for storage, washing, decontamination, or disposal.
- ◆ Employees must immediately (or as soon as feasible) remove, replace and dispose of personal protective equipment any time contamination of the equipment occurs or the equipment's ability to function in the manner designed is compromised.
- ◆ Employees must clean and decontaminate all equipment, environmental and working surfaces after contact with blood or other potentially infectious materials and at the end of each work shift. An appropriate disinfectant must be used. At the end of each work shift any protective covering must be removed and replaced, if it is contaminated. Protective coverings include plastic wrap, aluminum foil, or imperviously backed absorbent paper used to cover equipment and environmental surfaces.

- ◆ Employees must dispose of blood or other potentially infectious waste in accordance with applicable federal, state and municipal regulations and the University's Biological Waste Manual.

UNIVERSAL PRECAUTIONS

Universal Precautions require that all blood and certain body fluids be considered potentially infectious for bloodborne pathogens no matter where the source originated. All activities involving contact with blood, tissue and other potentially infectious materials, including the handling of contaminated or potentially contaminated equipment or materials, must be conducted as if dealing with contaminated infectious material. Other potentially infectious materials include semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, any body fluid with visible blood, any unidentifiable body fluid, and saliva from dental procedures.

Universal Precautions do not apply to the following body fluids unless they are contaminated with blood: feces, nasal secretions, sputum, sweat, tears, urine, and vomitus.

Standard Precautions is another method of infection control that healthcare workers follow to protect themselves and patients from infection. Procedures and practices apply not only to the fluids and materials covered in this standard, but expand coverage to all excretion and secretion except sweat.

The following standards of practice must be observed and must be conspicuously posted near first aid equipment and in all areas where the possibility of contamination by infected materials may occur:

- ◆ Hands must be washed if there is any likelihood of contact with blood, body fluids or human tissue. If soap and water are not immediately available, hand sanitizer must be used as an interim measure.
- ◆ Gloves must be worn when contact with any of the following is anticipated: blood, body fluid, tissues, mucous membrane or contaminated surfaces.
- ◆ An impervious gown or apron must be worn when splattering of clothing is likely to occur.
- ◆ If splattering, atomization or aerosolization can be anticipated, appropriate protective equipment (such as a mask and eye protection) must be worn at all times.
- ◆ Mouthpieces, resuscitation bags and other resuscitation devices must be made available to workers for use in areas where the need for resuscitation is likely, this includes emergency response personnel.
- ◆ Sharp objects must be handled carefully and properly sent out for disposal.

ENGINEERING CONTROLS

Engineering and work practice controls shall be used to eliminate or minimize employee exposure. Where occupational exposure remains after institution of these controls, personal protective equipment shall also be used. The engineering controls listed below must be provided when appropriate. They must also be examined, maintained or replaced periodically to ensure their effectiveness:

Biosafety Cabinets. Procedures that create aerosols should be performed in a Biological Safety Cabinet (BSC) for personnel, product, and environment protection. It is imperative that BSC certification takes place prior to use in the laboratory, whenever the BSC is moved, and at least annually to avoid contamination in the workplace.

Handwashing Sinks. Employers shall provide handwashing facilities which are readily accessible to employees.

Pocket Masks. This device must be made available to emergency response personnel to use during CPR procedures.

Sharps Containers. Where sharps are stored, handled, or reasonably anticipated to be encountered, sharps containers must be used and readily accessible. These containers must meet the following criteria: 1) closable, 2) puncture resistant, 3) leak proof on sides and bottom, and 4) properly marked.

HOUSEKEEPING

All covered department directors or managers must ensure that the work site is maintained in a clean and sanitary condition. Where the possibility of contamination by a potentially infectious material exists, a written schedule must be developed and implemented. The schedule should include the location within the facility, type of surface to be cleaned, type of soil present, method of decontamination, and tasks or procedures being performed in the area.

Employees must be provided with appropriate disinfectants, and protective coverings (such as plastic wrap, aluminum foil, or imperviously backed absorbent paper). EPA has a list of registered antimicrobial products effective against bloodborne pathogens. The product names are located at the following website. <http://www.epa.gov/oppad001/chemregindex.htm>

All bins, pails, cans, and similar receptacles intended for reuse which are likely to become contaminated with potentially infectious materials must: 1) be routinely inspected and decontaminated, and 2) be cleaned and decontaminated immediately, or as soon as feasible, when contamination has occurred.

