UNMC BLOODBORNE PATHOGENS EXPOSURE PLAN

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UNMC Bloodborne Pathogen Exposure Control Plan

The UNMC Bloodborne Pathogen standard is intended to provide adequate information to prevent employees and students from exposure to human or infectious blood, body fluids or other potentially infectious materials. This document is designed to describe the federal standard as well as provide information on how the standard is to be implemented. Should clarification of terminology or abbreviations be necessary, please refer to Appendix I.

Under the federal standard, UNMC is required to:

- Develop an exposure control plan.
- Use warning labels and signs to identify hazards.
- Implement methods to comply with provisions for worker protection, including standard precautions.
- Provide training regarding safe handling of sharps, specimens, contaminated laundry, regulated waste and other engineering controls.
- Provide access to voluntary Hepatitis B vaccine at no cost to those employees at risk of exposure.
- Provide education and ongoing review of safety medical devices.
- Provide medical evaluation counseling and treatment after exposure incidents. Be accountable to oversee maintenance of records of medical evaluations.

Department Responsibilities:

- Determine employees and students within the department, who carry the risk of exposure to bloodborne pathogens.
- Develop a monitoring plan to assure compliance of all employees and students to the exposure plan.
- Maintain adequate supplies of personal protective equipment and ensure appropriate use. Encourage the reporting of exposure incidents involving employees, physicians, students, or visitors. Aid in the investigation and follow-up of incidents.
- It is the responsibility of each employee and student, following training, to adhere to the components of the exposure plan. Employees not in compliance with the plan are subject to disciplinary action in accordance with UNMC Corrective and Disciplinary Action policy. Specialty labs such as HIV and HBV production labs and animal research labs must follow additional regulations as listed in Appendixes II and III.

To minimize risk of occupational exposure to blood and body fluids, the employee/student must:

- Comply with the procedures and protocols set forth in the UNMC Exposure Control Plan.
- Attend all bloodborne pathogen in-service training sessions.
- Report all exposure incidents and complete follow-up.
- Assure the continuous improvement of safe work practices.
- Utilize appropriate PPE.

I. EXPOSURE DETERMINATION

A. The department manager is responsible for determining the jobs within their department which carry the risk of exposure to bloodborne pathogens to employees and students.
B. Exposure categories shall be determined without regard to the use of personal protective equipment.
C. All employees and students will be placed in an exposure category upon employment or transfer by their departmental manager or college. This information will be stated in the employee and student's job description and given to Human Resources (HR) and The
Nebraska Medical Center Employee Health (EH). The categories will be determined by the duties, tasks, and procedures that place, may place or do not place an individual at risk of occupational exposure.

D. To help determine which employees and students are Exposure Category I, II, or III, the following will be used:

   **Category I.** The employee and student perform tasks that involve exposure to blood, body fluids or tissues (example: research tech.).

   **Category II.** The employee and student perform tasks that involve no exposure to blood, body fluids or tissues, but employment may require performing unplanned Category I tasks (example: Security Officer/Dept. Secretary in Research Area).

   **Category III.** The employee and student perform tasks that involve no exposure to blood, body fluids or tissues (example: Accountant).

II. **EXPOSURE CONTROL PRECAUTIONS (METHODS OF COMPLIANCE)**

A. **Standard Precautions**

   In accordance with CDC/OSHA, Standard Precautions will be observed. This refers to the practice of regarding all blood and body fluids as potentially infectious. Standard Precautions shall be utilized when handling any blood and/or body fluids, tissues, other potentially infected material or when in contact with mucus membranes or non-intact skin of **all** patients/persons/animals.

B. **Engineering Controls**

   1. Engineering controls provided by UNMC reduce the likelihood of exposure. It is the employer’s responsibility to see that these controls are examined and maintained or replaced on a regular schedule to ensure their effectiveness. Examples of engineering controls include, but are not limited to, self-sheathing needles, hand pipettes, biosafety cabinets, plastic capillary tubes, and sharp disposal containers. Employee and student acceptance and employee/student training are required for the engineering control to be effective.

   2. UNMC will continue to require safe work practices to reduce the risk of occupational exposure during all procedures or tasks that involve contact with blood or other potentially infectious materials, including handling and processing of specimens and repair of contaminated equipment.

C. **Work Practice Controls**

   1. Work practice controls reduce the likelihood of exposure by changing the procedure for performing a task. Work practice controls act on the course of the hazard, but rely on the change in the behavior of the employer and employee or student to eliminate exposure. Examples of work practice controls are hand washing, disposal of sharps in sharp disposal containers, no-hands procedures in handling contaminated sharps, and eliminating hand-to-hand instrument passing during animal operations or autopsies.

