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Owner Heather Vinson
 Area Public Safety
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 + 1 more

Bloodborne Pathogens Exposure Control Plan

POLICY STATEMENT

The University of North Dakota (UND) is committed to providing a safe and healthful work environment for its entire faculty, staff, and students. In pursuit of this goal, the following exposure control plan (ECP) is provided to eliminate or minimize occupational exposure to bloodborne pathogens in accordance with Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1910.1030 and its amendment and amendments thereto, Occupational Exposure to Bloodborne Pathogens.

REASON FOR POLICY

The ECP is a key document to assist our organization in implementing and ensuring compliance with the Bloodborne Pathogens Standard 29 CFR 1910.1030 and its amendment and amendments thereto, thereby protecting our employees/students. This ECP includes determination of employee/student exposure; implementation of various methods of exposure control, including universal precautions, engineering and work practice controls, personal protective equipment, and housekeeping; Hepatitis B vaccination, post-exposure evaluation and follow-up; communication of hazards to employees/students and training; recordkeeping; and procedures for evaluating circumstances surrounding exposure incidents.

SCOPE OF POLICY

This policy applies to:

- President
- Vice Presidents
- Deans, Directors & Department Heads
- Area Managers & Supervisors
- Faculty
- Staff to include student employees
- Students/Visiting Students
- Others/Affiliates

RELATED INFORMATION

<p>29 CFR § 1910.1030 – Occupational Safety and Health Standards: Bloodborne Pathogens</p>	<p>http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=d0a3d4bf728be183be0fc517eebfc337&n=pt29.6.1910&r=PART&ty=HTML#se29.6.1910_11030</p>
<p>A Guide to Understanding North Dakota's</p>	<p>https://deq.nd.gov/Publications/WM/AGuideToUnderstandingNorthDakotasInfectiousWasteRegulations.pdf</p>

Infectious Waste Regulations	
EPA Registered Tuberculocidal Products Effective Against Mycobacterium Tuberculosis	https://www.epa.gov/pesticide-registration/list-b-epas-registered-tuberculocide-products-effective-against-mycobacterium
North Dakota Department of Health Waste Management: Household Infectious Waste	https://deq.nd.gov/WM/InfectiousWaste/
OSHA Bloodborne Pathogens Standard	https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10051
UND Biological Safety Cabinet Policy	https://UND.policystat.com/?lt=nEb9f5IPhIT42yu4MLKV8w&next=/policy/5362590/latest/
UND Communicable Disease Policy	https://und.policystat.com/policy/6719239/latest/
UND Incident Reporting Policy	https://UND.policystat.com/?lt=nEb9f5IPhIT42yu4MLKV8w&next=/policy/4716818/latest/
UND Institutional Biosafety Manual	https://campus.UND.edu/safety/_files/docs/institutional-biosafety-manual.pdf
UND Lab Specific Safety Manual	https://campus.UND.edu/safety/public-safety/biological.html#d19e96-10
UND Laboratory Access Door Signs	https://campus.UND.edu/safety/_files/docs/safety-information-card-med-biology.pdf
UND SafeCampus App	https://www.apparmor.com/clients/und.edu/
UND Sharps Policy	https://UND.policystat.com/?lt=nEb9f5IPhIT42yu4MLKV8w&next=/policy/6126651/latest/
UND Workers' Compensation and Claims Management Procedures	https://UND.policystat.com/?lt=nEb9f5IPhIT42yu4MLKV8w&next=/policy/4746649/latest/

CONTACTS

Specific questions should be directed to the following:

Subject	Contact	Telephone	Office or Department E-Mail / Web Address
Policy Clarification	Office of Safety	(701) 777-3341	https://campus.UND.edu/safety/public-safety/index.html
Report Accidents	Office of Safety	(701) 777-3341	https://campus.UND.edu/safety/public-safety/index.html

DEFINITIONS

Biological waste	Biological waste is any material that contains or has been contaminated by a biohazardous agent.
Biohazard	Biohazard refers to a material that is biological in nature and has the capacity to produce deleterious effects upon biological organisms. Biohazards include, but are not limited to; bacteria, fungi, viruses, prions, parasites, recombinant products, allergens, cultured human and animal cells and the potentially biohazards these cells may contain, infected clinical specimens, tissue from experimental animals, plant viruses, bacteria and fungi, toxins, and other biohazards as defined by State and Federal regulations.
Blood	Human blood, blood components, and other potentially infectious materials (OPIM).
Bloodborne Pathogens	Pathogenic microorganisms that are present in human blood that can cause disease in humans, such as Hepatitis B virus (HBV), Hepatitis C virus (HCV), and Human immunodeficiency virus (HIV).
Body Substance Precautions	Body substance precautions take universal precautions one more step and require the same barrier precautions for all moist body substances, not just those associated with transmission of HIV and HBV (i.e., would include respiratory secretions, urine, etc.). Since many patients' secretions become colonized with organisms (often resistant organisms) prior to any symptoms of illness, body substance precautions can decrease transmission before a patient is isolated for an infection.
Contaminated	The presence, or the reasonably anticipated presence, of blood or other potentially infectious materials on an item or surface.
Contaminated Laundry	Laundry that has been contaminated with blood or other potentially infectious materials or may contain sharps.
Decontamination	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.
Disinfect	The use of a physical or chemical procedure to destroy certain microbial life. Levels of disinfection include low, intermediate, and high. Unlike sterilization, even high-level disinfection does not kill bacterial endospores. Surface disinfectants are ranked as either low or intermediate. These include EPA registered tuberculocidal disinfectants or 1:10 freshly mixed bleach and water. If blood or other potentially infectious materials are to be disinfected from a contaminated surface, one of these intermediate-level disinfectants is required to be used.
Designated Medical Provider (DMP)	A medical professional or a facility selected by the employer to treat work related injuries. All employers in North Dakota have the option of selecting a DMP.
Employee	For the purposes of this document, includes UND faculty, staff, and student employees.
Engineering Controls	Controls (e.g., safer medical devices, such as sharps with engineered sharps injury protections and needleless systems, sharps disposal containers, self-sheathing needles) that isolate or remove the bloodborne pathogens hazard from the workplace. [See also Work Practice Controls]
Exposure Control Plan (ECP)	A plan with the goal of eliminating or minimizing occupational exposure to bloodborne pathogens.
Exposure Incident	An exposure incident is a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact (subcutaneous or intravenous injection) with blood or other potentially infectious materials (OPIM), as defined in the standard that results from the performance of a worker's duties.
Eyewash Station	A unit which flushes water specifically to the eyes
Hepatitis B Virus (HBV)	A viral infection that attacks the liver and can cause both acute and chronic disease. The virus is transmitted through contact with the blood or other body fluids of an infected person.
Hepatitis C Virus (HCV)	An infectious disease affecting primarily the liver. The infection is often asymptomatic, but chronic infection can lead to scarring of the liver and ultimately to cirrhosis, which is generally apparent after many years.

Human Immunodeficiency Virus (HIV)	A lentivirus (a subgroup of retrovirus) that causes HIV infection and acquired immunodeficiency syndrome (AIDS). AIDS is a condition in humans in which progressive failure of the immune system allows life-threatening opportunistic infections and cancers to thrive.
Hand Washing Facilities	A facility providing an adequate supply of running potable water, soap, and single use towels or hot-air drying machines.
Infectious Waste	<p>NDCC 23-29-03.5 defines infectious waste as solid waste that may contain pathogens with sufficient virulence and in sufficient quantity that exposure of a susceptible human or animal to the solid waste could cause the human or animal to contract an infectious disease. Regulated infectious waste includes but is not limited to:</p> <ul style="list-style-type: none"> • Sharps • Cultures and stocks • Human blood and blood products • Pathological waste • Animal waste • Isolation waste • Unused sharps <p>The majority of waste produced at any medical facility is not classified as infectious waste. Materials such as office waste, paper from examination tables, gauze, packaging, and band-aids are not considered infectious waste and may be disposed of as regular solid waste. North Dakota does not have a separate definition for medical waste. [see also Regulated Waste]</p>
Institutional Biosafety Committee (IBC)	An institutional committee created under the NIH guidelines to review research involving recombinant or synthetic nucleic acid molecules. The role of IBCs has evolved and UND's committee also reviews other forms of research, as well as instructional activity that entail biohazardous risks as part of their institutionally assigned responsibilities.
Licensed Health Care Professional	A person whose legally permitted scope of practice allows him or her to independently perform the activities required by the program, Hepatitis B vaccination and post-exposure evaluation and follow-up.
Needleless Systems	<p>Devices that do not use needles for:</p> <ul style="list-style-type: none"> • The collection of body fluids or withdrawal of body fluids after initial venous or arterial access is established; • The administration of medication or fluids; or • Any other procedure involving the potential for occupational exposure to bloodborne pathogens due to percutaneous injury involving contaminated sharps. Examples of needleless systems include, but are not limited to, intravenous medication delivery systems that administer medication or fluids through a catheter port or connector site using a blunt cannula or other non-needle connection, and jet injection systems that deliver subcutaneous or intramuscular injections of liquid medication through the skin without use of a needle.
Near Miss	An unplanned event that did not result in injury, illness, or damage – but had the potential to do so.
Occupational Exposure	Reasonable 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 (OPIM)	<p>OPIM refers to:</p> <ul style="list-style-type: none"> • Human blood, semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, and any body fluid visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; • Any unfixed tissue or organ (other than intact skin) from a human (living or