LAUNDRY

Each department must adopt the use of Universal Precautions when handling soiled contaminated laundry. When doing this, the use of alternatively labeled or color-coded containers will suffice as long as all employees recognize the containers as requiring compliance with Universal Precautions. Departments must ascertain that 1) employees are provided with proper, color-coded containers and 2) only these containers are used to transport contaminated laundry.

Laundry that is contaminated must be disposed of as biohazardous waste or handled as little as possible with a minimum of agitation. This laundry must be bagged or containerized at the location where it was used and must not be sorted or rinsed in the location of use.

Departments must provide employees with appropriate secondary containment for the handling of laundry that is wet and that presents a reasonable likelihood of soak-through of, or leakage from, the primary bag or container. These secondary containers must be properly marked and prevent soak through and/or leakage to the environment.

When a department's contaminated laundry is transported off site; the department must ascertain compliance with all applicable federal, state, and municipal regulations, including labeling.

COMMUNICATION OF HAZARDS

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 materials. In addition, signs must be posted at the entrance to work areas where potentially infectious are used to include; name of infectious agent, special entrance and exiting requirements, and contact/emergency information.

Warning Label Requirements

- Labels required under this Section must consist of the international biohazard symbol in fluorescent orange or orange red with lettering or symbols in a contrasting color.
- Labels must be affixed as close as feasible to the container by string, wire, adhesive, or other methods that prevent their loss or unintentional removal.
- Labels required for contaminated equipment must be in accordance with this Section and must also indicate which portion of the equipment remain contaminated.

BIOHAZARDOUS/BIOMEDICAL WASTE

Biomedical Waste is defined as any solid or liquid waste which may present a threat of infection to humans, including non-liquid tissue, body parts, blood, blood products, and body fluids from humans and other primates which contain human disease-causing agents; and discarded sharps. The following are also included:

1. Used, absorbent materials saturated with blood, blood products, body fluids, or excretions or secretions contaminated with visible blood; and absorbent materials saturated with blood or blood products that have dried.
2. Non-absorbent, disposable devices that have been contaminated with blood, body fluids or, secretions or excretions visibly contaminated with blood, but have not been treated by an approved method.
3. Pathological and microbiological wastes containing blood or other potentially infectious materials.

The State of Florida has established minimum sanitary practices relating to the segregation, handling, labeling, storage, treatment and disposal of biomedical waste in **Chapter 64E-16** of the **Florida Administrative Code (FAC)**. These practices have been developed to minimize exposure of employees, patients, and the public to disease-causing agents.

As a result of this, all disposal of biomedical waste must follow the FAU *Biological Waste Manual*. This includes the proper use of red biomedical waste bags, autoclaving, sharps containers and record keeping. Contact EH&S for additional information.

SPILL PROCEDURES

All departments that work with blood or other potentially infectious materials must have an appropriate spill kit available at all times. The spill kit contents should include disinfectant such as 10% bleach, PPE, dust pan and forceps for picking up contaminated sharps, paper towels and biohazard bags.

Employees should adhere to the following procedures when dealing with spills of potentially infectious materials.

- ◆ Isolate the area and warn others nearby.
- ◆ Notify the supervisor.

- ◆ Do not attempt to clean a spill unless appropriately trained and equipped with an adequate spill kit.
- ◆ Put on proper PPE and remove glass or sharps with forceps or dust pan.
- ◆ Put paper towels on spill and apply disinfectant carefully to avoid splashes.
- ◆ Allow adequate contact time for disinfectant to be effective.
- ◆ Dispose of spill and clean up materials in accordance with the University's policy on Biomedical Waste.

If a spill or accident results in an exposure incident involving infectious materials, the employee must immediately report the accident to their supervisor and medical provider and follow post exposure procedures.

POST EXPOSURE PROCEDURES

Following an exposure incident and at no cost to the employee, the employee will be offered counseling and a confidential post exposure evaluation (within 24 hours of the incident) and follow-up through the FAU Workers' Compensation program. This evaluation will include:

- ◆ Documentation of the exposure route, and the circumstances under which the exposure occurred.
- ◆ Blood collection and testing of the source person to determine the presence of HBV or HIV infection if the source person(s) is known and confidential permission is obtained.
- ◆ Identification and documentation of the source individual unless identification is infeasible or prohibited by law. The source individual's blood shall be tested as soon as feasible and after consent is obtained. When the source person is known to be infected with HIV or HBV, testing of the source person's blood need not be repeated.
- ◆ The source individual's test results will be made available to the exposed employee, and the employee will be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.
- ◆ If consent is obtained, collection and testing of blood from the exposed employee, as soon as feasible after the exposure incident for determination of HIV and/or HBV status. Blood samples shall be preserved for at least 90 days for HIV serological testing.
- ◆ Follow-up of employee exposure includes antibody or antigen testing, counseling, illness reporting and safe and effective post-exposure treatment according to standard recommendations for medical practice.
- ◆ The employee shall be provided with a copy of the evaluating healthcare professional's written opinion within 15 days of completing the evaluation. The report will include results of the evaluation and any medical conditions resulting from the exposure which require further evaluation or treatment. All other findings or diagnoses shall remain confidential and not be included in the written report.

RECORDKEEPING

All records must be retained as required under the Standard. The following areas are responsible for record retention.

Requirements for EH&S

EH&S will be responsible for the following record keeping activities:

- ◆ Approval of training curricula records and individual training and re-training records. The training records must be kept for a period of three years.
- ◆ Making training available, upon request, for examination and copy to: 1) the Occupational Safety and Health Administration and 2) the employee or his/her authorized representative as required by law.
- ◆ Holding copies of the Notice of Injury Forms and the Accident Investigation Report received by **EH&S** indicating investigation and follow-up. These records will be kept for 30 years after employee leaves FAU.

Covered Departments

Each covered Department will be responsible for the following:

- ◆ Storing copies of Exposure Determinations for each employee in that department.
- ◆ Storing copies of HBV Vaccination Consent Forms or HBV Vaccination Declination Forms for each covered employee.
- ◆ Establishing and maintaining a Sharps Injury Log for the recording of percutaneous injuries from contaminated sharps.
- ◆ Maintaining current editions of the individual department's Exposure Control Plan including job classifications, employment records, etc.

Healthcare Provider

Healthcare Providers, under contract with FAU to provide services as required by the Standard, must retain all medical records, including but not limited to:

- ◆ Name and FAU Z number of the employee.
- ◆ The consent or declination of HBV immunization.
- ◆ The HBV vaccination status, the dates of vaccinations and any medical records relative to the employee's ability to receive vaccination.
- ◆ If required, a copy of the employee's HIV/HBV serological status and healthcare professional's written opinion.
- ◆ All medical records will be kept for 30 years after the employee separates from FAU.

HIV/HBV RESEARCH PRODUCTION LABORATORIES

In addition to all other requirements listed in this manual, all Departments engaged in the culture, production, concentration, experimentation and manipulation of HIV or HBV, including laboratory and animal facilities, must comply with this Section's requirements. Clinical or diagnostic laboratories engaged solely in the analysis of blood, tissues, or organs are exempt from this Section.

- ◆ Laboratory doors must remain closed while work involving HIV or HBV is in progress.