	<p>dead);</p> <ul style="list-style-type: none"> • HIV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV, HBV, or HCV. • Human derived cell cultures, including well established cell lines as described above;
Parenteral	Piercing mucous membranes or the skin barrier through such events as needle sticks, human bites that break the skin, cuts, and abrasions.
Personal Protective Equipment (PPE)	Protective clothing, helmets, goggles, or other garments or equipment designed to protect the wearer's body from injury or infection. The hazards addressed by protective equipment include physical, electrical, heat, chemicals, biohazards, and airborne particulate matter.
Regulated Waste	Liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state 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.
Sharps	Sharp instruments that have been used in animal or human patient care or treatment or in medical, research, or industrial laboratories, including, but not limited to; hypodermic needles, syringes (with or without the attached needle if contaminated), Pasteur pipettes, scalpel blades, blood vials, needles with attached tubing, and glass culture dishes (regardless of presence of infectious agents). Also included are other types of broken or unbroken glassware that were in contact with infectious agents, such as used slides and cover slips. (University policy considers all sharps to be contaminated)
Sharps with Engineered Sharps Injury Protections (SESIPs)	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. These may include: syringes with guards or sliding sheaths that shield the attached needle after use; needles that retract into a syringe after use; shielded or retracting catheters used to access the bloodstream for intravenous administration of medication or fluids; intravenous medication delivery systems that administer medication or fluids through a catheter port or connector site using a needle that is housed in a protective covering, blunt suture needles; and plastic capillary and blood tubes.
Standard Precautions	The general concept that all patients and all laboratory specimens should be handled as if they were infectious, capable of transmitting disease.
Sterilize	The use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.
Student	Student, for the purposes of this document, means an individual matriculating at an institution of higher education who is at UND for academic purposes only. Students who are also hired as an employee will function under the guidelines for employees when acting as an employee.
Soiled	Dirty; not contaminated with blood or OPIM. An employee's/student's uniform may be soiled with dirt and sweat from the day's work. The uniform would be contaminated if blood or OPIM were on the uniform.
Source Individual	Any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee/student. 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.
Universal Precautions	An approach to infection control in which human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, HCV or other bloodborne pathogens.
Work Practice Controls	Controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g. handling medical waste with gloves). [see also Engineering Controls]

PRINCIPLES

Overview

UND is committed to providing a safe and healthful work environment for our entire faculty, staff, and students. In pursuit of this goal, the following exposure control plan (ECP) is provided to eliminate or minimize occupational exposure to bloodborne pathogens in accordance with OSHA Standard 29 CFR 1910.1030 and its amendment and amendments thereto, Occupational Exposure to Bloodborne Pathogens.

The ECP is a key document to assist our organization in implementing and ensuring compliance with the Bloodborne Pathogens Standard 29 CFR 1910.1030 and its amendment and amendments thereto, thereby protecting our employees/students. This ECP includes determination of employee/student exposure; implementation of various methods of exposure control, including universal precautions, engineering and work practice controls, personal protective equipment, and housekeeping; Hepatitis B vaccination, post-exposure evaluation and follow-up; communication of hazards to employees/students and training; recordkeeping; and procedures for evaluating circumstances surrounding exposure incidents.

As required by UND, safety policies and procedures will be enforced. Compliance by employees and students to the safety policies and procedures is required and enforceable. Any violation of this policy can result in discipline up to and including termination in accordance with North Dakota University System and UND human resource policies.

PROCEDURES

Administration

Those employees/students who are determined to have occupational exposure to blood or other potentially infectious materials (OPIM) by the principal investigator/supervisor must comply with the procedures and work practices outlined in this ECP.

TASK	RESPONSIBLE DEPARTMENT AND CONTACT INFORMATION
Implementation of the exposure control plan	Office of Safety, Director for Safety 3851 Campus Rd, Stop 9031 Grand Forks, ND 58202-9031 Phone: 701-777-3341
Maintain, review, and update the ECP at least annually and whenever necessary to include new or modified tasks and procedures	Office of Safety, Director for Safety 3851 Campus Rd, Stop 9031 Grand Forks, ND 58202-9031 Phone: 701-777-3341
Maintain and provide all necessary personal protective equipment (PPE), engineering controls (e.g., sharps containers), labels, and red bags as required by the standard	The affected department principal investigators, supervisors, chairs, directors, and student clinical sites
Ensure that all medical actions required are performed	Designated Medical provider, licensed health care provider, Student Health Services (Only UND Students)
Responsible for making the written ECP available to employees, students, OSHA, and NIOSH representatives	Office of Safety, Director for Safety 3851 Campus Rd, Stop 9031 Grand Forks, ND 58202-9031 Phone: 701-777-3341
Responsible for training and documentation	The affected department principal investigators, supervisors, chairs, directors and the Office of Safety
Maintenance of training records	The affected department principal investigators, supervisors, chairs, directors, and office of safety. (Office of Safety will only maintain records for trainings conducted by them.)
Ensure reports from an employee's/student's primary health care provider are maintained by approved personnel.	For Employees: Office of Safety, Director for Safety 3851 Campus Rd, Stop 9031 Grand Forks, ND 58202-9031 Phone: 701-777-3341 For Students:

	Student's program of record
Supply post-exposure evaluation written opinion to employee/student and Office of Safety	Occupational health care provider or licensed health care provider or Student Health Services
Supply return to educational experience document to student	Occupational health care provider or licensed health care provider or Student Health Services
Adhere to the requirements of the ECP; Develop good personal exposure control work habits; Complete all safety training requirements and comply with documentation procedures; and Report all suspected exposure incidents.	University employees and students with occupational exposure to human blood or OPIM

Exposure Determination

Each employee/student must have an exposure evaluation based upon the job description and assigned tasks. The evaluation shall be reviewed with the employee at time of hire or within 90 days of the establishment of this program. Similarly, the evaluation shall be reviewed with the student within 90 days of the establishment of this program. Exposure evaluation shall be based upon a reasonably anticipated contact (skin, eye, mucous membrane, parenteral contact, etc.) with blood or OPIM that may result from the performance of an employee's/student's duties.

As required by OSHA, exposure evaluations will be performed in accordance with a categorization scheme based on the potential of job-related tasks leading to exposure.

The three categories used are:

1. Category 1 – Tasks that involve routine occupational exposure to blood, body fluids or tissues.
2. Category 2 – Tasks that involve no routine occupational exposure to blood, body fluids or tissues, but work may require performing unplanned Category 1 procedures.
3. Category 3 – Tasks that involve no occupational exposure to blood, body fluids or tissues and Category 1 tasks are not a condition for employment.

Table 1 presents a listing of job classifications identified to date that may be assigned to categories 1 or 2. This list can be used as a guideline for categorization. Actual determinations for specific employees/students must be performed by the applicable supervisor/department.