- ◆ Access to work areas must be limited to those having authorization, training and knowledge in the handling of infectious materials. Janitorial and maintenance personnel, visitors and new employees entering the work area must: 1) have been advised of the potential hazard, 2) have been specifically authorized to enter the facility, 3) comply with all entry and exit procedures, and 4) have their activities monitored by competent supervisory personnel.
- ◆ All activities involving potentially infectious materials must be conducted in biosafety cabinets, and not on open counters or benches. The biosafety cabinet must have a current (annual) inspection certificate. Biosafety cabinets must be certified when originally installed, following repairs, or when moved.
- ◆ Engineering controls, such as safety caps on centrifuges, must be used for procedures that may pose a threat of exposure to droplets, splashes or aerosols.
- ◆ Supervisory personnel must strictly enforce the use of personal protective equipment by all persons in the work area. Protective clothing shall not be worn outside of the work area and shall be decontaminated before being laundered.
- ◆ Where vacuum lines are used, they must be equipped with liquid disinfectant traps and high-efficiency particulate air (HEPA) filters. These should be checked and maintained routinely, and replaced as necessary.
- ◆ Extreme caution shall be used when handling needle and syringes. Only needle locking syringes or integral needle-syringe units may be used. Hypodermic needles and syringes must be used only for parenteral injection or for aspiration of fluids from laboratory animals or diaphragm bottles. A needle shall not be bent, sheared, replaced in the sheath or guard, or removed from the syringe following use.
- ◆ Within each laboratory there must be, accessible and readily available to all employees, a biosafety manual outlining activities conducted in the laboratory and their potential hazards and practices and procedures to minimize and prevent exposure. In addition, there must be copies of the Exposure Control Plan, OSHA Bloodborne Pathogen Standard and a Chemical Hygiene Plan and applicable MSDS information.
- ◆ Each work area shall contain a sink for washing hands and a readily available eye wash facilities. The sink shall be foot, elbow, or automatically operated and shall be located near the exit door of the work area.
- ◆ Autoclave facilities must be available for decontamination of biohazardous waste.
- ◆ A sign containing the international biohazard symbol in fluorescent orange or orange red with lettering or symbols in a contrasting color must be posted at the entrance to work areas covered under this Section. The sign must read "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 other responsible person(s).
- ◆ The work areas shall be separated from areas that are open to unrestricted traffic flow within the building. Passage through two sets of doors shall be the basic requirement for entry into the work area from access corridors or other contiguous areas.
- ◆ A ducted exhaust-air ventilation system shall be provided. This system shall create directional airflow that draws air into the work area through the entry area. The exhaust air shall not be recirculated to any other area of the building and shall be discharged to the outside. The proper direction of the airflow shall be verified.

APPENDIX A

FLORIDA ATLANTIC UNIVERSITY

DEPARTMENTAL COMPLIANCE PROCEDURES

The following guidelines outline the steps necessary to bring those Departments, clinics or research areas into compliance with the OSHA Bloodborne Pathogens Standard.

1. Develop an Exposure Control Plan or adopt this FAU Exposure Control Plan for the covered area and outline site specific information. Fill out the required forms and customize this plan to fill the needs of the area. Provide easy access to the plan for all affected employees during all work hours. Provide documentation that the plan is reviewed annually and when there are changes made in the workplace or OSHA standard.
2. Prepare an exposure determination list (see form in Appendix B, Forms and Questionnaires) to document positions and employees with potential exposure.
3. Have each listed employee contact EH&S for initial and annual training and to obtain the Medical Approval form for the HBV vaccination.
4. Provide initial and annual worksite training sessions to current affected employees. Initial training for new affected employees will be given prior to their first assignment involving potential exposure. All training should be scheduled through EH&S.
5. Prepare a maintenance and inspection schedule to document the monitoring of equipment and engineering controls.
6. In the event of an exposure incident, either the supervisor or injured employee must call AmeriSys at 1-800-455-2079 **immediately** and PRIOR to obtaining medical treatment. AmeriSys will assist the injured employee in selecting an appropriate medical provider from within AmeriSys Workers' Compensation Services Provider Directory, and AmeriSys will arrange the appointment. For more detailed information, please refer to http://www.fau.edu/hr/Benefits/workerscomp_new.php#work.
7. Provide the following:
 - Biohazard warning labels
 - Biohazard warning door signs
 - Appropriate PPE
 - Handwashing and eye/face flushing facilities
 - Decontamination of equipment prior to servicing, shipping, or handling
 - Assurance that affected employees follow Universal Precautions
 - Assurance that each affected employee has been offered HBV immunization and post exposure evaluation and follow-up at no cost to the employee

APPENDIX C: HBV CONSENT FORM

FLORIDA ATLANTIC UNIVERSITY HEPATITIS B VACCINATION CONSENT FORM

Employees covered by the OSHA Bloodborne Pathogens Standard (29 CFR 1010.1030)

INSTRUCTIONS: Every employee covered by the OSHA Bloodborne Pathogens Standard must complete either this form or the Hepatitis B Vaccination Declination Form. ONLY ONE OF THESE TWO FORMS SHOULD BE COMPLETED.

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 agree to be vaccinated with hepatitis B vaccine, at no charge to myself. I understand that I will receive the complete series of injections required for immunization to HBV.

I understand the nature of HBV infection which may cause death. Most people with HBV recover completely, but they may become chronic carriers of the virus. Most of these people have no symptoms, but can continue to transmit the disease to others. Some may develop chronic active hepatitis and cirrhosis. HBV also appears to be a causative factor in the development of liver cancer.

I understand that there are contraindications to HBV vaccination which include, but are not limited to: 1) hypersensitivity to any component of the vaccine (where recombinant HBV vaccine is used, hypersensitivity to yeast is a contraindication), and 2) pregnancy or lactation.

I understand that additional information regarding the HBV vaccination will be provided to me by the healthcare provider at the time of vaccination.

Employee Name (print)

FAU Z No.

Employee Signature

Date

Supervisor Name (print), Signature and Date

Department Name, Location (campus, building, room #), and Phone Number

Healthcare Provider Name (print), Signature and Date

Copy to Employee's Departmental File

APPENDIX C: HBV DECLINATION FORM

FLORIDA ATLANTIC UNIVERSITY HEPATITIS B VACCINATION DECLINATION FORM

Employees covered by the OSHA Bloodborne Pathogens Standard (29 CFR 1010.1030)

INSTRUCTIONS: Every employee covered by the OSHA Bloodborne Pathogens Standard must complete either this form or the Hepatitis B Vaccination Consent Form. ONLY ONE OF THESE TWO FORMS SHOULD BE COMPLETED.

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Employee Name (print)

FAU Z No.

Employee Signature

Date

Witness, if other than Supervisor (print name), Signature

Supervisor Name (print), Signature and Date

Department Name, Location (campus, building, room #), and Phone Number

I choose not to receive the Hepatitis B vaccine as I have already completed the vaccination series.

Copy to Employee's Departmental File

APPENDIX D: ENGINEERING CONTROLS

FLORIDA ATLANTIC UNIVERSITY ENGINEERING CONTROLS

The following Engineering Controls are in place in this facility.

_____ Handwashing facilities are available for staff use at the following locations:

Where handwashing facilities are not immediately available, antiseptic hand cleansers and towels or towelettes are available for staff use at the following locations:

_____ Leak-proof, puncture-resistant sharps containers, with appropriate labels or color coding, are available at the following site(s):

Type of container(s) used:

_____ Biological Safety Cabinet (BSC) is used to contain splashes and aerosols and when working with OPIM. Types of BSC(s) used:

_____ Sharps with Engineered Sharps Injury Protections, with a built-in safety feature or mechanism that effectively reduces the risk of an exposure incident, is used when employees work with needle/syringes, scalpels or razor blades.

_____ Mechanical pipettes are available and used in this facility, where necessary.

_____ The Engineering Controls outlined above are inspected and maintained on a regular basis.

Supervisor or Program Manager Signature (**PRINT OR TYPE NAME FIRST**)

Date

APPENDIX E: SAFE WORK PRACTICES

FLORIDA ATLANTIC UNIVERSITY

WORK PRACTICE CONTROLS

The following Work Practice Controls are in place in this facility: (Check all that are applicable)