Table 1. Employee/student Assignments Qualifying as Category 1 or 2 for Purposes of Bloodborne Pathogen Control

College and Departments	Employee/student Assignment	Guideline Category
<p>College and Academic Departments are listed below:</p> <ul style="list-style-type: none"> • Arts and Sciences • Biology • Biomedical Sciences • Center for Family Medicine (Bismarck and Minot) • Center for Health Promotion & Prevention Research • Chemistry • Family & Community Medicine • Forensic Science • Geriatrics • INMED • Internal Medicine (Bismarck, Fargo) • Master of Public Health • Medical Laboratory Science • ND Simulation, Teaching, and Research Center • Neurology • Nursing 	Assistant Professor Research Assistant Professor Associate Professor Research Assistant Graduate Assistant Graduate Student Medical Resident/Fellow Postdoctoral Fellow Predoctoral Fellow Professor Research Associate Research Scientist Students MD RN MLS	1-2

<ul style="list-style-type: none"> • Obstetrics & Gynecology (Bismarck, Fargo, Grand Forks, Minot) • Occupational Therapy • Pathology • Pediatrics (Bismarck, Fargo, Grand Forks) • Physical Therapy • Physician Assistant Program • Population Health • Psychiatry and Behavioral Science (Bismarck, Fargo, Grand Forks) • Radiology (Bismarck) • School of Medical and Health Sciences • Sports Medicine • Surgery (Bismarck, Fargo, Grand Forks) 		
Athletics	Head Athletic Trainer Trainers (including paid student trainers), Equipment Manager	1-2
Childcare	Teachers Child Care Providers Assistants (including Student Assistants)	2
Dining Services	Food Service Manager Maintenance Staff Servers Cook	2
Facilities Management	Associate Vice President Facilities Supervisor Operations Director Director Building & Maintenance Technicians All Facilities Trades employees	2
Office of Safety	Director for Safety EHS Manager Biological Safety Officer Physical Infrastructure Safety Officer Risk Management Officer Work Comp Claims Coordinator Student Employees Safety Assistants	1-2
Housing	Director Assistant Director Resident Director Residence Assistants Resident Managers	2
Student Health Services	Nurse Physician Assistant Physician Nurse Practitioner Medical Technologist Laboratory Technician Phlebotomist Radiation Technologist	1-2
Transportation	Auto Service Mechanics Fleet Drivers	2
University Police and Office of Emergency Management	Chief of Police Emergency Manager	1

Note: Part-time, temporary, contract, and per diem employees are covered by the BBP standard. All other departments are to follow the Communicable Disease Policy exposure evaluation based upon the job description and assigned tasks (See Related Information at the beginning of this policy).

Near Misses

Changing an unsafe behavior is the best method of preventing an accident. Identifying near misses is crucial in order to reevaluate procedures and re-train individuals.

Accidents, near misses, unsafe behaviors, and unsafe situations must immediately be reported to the Office of Safety. Methods for reporting unsafe behaviors established by UND may include:

1. Confidential meetings with the Office of Safety
2. Reporting forms

Bloodborne Pathogens and Other Potentially Infectious Material

Bloodborne Pathogens

Bloodborne pathogens are microorganisms found in human blood that can infect and cause disease when persons are exposed to blood that contain microorganisms. While there are many bloodborne pathogens, the 3 specifically covered in this ECP are:

1. Human Immunodeficiency Virus (HIV) – Cause Acquired Immunodeficiency Syndrome (AIDS)
2. Hepatitis B Virus (HBV)
3. Hepatitis C Virus (HCV)

Other Potentially Infectious Material (OPIM)

Materials that can contain pathogens. OPIMs include:

1. Human blood and blood products
2. Semen or vaginal secretions
3. Internal human body fluids, including cerebrospinal fluid, and fluids from joints, chest cavity, heart sac or abdomen
4. Breast milk (only if ingested)
5. Unfixed human tissues or organs (both living and dead)
6. Human cell lines not documented to be free of bloodborne pathogens
7. Blood, tissues, or cell lines from animals experimentally infected with bloodborne pathogens
8. Cultures or any liquid containing bloodborne pathogens (this includes culture media)
9. Equipment contaminated with human blood or OPIMs
10. Any body fluid visibly contaminated with human blood
11. Any body fluid that is difficult to differentiate from other fluids

The following are not considered to be OPIMs unless they are visibly contaminated with blood, or it is difficult or impossible to distinguish:

1. Tears
2. Sweat
3. Saliva (except during dental procedures)
4. Vomit
5. Feces
6. Urine
7. Nose fluids
8. Intact human skin (from living or dead source)

How are Bloodborne Pathogens Transmitted

Pathogens, which are contained in blood and OPIM, must be introduced into the body for an employee/student to become exposed. An exposure potential task is a task that could potentially expose the employee/student in one of the following ways:

1. Parenteral exposure from needles, scalpels, broken glass, sharp instruments, or anything that can pierce, puncture or cut your skin that is contaminated with blood or OPIM.
2. Non-intact skin such as an existing wound, eczema, broken cuticle, or rash coming in contact with blood or OPIM.
3. Mucous membranes such as the eyes, nose, and mouth becoming splashed, sprayed, or touched with blood or OPIM.

Touching contaminated surfaces can be a mode of spreading disease. The HBV virus can survive on environmental surfaces and objects dried and at room temperature for as long as a week. More about decontamination of surfaces is discussed later in this document (See Procedures: ECP Implementation and Control: Housekeeping).

ECP Implementation and Control

The bloodborne pathogen exposure control at UND employs three major strategies:

1. Administrative controls and training
2. Engineering and work practice controls
3. Personal Protective Equipment

Administrative Controls and Training

Employees/Students covered by the bloodborne pathogens standard receive an explanation of this ECP during their initial training session. This plan is also to be reviewed in their annual refresher training. All employees/students have an opportunity to view this plan at any time during their work by contacting their supervisor. If requested, Office of Safety will provide an employee/student with a copy of the ECP free of charge within 15 days of the request. The Office of Safety is responsible for reviewing and updating the ECP annually or more frequently if necessary to reflect any new or modified tasks and procedures that affect occupational exposure and to reflect new or revised employee positions with occupational exposure.

Engineering and Work Practice Controls

Engineering and work practices designed to eliminate or minimize employee/student exposure shall be used when performing exposure potential tasks. All procedures involving blood and OPIM will be performed in a way that prevents or minimizes splashing, spraying, spattering, and generation of droplets. Where occupational exposure remains, personal protective equipment shall also be used. Engineering and work practice controls will be evaluated, maintained, and/or replaced on a regular schedule to ensure their continued effectiveness. The principal investigator, supervisor, or department identifies the need for changes in engineering controls and work practices through review of incident records, use of checklists, evaluation forms and employee/student interviews. Should an exposure incident occur while using these controls, the controls will be evaluated as to the reason for the failure, corrected, and changes will be made to this exposure control plan in order to prevent future incidents. Training of employees/students will occur immediately, reflecting the new changes.

Examples of engineering and work practice controls used to eliminate or minimize employee/student exposure to bloodborne pathogens include but may not be limited to:

1. Universal Precautions or Standard Precautions
2. Use of biological safety cabinets
3. Hand washing
4. Sharps with engineered sharps injury prevention (SESIPs)
5. Sharps containers

Universal Precautions and Standard Precautions

UND as well as OSHA requires that universal precautions or standard precautions be observed to prevent contact with blood or body fluids. The difference between universal precautions and standard precautions is as follows:

Universal Precautions

All blood and OPIM are treated as if known to be infectious for HIV, HBV, HCV and other bloodborne pathogens, regardless of the perceived low or high risk of the patient/person from whom they came.

Universal precautions include the following practices:

1. Wear gloves when hands may come into contact with human blood or OPIM.
2. Replace gloves when they become torn or contaminated.
3. To prevent exposure of mucous membranes of the mouth, nose and eyes, wear masks and protective eyewear whenever splashes, spray, or spatter of blood or potentially infectious materials are likely to occur.
4. Wear protective suits, gowns or aprons during procedures that are likely to generate splashing of potentially infectious materials.
5. Employees/students will wash their hands for approximately 20 seconds with soap and tepid running water immediately or as soon as possible after all glove or other personal protective equipment removal. Hand sanitizers (greater than 62% alcohol) may be used in situations if there are no means to wash (i.e., health fair). This procedure must be followed by washing with soap and water as soon as feasible.
6. Use care when handling needles, scalpels, razors and other sharp objects contaminated with blood or OPIM. Use tongs or forceps if possible.
7. Use appropriately-labeled and constructed containers for disposal, storage, and transport of any potentially infectious material.
8. Employees responsible for first aid should use protective resuscitation masks for mouth-to-mouth resuscitation.
9. Health care workers or first aid providers must cover skin lesions and wear gloves when treating patients or when handling health-care equipment.
10. Do not eat, drink, apply cosmetics or lip balm, smoke, or handle contact lenses in work areas where there is likelihood of occupational exposure. Do not keep food and beverages in refrigerators, freezers, shelves, cabinets, or on countertops where human blood or OPIM are present.