- _____ Handwashing is required in this facility and employees have been instructed in this procedure and know where facilities are located.
- _____ Recapping of sharps and bending and breaking of needles is prohibited in this facility. Employees have been trained in these procedures. If needles must be recapped, this is done:
 - With an openhanded scoop (passive recapping)
 - When engineering control is used
- _____ Disposal of sharps: After use, all sharps are placed in appropriate receptacles for reprocessing or disposal. Employees have been trained in these procedures, and have been instructed not to overfill containers.
- _____ Mechanical pipettes are required in this facility where appropriate. Blood and other potentially infectious materials are handled with care in this facility. Employees have been trained in these procedures.
- _____ Eating, drinking, smoking, applying cosmetics and handling contact lenses is prohibited in worksites where there is any risk of occupational exposure. Employees have been informed of this rule.
- _____ Storage of food and drink is prohibited in places where other potentially infectious materials are kept. This applies to refrigerators, freezers, shelves, cabinets, countertops and benchtops. Employees have been informed of this rule.
- _____ Leak-proof containers are used for all specimens in this facility.
- _____ Equipment that may become contaminated is inspected for blood or other potentially infectious materials on a regular basis and decontaminated if necessary.
- _____ Equipment is inspected before it is repaired or shipped and decontaminated if necessary. If it cannot be decontaminated before repair or shipment, staff has been instructed to label the site(s) of contamination clearly.
- _____ Sharps containers in this facility are puncture and leak-proof. Staff has been instructed to close the containers when they are moved to prevent spillage.
- _____ Closable, leak-proof containers with the appropriate color coding or labeling are available in the event that the sharps containers appear to be leaking.
- _____ Closable, leak-proof containers with the appropriate color coding or labeling are available for all other regulated waste such as disposable gloves or OPIM.

Supervisor or Program Manager Signature (**PRINT OR TYPE NAME FIRST**)

Date

APPENDIX F: PERSONAL PROTECTIVE EQUIPMENT

FLORIDA ATLANTIC UNIVERSITY PERSONAL PROTECTIVE EQUIPMENT

The following Personal Protective Equipment is available in this facility free of charge.
(Check all that are applicable)

_____ Disposable gloves, in appropriate sizes, are available for all workers at-risk of exposure, for use at their discretion at the following locations in this facility:

Explanation of when used, if applicable, or reasons for lack of use:

_____ Hypoallergenic or alternative gloves are available to workers who need them, at the following locations:

_____ Face protection (check one) () is () is not required in this facility.

Type of face protection used:

- () Face masks
- () Glasses with solid side shields
- () Goggles
- () Chin-length face shields
- () Other:

Explanation when used, if applicable, or reasons for lack of use:

_____ Utility gloves are available for all housekeeping and other staff at the following locations in this facility:

They are checked for cracks before each use and replaced as necessary. Explanation of when used, if applicable, or reasons for lack of use:

Supervisor or Program Manager Signature (**PRINT OR TYPE NAME FIRST**)

Date

APPENDIX F: PERSONAL PROTECTIVE EQUIPMENT

FLORIDA ATLANTIC UNIVERSITY PERSONAL PROTECTIVE EQUIPMENT WORKSHEET CONTINUED

The following Personal Protective Equipment is available in this facility free of charge.
(Check all that are applicable)

_____ The following protective body clothing (check one) () is () is not required in this facility:

- () Clinic jackets
- () Gowns
- () Laboratory coats
- () Aprons
- () Other:

Explanation of when used, if applicable, or reason for lack of use:

_____ The following footwear (check one) () is () is not required in this facility:

- () Booties
- () Shoe covers
- () Other:

Explanation of when used, if applicable, or reason for lack of use:

_____ The following respiratory equipment (check one) () is () is not required in this facility:

- () Mouthpieces
- () Resuscitation bags
- () Other:

Explanation of when used, if applicable, or reasons for lack of use:

Supervisor or Program Manager Signature (**PRINT OR TYPE NAME FIRST**)

Date

APPENDIX G: FACILITY HOUSEKEEPING PROCEDURES
FLORIDA ATLANTIC UNIVERSITY
FACILITY HOUSEKEEPING PROCEDURES

The following Housekeeping procedures are in place in this facility: (Check all that are applicable)

_____ A written schedule for cleaning and decontaminating work sites is attached (see Work Area Cleaning Schedule Form).

_____ Employees are responsible for ensuring that equipment or surfaces are cleaned with an appropriate disinfectant and decontaminated immediately after a spill or leakage occurs and at the end of the work shift.

_____ Employees have been instructed to clean reusable receptacles with a reasonable likelihood for blood contamination with an appropriate disinfectant and to replace protective coverings on surfaces and equipment which are also subject to contamination or at the end of the work shift.