At a minimum, all employees/students at this institution will practice universal precautions.

Standard Precautions

Incorporates the major features of universal precautions and body substance precautions and applies these principles to all individuals regardless if their diagnosis is presumed infection status. Standard precautions apply to:

1. Blood,
2. All body substances, secretions, and excretions (except sweat) regardless of whether or not these substances contain visible blood,
3. Non-intact skin,
4. Mucous membranes, and
5. Non-preserved tissues.

Standard precautions are designed to reduce the risk of transmitting of microorganisms from both known and unknown sources of infection in the hospital setting.

Biological Safety Cabinets (BSCs)

BSCs will be used to prevent exposure or aerosols based on risk assessment. It is the responsibility of the supervisor, principal investigator, or department to ensure that the BSCs are certified annually as per the NSF standard. The supervisor, principal investigator, or the department is responsible for covering the cost and maintaining the documentation for the BSC certification as per the UND Biological Safety Cabinet policy (See Related Information at the beginning of this policy).

Handling Sharps with Engineered Sharps Injury Protections (SESIPs)

Medical devices with sharps injury prevention features that are cleared by the FDA [510(k)] will be used whenever possible. Devices should have design features with the following characteristics:

1. A fixed safety feature that provides a barrier between the hands and needle after use;
2. The safety feature should allow or require the worker's hands to remain behind the needle at all times;
3. The safety feature is an integral part of the device and not an accessory;
4. The safety feature is in effect before disassembly and remains in effect after disposal to protect users, trash handlers, and for environmental safety;
5. The safety feature is as simple as possible, and requires little or no training to use effectively;
6. The device will not jeopardize patient or employee/student safety or be medically inadvisable;
7. The device will make an exposure incident involving a contaminated sharp less likely to occur.

Examples of such devices include:

1. Needle-protected systems
2. Needleless systems
3. Self-sheathing needles
4. Safety phlebotomy needles
5. Retracting lancets
6. Plastic blood tubes and plastic or mylar-coated capillary tubes
7. Blood transfer devices
8. Blunt suture needles

Engineering Controls and SESIPs Evaluation

Evidence to ensure engineering controls and sharps-injury protection effectiveness, sharps and engineering controls will be evaluated on a regular basis by the evaluation team (Office of Safety and Principal Investigators or Supervisors). Identification, evaluation and selection of effective engineering controls will be updated by appropriate personnel. Procedures and new technology will be reviewed at least annually.

Sharps Containers for Disposable and Reusable Sharps

Disposable sharps shall be discarded immediately or as soon as feasible in containers that are:

1. Able to be closed prior to removal
2. No more than two-thirds full
3. Puncture resistant
4. Leak-proof on sides and bottom
5. Labeled biohazard or color-coded red
6. Easily accessible to personnel and located as close as possible to the point of use, or where sharps might be found.
7. Maintained upright throughout use
8. Replaced routinely and may not be overfilled
9. Appropriate in size for devices placed in them
10. If wall-mounted must be designed with visible opening and below eye level
11. Designed with an unobstructed opening that allows devices to drop in easily

Note: Sharps container must be closed prior to transport. If it is necessary to transport sharps containers to other locations for autoclaving it must be placed in a secondary container prior to transport.

Reusable Sharps

Reusable sharps such as scissors that are contaminated shall be placed as soon as possible after use in appropriate containers with liquid disinfectant until properly reprocessed. These containers must be:

1. Puncture resistant

2. Labeled with biohazard or red in color
3. Leak-proof on the sides and bottom
4. Designed so sharps are not stored or processed in a manner that requires employees/students to reach by hand into the containers where the sharps have been placed.

Sharps containers are purchased by the principal investigators, supervisors, chairs, or directors. Once the sharps containers are filled up to three-quarters full, the Office of Safety must be contacted for pick up.

Note: Fill the waste disposal form/manifest (see Forms) and call the Office of Safety at 701-777-3341 to pick up the sharps container for disposal. UND has a contract with a licensed vendor, that removes sharps for disposal by incineration.

Sharps must be handled and disposed using the following precautions:

1. Extreme caution must be used when working with sharp objects such as needles, scalpels, razor blades, or broken glass and properly dispose of the sharps in appropriate sharps containers;
2. Syringes and Needles shall be disposed of in labeled sharps containers;
3. Needles should not be re-sheathed. Some applications may require re-sheathing. In those cases, the use of re-sheathing needles or mechanical re-capping devices are strongly recommended. If these alternatives are not feasible, then the one-handed scoop method for re-sheathing should be employed;
4. Needles and other sharps should be handled as little as possible. Handling sharps for transport, cleanup or disposal must be done using a mechanical device or tool (forceps, pliers, broom, and dust pan);
5. Breaking or shearing needles is prohibited;
6. Controls should be used to prevent needlestick injuries, and include specially engineered sharps injury protection (e.g. leur-lock syringes, permanent needle and syringe combination, self-sheathing needles, needle-less systems, etc.);
7. University employees/students who encounter improperly disposed needles shall notify Office of Safety of the location of the needle(s). The appropriate authorities (e.g., lab manager, principle investigator, supervisor) must also be notified;
8. Office of Safety should be contacted to dispose of properly decontaminated sharps or glassware.

Sharps Injury Log

UND has elected to establish and maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps (See Related Information at the beginning of this policy: UND Sharps Policy). This may help UND to identify the need to eliminate identified unsafe engineering devices. The information in the sharps injury log shall be recorded and maintained as to protect the confidentiality of the injured employee/student according to the procedures of the sharps policy by the supervisor, principal investigator, or department. The sharps injury log shall contain, at a minimum:

1. The type and brand of device involved in the incident.
2. The department or work area where the exposure incident occurred and an explanation of how the incident occurred.

Note: Students/Employees working at medical centers or clinical affiliate locations outside of the main campus must adhere to the medical center or clinical affiliate policies related to sharps injury log. UND will not establish and maintain a sharps injury log for locations outside of the main campus.

Personal Protective Equipment

Personal protective equipment (PPE) will be provided to the employees at no cost from their supervisors, principal investigators, or department. Training in the use of the appropriate PPE for specific tasks or procedures is provided by the affected principal investigator, supervisor, chair or the Office of Safety (if requested). All employees/students who have potential skin, eye, mouth, mucous membrane, or parenteral contact with human blood or OPIM must wear PPE that will act as a barrier to these materials. PPE will consist of, but may not be limited to, gloves, masks, fluid resistant gowns, lab coats, face shields, eye protection, and resuscitation devices. The type(s) of protective clothing or equipment used in a specific instance will depend on the job being performed.

All employees/students using PPE must observe the following precautions:

1. Wash hands immediately or as soon as feasible after removal of gloves or other PPE;

2. Remove PPE after it becomes contaminated, and before leaving the work area;
3. Used PPE may be disposed of in plastic bags, then incinerated or autoclaved;
4. Wear appropriate gloves when it can be reasonably anticipated that there may be hand contact with blood or OPIM, and when handling or touching contaminated items or surfaces;
5. Replace gloves if torn, punctured, contaminated, or if their ability to function as a barrier is compromised;
6. Utility gloves may be decontaminated for reuse if their integrity is not compromised;
7. Discard utility gloves if they show signs of cracking, peeling, tearing, puncturing, or deterioration.
8. Never wash or decontaminate disposable gloves for reuse;
9. Wear appropriate face and eye protection when splashes, sprays, spatters, or droplets of blood or OPIM pose a hazard to the eye, nose, or mouth;
10. Remove immediately or as soon as feasible any garment contaminated by blood or OPIM, in such a way as to avoid contact with the outer surface.

All contaminated PPE are thrown in red or orange biohazard bags or containers. The individual departments, principal investigators, or supervisors are responsible for maintaining appropriate biohazard containers.

The following protective clothing and equipment will be made available for use depending upon the activity performed and based on risk assessment:

Gloves

Gloves are worn when there is a possibility for direct hand contact with human blood or OPIM. There are several types of gloves available, and selection should be based upon the job being performed:

1. Thin latex or nitrile gloves are used for operations involving delicate manipulations. These gloves are designed to fit tightly against the skin. The proper size should be selected to fit the worker's hands. Latex and nitrile gloves are available either powdered or powder-free. If an employee/student has a skin reaction from the gloves, hypo-allergenic and/or powder-free types must be provided. All such gloves are disposable and are not to be reused.
2. Rubber, neoprene or other thicker reusable gloves are more durable and are generally used for more strenuous activities, such as cleaning blood spills. They may be re-used if properly decontaminated following contact with potentially infectious materials. Reusable gloves should be periodically inspected to ensure there are no cracks, holes or breaks in the material; if any are found, they must be discarded.
3. PVC gloves are not recommended for work with human blood or OPIM because they do not always provide a leak-proof barrier.

Safety Glasses

Eyewear goggles with solid side shields or chin-length face shields must be worn when there is a risk of splashing human blood or OPIM. This protective equipment reduces the potential for contact with the mucous membranes of the eyes.

Masks

The use of protective masks is intended to reduce the risk of splashing human blood or OPIM onto the mucous membranes of the nose and mouth. If masks are disposable, they must be removed immediately following use and not be reused. Reusable masks and face shields must be properly handled, cleaned and decontaminated prior to reuse.

Protective Clothing

Protective clothing must be worn when there is a risk of human blood or OPIM splattering a worker's skin or clothing. There are various types of suits, gowns and aprons available for this purpose. The type of protective clothing selected will depend upon the task and degree of exposure anticipated. Protective clothing should be resistant to fluids, and may be disposable or reusable. Reusable clothing must be properly laundered prior to reuse.

Resuscitation Masks

For personnel who perform cardiopulmonary resuscitation (CPR), resuscitation masks may be used in an emergency. Most resuscitation masks are disposable and should be handled as contaminated waste following use. The resuscitation mask allows for effective CPR without mouth-to-mouth contact.

Labels

The following labeling methods are used at UND:

1. Biohazard label for all equipment used with or to store infectious material (sharps container, refrigerators, biohazardous trash).
2. Biohazard bag for spill clean-up materials that have not been disinfected. The bag must be bright orange or red, and must have the biohazard symbol (See Figure 1).



Figure 1

Supervisors, principal investigators, or department are responsible for ensuring that the biohazard label and symbol is affixed on orange or red bags as required if regulated waste or contaminated equipment is brought into or taken out of the facility. Employees/Students are to notify Office of Safety if they discover regulated waste containers, refrigerators containing blood or OPIM, contaminated equipment, etc., without proper labels.

Housekeeping

Facilities and other UND custodial or maintenance staff must work together with each department to ensure that the following conditions are met:

1. Decontamination must be performed with an EPA registered tuberculocidal cleaner and disinfectant for destruction of HBV, HCV, and HIV;
2. Equipment and surfaces must be clean and decontaminated after contact with blood or OPIM;
3. Bins/pails (e.g. wash basins) need to be cleaned and decontaminated as soon as feasible after visible contamination;
4. Spills of blood or OPIM should be cleaned up as soon as possible by personnel specifically trained for bloodborne pathogen spill response;
5. Regulated waste needs to be placed in containers which are closable, constructed to contain all contents and prevent leakage, appropriately labeled or color coded and closed prior to removal to prevent spillage or protrusion of contents during handling;
6. Broken glassware must be picked up using mechanical means (e.g. tongs, dustpan and brush) and disposed of in an appropriate sharps container;
7. Contaminated sharps are discarded as soon as possible into containers that are closable, puncture-resistant, leak proof on sides and bottoms, and appropriately labeled or color coded. Sharps disposal containers are available through supervisors, principal investigators, or department and must be located where sharps are being used.

Disposing of biohazardous waste:

1. Supervisors must instruct employees/students in the proper disposal and procedures when using biohazard bags.
2. Biohazard bags **must be autoclaved** and over bagged with a translucent covering before they can be disposed of in the regular trash (e.g., black trash bag).
3. Waste containers must be in an upright position and replaced routinely.
4. Containers with blood or OPIM must be closed after use, for disposal or for transfer to an autoclave.

Laundry

1. Laundry contaminated with blood or OPIM shall include:
 - a. Reusable PPE
 - b. Reusable coverings such as towels, lab coats, etc. contaminated with blood or OPIM
 - c. Any employee/student clothing or uniform contaminated with blood or OPIM

2. Contaminated laundry shall not be:
 - a. Sorted or rinsed at the location of use
 - b. Taken home for laundering by employees/students
3. Contaminated laundry shall be:
 - a. Treated with universal precautions, handled as little as possible and with minimum agitation
 - b. Bagged or contained at the location where it was used
 - c. Placed in leak-proof biohazard bags if there is a chance of soaking or leaking through the bag
 - d. Handled with a minimum PPE of gloves

Laundry items should be contained appropriately using these examples as guides:

1. Lab coats, scrub jackets, patient drape, towels, bedding and other laundry that has been contaminated with blood or OPIM shall be placed into a biohazard bag in a designated area.
2. Items not contaminated, but simply soiled shall be placed in a separate laundry bag for washing separate from any contaminated laundry.
3. If contaminated items are laundered on-site, they shall be cleaned in the following manner: (Residence Halls, Wellness Center, School of Medicine and Health Sciences, Biology, Chemistry, etc.)
 - a. Use gloves and gown (additional PPE if determined necessary)
 - b. Wash at 150 degrees Fahrenheit (hot)
 - c. Use bleach if uncertain of the temperature
 - d. Dry at 200 degrees Fahrenheit (hot)
 - e. Discard any blood or OPIM-contaminated plastic bags
 - f. Laundry is to be handled only by trained employees

Research Laboratories

Additional Considerations for Researchers Handling Human Blood, OPIM, Bloodborne Pathogens, or Human Derived Tissue Cultures

Principle investigators, supervisors, and departments must provide additional appropriate administrative controls, protective equipment, information and training as appropriate for all employees/students engaged in:

1. Culture, concentration or research of HIV, HBV, or HCV and/or other bloodborne pathogens;
2. Work with human or animal cell lines potentially infected with bloodborne pathogens;
Note: Certain cell lines may be exempt from this requirement. Principle investigators must consult with the biological safety officer (701-777-2444) to determine specific exemptions;
3. Manipulation of human blood or OPIM;
4. Manipulation of animal blood or tissue cultures experimentally infected with HIV, HBV, or HCV.

Additional requirements that may exceed those for research laboratories not involved in the above activities include:

Security

1. Closed, locked when not attended, laboratory doors and limited lab access.
2. Appropriately labeled laboratory access doors (See Related Information at the beginning of this policy for fillable door signs).