_____ Broken glass: Staff has been instructed to never pick up by hand any broken glassware that may be contaminated. A brush, dustpan, forceps and/or tongs are available for picking up broken glassware that may be contaminated.

_____ Sharps containers in this facility are closable and puncture/leak proof.
() Staff has been instructed not to overfill the containers
() Staff has been instructed to close the containers when they are moved to prevent spillage.
() A secondary container must be provided if the outside of the container appears to be contaminated or the sharps container appears to be leaking.
() Closable, leak-proof containers with the appropriate color coding or labeling are available for other regulated waste such as gloves or bloodied bandages.

_____ Reusable sharps that are contaminated with blood or other infectious materials are stored and processed in receptacles that do not require employees to reach, by hand, into the containers where these sharps have been placed.

_____ Laundry: Color-coded or labeled bags or containers are available where contaminated laundry is stored for cleaning. Soiled laundry is sorted and rinsed away from the point of use or discarded in biohazardous waste containers. Staff has been instructed to handle contaminated laundry, personal or university provided, as little as possible.

_____ Laundry is shipped to _____ for cleaning. The containers used for shipping are appropriately labeled or color-coded.

_____ Contaminated laundry, personal or university provided, which is wet and presents a reasonable likelihood of soak through or leakage from the bag or container is stored and transported in bags or containers which prevents soak through and/or leakage of fluids to the exterior.

_____ Protective gloves are used by all workers. For those who have contact with contaminated laundry; other protective equipment is available as required.

Supervisor or Program Manager Signature (**PRINT OR TYPE NAME FIRST**) Date

APPENDIX H: SHARPS INJURY LOG

FLORIDA ATLANTIC UNIVERSITY SHARPS INJURY LOG

DATE OF INCIDENT	TYPE & BRAND OF DEVICE THAT CAUSED INJURY	WORK AREA WHERE INCIDENT OCCURRED	EXPLANATION OF HOW INCIDENT HAPPENED	PROCEDURES THAT WILL BE DONE TO PREVENT INJURY FROM REOCCURRING

Supervisor or Program Manager Signature (**PRINT OR TYPE NAME FIRST**)

Date

APPENDIX I: POST EXPOSURE CHECKLIST

FLORIDA ATLANTIC UNIVERSITY POST EXPOSURE EVALUATION AND FOLLOW-UP

Fill in the dates of compliance for each procedure/item in use in your facility on the lines provided. In the event of an exposure incident, the following procedures are followed in this facility:

DATES:

_____ A written report of the exposure incident and circumstances is prepared by the supervisor or designated facility exposure incident evaluator.

_____,
Name (**PLEASE PRINT OR TYPE NAME**)

_____ The source individual is identified, where possible and not prohibited by state or local law.

_____ HIV and HBV blood testing of the source individual is performed in accordance with Florida Statutes on confidentiality unless the source is known to be infected with HIV and HBV.

_____ The exposed employee is informed of source blood test results if known and of applicable laws governing disclosure of this information.

_____ A licensed physician or health care worker performs the evaluation and medical follow-up for the exposure at no cost to the employee.

_____ The exposed employee is offered blood collection and/or testing at no cost. The employee has the right to refuse either or both. However, if the exposed employee gives consent for blood collection but not for HIV testing, the blood is kept for 90 days, during which time the employee can choose to have the sample tested.

_____ Appropriate post-exposure prophylaxis is offered to the exposed employee. The recommendations of an evaluating physician who is familiar with the current CDC guidelines on post-exposure prophylaxis treatment for HIV/HBV/HCV are followed in the event of an exposure.

_____ Counseling and evaluation of any reported illness is provided at no charge to the exposed employee.

_____ A written opinion by the health care professional stating that the exposed employee has been informed of the results of the evaluation and about any exposure-related conditions that will need further evaluation and treatment is included in the employee's confidential medical record.

_____ All required laboratory tests are done by an accredited laboratory at no cost to the employee.

Supervisor or Program Manager Signature (**PRINT OR TYPE NAME FIRST**)

Date

APPENDIX K: OSHA BLOODBORNE PATHOGENS STANDARD

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10051