Work Practices and Administration

Site-specific training must document that personnel have:

1. Read the UND Institutional Biosafety Manual (See Related Information at the beginning of this policy)
2. Read the Lab Specific Safety Manual (See Related Information at the beginning of this policy)
3. Completed all the required biosafety trainings offered through SafeColleges and the Office of Safety
4. Been informed of the risks associated with their job
5. All spills must be contained or cleaned up immediately by trained personnel

6. All spills and accidents must be reported immediately to the supervisor and the Office of Safety
7. All waste from the work area and animal rooms must be decontaminated appropriately
8. Transportation of contaminated materials for decontamination must be performed in closed, leak-proof, labeled containers

Engineering Controls

1. Certified biosafety cabinets
2. Centrifuge containment devices to prevent aerosols
3. Autoclave or other effective decontaminating method for decontamination of waste
4. High-Efficiency Particulate Arrestance (HEPA) filters for vacuum lines
5. Use of leak-proof and appropriately labeled containers for transporting contaminated materials
6. Hand washing sink
7. Eyewash station

Sharps

1. Safety needles/syringes will be used whenever possible
2. Extreme caution is to be used whenever performing procedures with sharps
3. Needles/syringes should not be recapped, bent, or removed from syringe after use
4. Sharps will be placed in sharps container immediately after use and autoclaved prior to disposal or reusing

Personal Protective Equipment

1. Lab coats/gowns or other appropriate clothing must be worn at all times in the laboratory and animal handling facility
2. Gloves must be worn when manipulating potentially infected materials or animals
3. Protective clothing must not be worn outside of the work area

Biohazardous Waste Management Program

North Dakota Department of Health defines regulated waste (commonly called infectious waste) as:

1. Liquid or semi-liquid blood, or other potentially infectious materials (OPIM)
2. Contaminated items that would release blood, or OPIM in a liquid or semi-liquid state if compressed
3. Items that are caked with dried blood, or OPIM and are capable of releasing these materials during handling
4. Contaminated sharps
5. Pathological and microbiological wastes containing blood or OPIM

Types of Regulated Waste

Sharps Waste

Please refer to Procedures - ECP Implementation and Control: Engineering and Work Practice Controls in this plan for the proper handling of contaminated sharps and sharps container criteria, transport, and usage. Always place the sharps container into a secondary container if leakage is possible. This container shall meet the same criteria as the original container.

Other Regulated Waste

Other regulated waste (soft waste, such as blood soaked gauze) must be placed in containers, which are:

1. Closable
2. Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping
3. Appropriate in size for devices placed in them
4. Designed with a visible opening, below eye level, if wall-mounted
5. Designed with an unobstructed opening that allows devices to drop in easily

6. Labeled with a biohazard label or color coded red
7. Closed prior to removal
8. Placed into a secondary container that meets the same criteria as the primary container, if outside contamination of the primary container occurs

Disposal of all regulated waste shall be in accordance with applicable regulations of the state of North Dakota (See Related Information at the beginning of this policy: A Guide to Understanding North Dakota's Infectious Waste Regulations).

Waste Containment, Transport and Treatment

Only trained employees/students, utilizing universal precautions, will store regulated infectious waste until Office of Safety picks it up. A waste disposal manifest form (see Forms) must be filled out and signed by the principle investigator or designee prior to pick up and disposal.

Regulated waste is contained, transported, and treated in the following manner:

1. **Red bag-lined containers:** The containers should be hard-walled, leak-proof with a lid. The container needs to be closed during transport and when not in use.
 - a. **Removal Frequency:** When three-quarters full, the waste shall be removed and transported for disinfection or incineration.
 - b. **Documentation:** Disinfection by immediately transferring the waste to autoclave facilities within the laboratory buildings is processed by the individual departments without Office of Safety involvement. For items needing disposal through a licensed vendor, a waste manifest form is used. The original remains with the generating department. The second copy is retained by the Office of Safety and a copy is held by the licensed vendor.

Manifests, waste use evaluation, and procedure performance shall be evaluated annually. Management of the regulated waste program including maintenance of the documentation for UND is coordinated by the Office of Safety.

For all regulated infectious waste:

1. Proof of regulated waste destruction shall be filed and maintained for a minimum of three years by the Office of Safety or time required by state and local jurisdictions.
2. Documentation of infectious waste destruction shall be maintained for the time required by state and local regulations, and at a minimum of three years by Office of Safety.
3. Each department/principal investigator/supervisor will be responsible for covering the costs associated with regulated infectious waste disposal.

Regulated Waste Labeling for Transport

Prior to transport from the site of origin it is typically required from state environmental agencies that the waste container be labeled. The generator (UND) has a cradle to grave liability for the waste leaving this facility; and it is crucial that correct handling and labeling of waste be performed to protect employees/students, the public, and the environment.

Labeling should typically consist of half inch high letters written in indelible ink and including:

1. Name and address of the generator (this facility) and
2. Identification number (waste transporter account number) or
3. Date of shipment

Hepatitis B Vaccination

The principal investigators, supervisors, department, or Office of Safety will provide annual training to employees/students that will include information about the Hepatitis B vaccine, addressing its safety, benefits, efficacy, methods of administration, and availability. The Hepatitis B vaccination series is available at no cost, after training and within ten days of initial assignment, to employees (including student employees) identified in the exposure determination section of this plan by a licensed health care provider or designated medical provider. All other students are responsible for following policies within their academic field of study for Hepatitis B vaccination. Students not functioning under the definition of employees are responsible for covering the cost associated with their vaccinations.

Vaccination is encouraged unless:

1. Documentation exists that the employee/student has previously received the series;
2. Antibody testing reveals that the employee/student is immune; or
3. Medical evaluation shows that vaccination is contraindicated.

If an employee/student chooses to consent or decline vaccination, the employee/student must sign a hepatitis B vaccine – consent/declination form (see Appendix 1). Employees/students who decline may request and obtain the vaccination at a later date. Documentation of refusal of the vaccination is kept by the Office of Safety.

Vaccination for the ECP must be provided by the designated medical provider or licensed health care provider or Student Health Services (only students) who will provide a written opinion.

Immediate Response, Incident Reporting, and Post-Exposure Evaluation

All occupational exposures to human blood and OPIM will be regarded as serious, reported promptly, and be evaluated by a trained health care professional. For SMHS students, please see the pathogen exposure immediate steps sheet (see [Appendix 11](#)) for additional guidance. For all other personnel, please refer to Appendix 2 for the post-exposure incident checklist. This checklist summarizes the steps that must be taken in the event of an employee's/student's exposure to blood or other potentially infectious material.

1. If necessary, first-aid should be administered immediately for any cuts or punctures and any exposed skin should be washed with soap and water.
2. The employee/student should report the injury to their supervisor immediately.
 - a. The supervisor will then locate and complete any necessary incident report forms (as per the requirements of the UND Incident Reporting Policy (See Related Information at the beginning of this policy) and will refer the employee/student to the UND designated medical provider or licensed health care provider. Students will be referred to Student Health Services. Note: If the employee/student refuses to receive medical care the employee/student needs to fill the employee/student bloodborne/other potential infectious material (OPIM) exposure release form (refusal of care) (see Appendix 7).
3. In off campus sites (Clinical Locations, Hospitals etc.) the employee/student should report the injury to their immediate supervisor immediately.
 - a. The supervisor will then locate and complete any necessary incident report forms and will refer the employee/student to the designated medical provider or licensed health care provider. In such instances, the student/employee will follow the procedures and policies of the off campus site in addition to the UND Exposure Control Plan requirements.
 - b. The immediate supervisor at the off campus site location will be responsible to locate and complete any necessary UND Incident Reporting Requirements for the student/employee in addition to site-specific required documentation. (see Related Information at the beginning of this policy)
4. The employee/student will provide details on their injury to the licensed health care provider or designated medical provider (see Appendix 8):
 - a. The type of injury the employee/student received
 - b. The type and samples of any biohazardous material the employee/student was exposed to
 - c. Circumstances under which the exposure occurred
 - d. The hepatitis immunization status of the employee/student
5. The licensed health care provider or designated medical provider will provide the employee/student with a confidential medical evaluation and follow-up of the incident:
 - a. Evaluation of the exposure risk of the incident based on the exposure source, providing the employee/student with a written list of recommended options for testing and preventative treatment. Note: The medical care provider will collect the exposed employee's/student's blood as soon as feasible, and test for HIV, HBV, and HCV serological status after consent is obtained. The collected blood must be retained for 90 days or until consent to test is obtained, whichever period of time is shorter.
 - b. Explaining to the employee/student the rationale and benefits of these tests and treatments.

6. Employee (including student employees) acceptance of the tests/treatments will be on a completely voluntary basis and services will be covered by workmans' compensation benefits.
7. Student acceptance of the tests/treatments will be on a completely voluntary basis. Students not functioning under the definition of employees are responsible for covering the cost associated with their tests/treatments.
8. The medical provider is encouraged to provide the Office of Safety with a written opinion (see Appendix 8 or its equivalent form), within 15 days of the exposure incident. The report will summarize:
 - a. That the employee/student has been informed of the results of the evaluation and has been told about any medical conditions resulting from exposure to blood or other biohazardous materials that require further evaluation and treatment
 - b. Whether HBV vaccine was indicated for the employee/student, and if the employee has received such treatment.
 - c. All other findings or diagnoses will remain confidential and will not be included in the report.
9. The Office of Safety will provide the employee/student a copy of the licensed health care provider or the designated medical provider's determination within 15 days of the exposure incident. A copy of the report will be retained by the Office of Safety.
10. If the employee/student eventually becomes ill or seroconverts (develops antibodies to the virus) as a direct result of occupational exposure to a bloodborne pathogen, the employee is responsible to file a complete report with the Office of Safety, which handles workers' compensation (See Related Information at the beginning of this policy).
 - a. The report will be confidential and will be sent to no other organization within the University.
 - b. If the exposure source sample is positive or not available and the employee/student is negative for HBV, HCV, and HIV, follow up testing will be made available to them at three months and six months.
 - c. If occupational exposure of the employee/student to a bloodborne pathogen is confirmed, the University shall provide, through the health care service, confidential counseling and evaluation of any consequent illness that the employee/student reports. Students not functioning under the definition of employees need to follow up on their own with the health care provider.

Source Individual Identification

If possible, the supervisor should determine and document the identity of the source individual (see Appendix 6), who should be referred for testing to the health care professional that is treating the exposed employee/student. The source individual's blood must be tested as soon as feasible after consent is obtained to determine HIV/HBV/HCV infection status. The supervisor shall document any issues related to obtaining consent, and note if consent cannot be obtained (see Appendix 9). The supervisor shall ensure that the exposed employee/student is informed about the applicable laws and regulations concerning disclosure of the identity and infection status of the source individual.

If a source individual can be identified, the supervisor overseeing the exposure shall complete the UND occupational exposure to bloodborne pathogens source identification form (see Appendix 6). The source individual identification form shall be transmitted to the health care professional as soon as the form is completed. If possible, the form should be faxed. If the form cannot be faxed, contact the health care professional by phone to alert them that a source individual has been referred. If phone contact is made, a hard copy of this form shall be mailed or carried to the health care professional as soon as feasible. The Office of Safety shall retain a copy of the source identification form for University records.

Procedures for Evaluating the Circumstances Surrounding an Exposure Incident

The University, as required, will investigate and review the circumstances of all exposure incidents to determine:

1. Has a risk assessment been completed (Contact the biological safety officer if assistance is needed with risk assessment)
2. Engineering controls in use at the time
3. Work practices followed
4. A description of the device being used (including type and brand)

5. Protective equipment or clothing that was used at the time of the exposure incident (gloves, eye shields, etc.)
6. Location of the incident
7. Procedure being performed when the incident occurred
8. Employee's/student's training

The supervisor, principal investigator, or department will investigate and fill out the incident reporting form and a sharps injury log (see Appendix 3) for all percutaneous injuries from sharps on the UND campus. If revisions to this ECP are necessary the Office of Safety will ensure that appropriate changes are made and retraining. (Changes may include an evaluation of safer devices, adding employees/students to the exposure determination list, etc.)

Employee/Student Training

Initial Training and Annual Refresher Training

All employees/students required to participate in the ECP must have initial training and annual refresher training. Initial training must be completed before performing duties by which occupational exposure could occur. Students who may have occupational exposure to bloodborne pathogens or exposure to OPIM are also required to complete training according to the requirements of their academic field of study and coursework.

Several training techniques may be used, as approved by Office of Safety, include, but are not limited to:

1. Instructor led (by Office of Safety or Personnel designated by Office of Safety)
2. Electronic training programs
3. Computer aided interactive training
4. Training manuals/employee/student handouts
5. Employee/student review sessions

Training must cover, at a minimum, the following elements:

1. A copy and explanation of the OSHA bloodborne pathogen standard
2. An explanation of the ECP and how to obtain a copy
3. Epidemiology, symptoms, and transmission of bloodborne pathogen diseases
4. An explanation of methods to recognize tasks and other activities that may involve exposure to blood and OPIM, including what constitutes an exposure incident
5. An explanation of the use and limitations of engineering controls, work practices and PPE
6. An explanation of the types, uses, location, removal, handling, decontamination, and disposal of PPE
7. An explanation of the basis for PPE selection
8. Information on the Hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine is free of charge for employees/student employees
9. Information on the appropriate actions to take, and persons to contact, in an emergency involving blood or OPIM
10. Spill cleanup procedures
11. An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up available. Refer to appendix for specific forms.
12. Information on the post exposure evaluation and follow-up that the employer is required to provide for the employee/student following an exposure incident
13. An explanation of the signs and label and/or color coding required by the standard and uses at the University
14. An opportunity for interactive questions and answers with the person conducting the training session

Additionally, principal investigators or supervisors must provide lab specific training for researchers handling any cultures or other materials potentially containing human blood/bloodborne pathogens, OPIM or human derived tissue cultures. Training must include safety training specific for the duties, equipment, and protocols relative to each employee/student. Training must ensure that employees/students have sufficient proficiency

in working with human pathogens or tissue cultures prior to being allowed to work with any materials potentially containing human bloodborne pathogens. The employee/student must not participate in work involving infectious agents until proficiency is demonstrated to the satisfaction of the principal investigator or supervisor. This training needs to be documented in the lab specific safety manual (See Related Information at the beginning of this policy).

Note: Refer to Appendix 4 to review the bloodborne pathogens site-specific training checklist.

Requirements Prior To Assignment to Duties with Occupational Exposure to Bloodborne Pathogens

It is the principal investigator's or supervisor's responsibility to ensure that prior to assignment to duties with occupational exposure:

1. Initial training is completed, to include spill clean-up
2. Site-specific training is completed
3. Hepatitis B vaccination, if requested, has been initiated (see Appendix 1 form)
4. Hepatitis B declination form, if declined (see Appendix 1 form) is filed with the principal investigator, supervisor, or department, and Office of Safety
5. Employees/students refresher training is required annually

Note: Principal Investigators/Supervisors are required to notify the Office of Safety about any changes in enrollment of laboratory personnel (students/employees) on an annual basis (Appendix 10). Additionally, they will be responsible for the enrollment of new members to the UND Exposure Control Plan.

Recordkeeping

Training Records

Records of training conducted by Office of Safety are maintained according to UND's Record Retention Policy. Principal investigators, supervisors, or department are responsible for maintaining records of training done on-site according to UND's Record Retention Policy.

The training records include:

1. The dates of the training sessions
2. The contents or a summary of the training sessions
3. The names and qualifications of the persons conducting the training
4. The names and job duties of all persons attending the training sessions

Employee/student training records will be provided upon request to the employee/student or the employee's authorized representative within 15 working days. Such requests should be addressed to the employee's/student's supervisor, principal investigators or department.

OSHA Recordkeeping

An exposure incident is evaluated to determine if the case meets OSHA's Recordkeeping Requirements (29 CFR 1904). This determination and the recording activities are done by supervisor, principal investigator, or department.

Sharps Injury Log

In addition to the 1904 Recordkeeping Requirements, all percutaneous injuries from contaminated sharps are also recorded in a sharps injury log at UND campus. All incidences must include:

1. Date of the injury
2. Type and brand of the device involved (syringe, suture needle)
3. Department or work area where the incident occurred
4. Explanation of how the incident occurred

This log is reviewed as part of the annual program evaluation and maintained for at least five years following

the end of the calendar year covered. If a copy is requested, it must have any personal identifiers removed from the report. For all off campus incidents UND will not keep a log for sharps injury.

Medical Records

Medical records are maintained for each employee/student having a workmans' compensation claim associated with occupational exposure in accordance with 29 CFR 1910.1020 and its amendment and amendments thereto, "Access to Employee/student Exposure and Medical Records." These confidential records are kept for at least the duration of employment/enrollment plus 6 years. Employee/student medical records are provided upon request of the employee/student or to anyone having written consent of the employee/student within 15 working days. Such requests should be sent to the occupational health provider or designee.

Program Evaluation

Each department is required to comply with the OSHA bloodborne pathogens standard. UND expects its employees/students to adhere to all aspects of this ECP. These procedures have been established to eliminate or reduce exposure to bloodborne pathogens. Without commitment of employer, employees, and students to safety and health in this workplace, individuals are likely to suffer injury and illness.

It is the procedure of the Office of Safety to evaluate the effectiveness of this bloodborne pathogen program on a regular basis. It may accomplish these evaluations in a variety of ways including:

1. Management and evaluation of engineering controls and personal protective equipment
2. Management and evaluation of employee/student training programs
3. Employee/student self-evaluations and safety recommendations
4. Annual Notification and enrollment of new members to the UND policy
5. Safety audits

RESPONSIBILITIES

Departments	<ul style="list-style-type: none"> • Ensure compliance with the contents of the ECP. • Identify departmental personnel governed by the ECP and notify the Office of Safety. • Meet training requirements. • Ensure proper record maintenance. • Ensure the cost associated with tests/services associated with the ECP program are covered.
Employees	<ul style="list-style-type: none"> • Employees who are determined to have occupational exposure to blood or other potentially infectious materials (OPIM) must comply with the procedures and work practices outlined in this ECP.
Health Care Professional Responsibilities (Designated Medical Provider or Licensed Health Care Professional)	<p>Health care professionals contracted by UND to provide the Hepatitis B vaccination series and/or post-exposure care must:</p> <ul style="list-style-type: none"> • Provide services in compliance with applicable OSHA regulations regarding bloodborne pathogens and in accordance with current U.S. Public Health Service recommendations; • Administer Hepatitis B vaccinations as recommended by the U.S. Public Health Service; • If providing post-exposure care, conduct a confidential medical post-exposure evaluation in accordance with current U.S. Public Health Service recommendations, including: • Obtain consent for testing of source individual; • Make results of the testing of the source individual available to the exposed employee/student; • Collect the exposed employee's/student's blood as soon as feasible, and test for HIV, HBV, and HCV serological status after consent is

	<p>obtained. The collected blood must be retained for 90 days or until consent to test is obtained, whichever period of time is shorter;</p> <ul style="list-style-type: none"> • Advise the exposed employee/student of post-exposure preventive and protective measures when medically indicated, as recommended by the U.S. Public Health Service; • Provide the exposed employee/student with appropriate treatment and counseling concerning precautions to take during the period after the exposure incident; • Give the employee/student information regarding which potential illnesses to be alert for and instructions for reporting any related experiences. • Provide all written documentation specified in the UND Bloodborne Pathogen Exposure Control Plan.
<p>UND Student Health Services</p>	<p>UND Student Health Services providing the Hepatitis B vaccination series and/or post-exposure care to students (not student employees) must:</p> <ul style="list-style-type: none"> • Provide services in compliance with applicable OSHA regulations regarding bloodborne pathogens and in accordance with current U.S. Public Health Service recommendations; • Administer Hepatitis B vaccinations as recommended by the U.S. Public Health Service; • If providing post-exposure care, conduct a confidential medical post-exposure evaluation in accordance with current U.S. Public Health Service recommendations, including: • Obtain consent for testing of source individual; • Make results of the testing of the source individual available to the exposed student; • Collect the exposed student's blood as soon as feasible, and test for HIV, HBV, and HCV serological status after consent is obtained. The collected blood must be retained for 90 days or until consent to test is obtained, whichever period of time is shorter; • Advise the exposed student of post-exposure preventive and protective measures when medically indicated, as recommended by the U.S. Public Health Service; • Provide the exposed student with appropriate treatment and counseling concerning precautions to take during the period after the exposure incident; • Give the student information regarding which potential illnesses to be alert for and instructions for reporting any related experiences.
<p>Office of Safety</p>	<ul style="list-style-type: none"> • Oversee and implement ECP. • Develop, in cooperation with administrators and departmental authorities, any additional policies and practices needed to support the implementation of the ECP. • Work with principal investigators or supervisors in the evaluation of employee exposure potential. • Review the ECP at least annually and whenever necessary to reflect new or changed exposure potential tasks and procedures. • Responsible for training, documentation of training, and making the written ECP available to employees, students, OSHA, and NIOSH representatives. • Periodically review and update training programs.
<p>Principal Investigators/Supervisors</p>	<ul style="list-style-type: none"> • Perform exposure evaluation of students/employees based upon the job description and assigned tasks. • Complete necessary paperwork for enrollment of new students/employees in the UND Exposure Control Plan.

	<ul style="list-style-type: none"> • Ensure that guidelines established in this manual are strictly followed by all persons under their jurisdiction. • Follow and ensure that their employees are trained in and use proper work practices, universal precautions, the use of personal protective equipment, and proper cleanup and disposal techniques. • Maintain records of all site-specific training and declaration of vaccination preference with employee records, and submitting a copy to Office of Safety. • Provide all necessary personal protective equipment (PPE), engineering controls (e.g., sharps containers), labels, and red bags as required by the standard. • Complete appropriate incident reporting and investigative forms.
Students/Visiting Students	<ul style="list-style-type: none"> • Utilize proper work practices, universal precautions, personal protective equipment and cleanup/disposal techniques as described in this plan. • Notify immediate supervisors. • Complete necessary paperwork for enrollment in the UND Exposure Control Plan. • Incur the charges of their testing, medicine, and all other expenses related to their bloodborne hazardous exposure. • Complete follow-up recommendations given by their healthcare provider. • Complete appropriate paperwork, post-exposure.

FORMS

Employee/student Bloodborne/OPIM Exposure Release Form (Refusal of Care)	See Appendix 7
Hepatitis B Vaccine Declination Form	See Appendix 1
Incident Investigation Form-Part 1	https://campus.UND.edu/safety/_files/docs/incident-investigation-form-part-one.pdf
Incident Investigation Form-Part 2	https://campus.UND.edu/safety/_files/docs/incident-investigation-form-part-two.pdf
Incident Reporting Form	https://campus.UND.edu/safety/_files/docs/incident-reporting-form-persons.pdf
Source Individual Consent Form (HIV, Hepatitis B And C Virus Blood Testing)	See Appendix 9
Waste Disposal Form/Manifest	https://campus.UND.edu/safety/_files/docs/waste-disposal-manifest-form-bio.pdf

APPENDICES

See attachments for the following appendices

Appendix 1 – Hepatitis B Vaccine Declination Form
Appendix 2 – Post-exposure Incident Checklist
Appendix 3 – Sharps Injury Log
Appendix 4 – Bloodborne Pathogens Site-Specific Training Checklist
Appendix 5 – Blood and Other Potentially Infectious Material Spill Clean Up
Appendix 6 – Occupational Exposure to Bloodborne Pathogens Source Identification
Appendix 7 – Employee/student Bloodborne/OPIM Exposure Release Form (Refusal of Care)
Appendix 8 – Report of Exposure to Blood or OPIM Request for Treatment
Appendix 9 – Source Individual Consent Form (HIV, Hepatitis B And C Virus Blood Testing)
Appendix 10 – UND Bloodborne Pathogens Exposure Control Plan Annual Notification

Appendix 11 - UND SMHS Bloodborne Pathogen Exposure Immediate Steps Sheet

Appendix 12 – UND PPE Guide for Exposure to Bloodborne Pathogens

Appendix 13 – SMHS Return to Educational Experiences

Attachments

- [01: Hepatitis B Vaccine Declination Form](#)
- [02: Post-exposure Incident Checklist](#)
- [03: Sharps Injury Log](#)
- [04: Bloodborne Pathogens Site-Specific Training Checklist](#)
- [05: Blood and Other Potentially Infectious Material Spill Clean Up](#)
- [06: Occupational Exposure to Bloodborne Pathogens Source Identification](#)
- [07: Employee/Student Bloodborne/OPIM Exposure Release Form \(Refusal of Care\)](#)
- [08: Report of Exposure to Blood or OPIM Request for Treatment](#)
- [09: Source Individual Consent Form \(HIV, Hepatitis B And C Virus Blood Testing\)](#)
- [10: UND Bloodborne Pathogens Exposure Control Plan Annual Notification](#)
- [11: SMHS Bloodborne Pathogen Exposure Immediate Steps Sheet](#)
- [12: UND PPE Guide for Exposure to Bloodborne Pathogens](#)
- [13: SMHS Return to Educational Experiences](#)

Approval Signatures

Step Description	Approver	Date
Policy Office	Jennifer Rogers: Policy Office	08/2022
Policy Owner	Heather Vinson	08/2022

References

CFR, OSHA, UND Policy, UND Procedure