   2. **Sharps Disposal**

      a. Do not shear, bend, break, or cut used needles. **Do not** recap, re-sheath, or dismantle contaminated needles by hand. In specific situations where recapping or removal of needles from syringes is necessary, it must be accomplished with the use of a mechanical device that protects the hand or a safe one-handed recapping technique (e.g., when specimen is contained in the needle). Exceptions to this must be approved by the UNMC Safety Leadership Committee.

      b. **Reusable Sharps**

         1) Since reusable sharps, such as large bore needles, scalpels, and saws, pose the same percutaneous exposure hazard as disposable sharps, contaminated reusable sharps must be placed in appropriate, puncture-resistant and leak proof containers until they are reprocessed. These special containers are purchased from General Supply.

         2) Containers used to transport or store reusable sharps must be placed in the designated biohazard area. Containers must be accessible and located as close as possible to the area where sharps are used.

         3) The containers must be color-coded or labeled to include the biohazard sign.
4) Contaminated instrument/reusable sharps are not to be stored or reprocessed in such a manner that would require personnel to reach into the container with their hands.

5) The employee and student should never reach into, or force items into a sharps container. They must be kept upright throughout use, replaced routinely, and not allowed to overfill.

c. Disposable Sharps - Disposable sharps must be discarded immediately, or as soon as feasible, into containers that are closable, puncture-resistant, color-coded or labeled, and leak proof on the sides and bottom.

1) Blunted, sheathed or retracted safer devices are considered sharps and must be discarded in sharp containers.

2) Sharps disposal containers
   a. Sharps disposal containers are closable, puncture resistant and leak-proof on the side and bottom.
   b. Sharps disposal containers must be conveniently and widely available in all areas where there may be handling of blood/body fluids/ or other potentially infected materials.
   c. Sharps containers must be accessible to employees and located as close as feasible to the immediate area where sharps are used (e.g., research lab workstation) or where sharps may be found although not routinely used (e.g., laundry).
   d. Sharps containers must be approved by Healthcare Epidemiology and UNMC Safety Operations.
   e. The sharps containers must be labeled with a biohazard sign or be red in color. These containers must remain upright throughout use. Containers are properly closed and removed to the appropriate pick-up point when they are three-fourths full.
   f. It is the responsibility of any employee to remove and replace sharps containers when they are three-fourths full.
   g. Gloves are worn when sharps containers require removal. Containers are appropriately sealed and placed in designated infectious waste containers.

d. Safer Medical Devices
   1) UNMC will make changes to its Exposure Control Plan to incorporate safer medical devices. An example would be to substitute devices such as plastic (instead of glass) capillary tubes.
   2) The primary investigator or designee must determine the effectiveness of safer medical devices in the situations in which they will be used. Safer medical devices should include the following design characteristics:
      a. A fixed safety feature that provides a barrier between the hands and the needle after use; the safety feature should allow or require the worker's hands to remain behind the needle at all times.
      b. The safety feature is part of the device and not an accessory.
      c. The safety feature is in engaged before disassembly and remains in effect after disposal to protect users and trash handlers, and for environmental safety.
      d. The safety feature is as simple as possible, and requires little or no training to use effectively.
      e. Training shall be provided with introduction of new safer medical devices and as needed thereafter
      f. Broken glassware requires the use of mechanical means (e.g., brush and a dustpan or tongs) to clean up safely.
      g. Eye wash stations are readily available in research areas using blood and other potentially infectious materials, chemicals, or radioactives.
      h. Biosafety cabinets are tested and certified upon installation, relocation, and at least annually.
D. Hand washing

1) Hand washing is the single most important means of preventing the spread of infection. Hands must be washed, even after gloves are used. Examples of when hand washing is to occur include, but are not limited to the following:
   a. When coming on duty and at the completion of duty
   b. After completing a procedure
   c. After handling any blood, body fluid, tissue, or other potentially infected material
   d. Before invasive procedures
   e. Between all research material contacts
   f. Immediately following the removal of gloves or other protective equipment
   g. Whenever hands are soiled
   h. Before performing any procedure
   i. After blowing or wiping the nose
   j. Before eating, drinking, applying cosmetics, handling contact lenses, or smoking.

2) Routine hand washing for visibly soiled hands consists of the use of soap, running water and friction for at least 15 seconds.

3) Alcohol-based hand sanitizers are NOT reliable in killing bacterial spores (e.g., Clostridium difficile and Bacillus anthracis). Gloves are required when caregivers come in contact with patients that have C difficile-associated diarrhea. After gloves are removed, hands should be washed with an antimicrobial soap and water.

4) Hand washing facilities are readily available in all areas where exposures may occur. Hand washing facilities are also to be provided at a reasonable proximity to employees normal work area.

5) Hand cream application is permitted in work and laboratory areas provided the hands are thoroughly washed immediately prior to application, however, care should be taken not to contaminate the hand cream during application. Lotion bottles are limited in size to eight ounces or smaller to prevent bacterial growth. Lotion bottles are to be discarded after use and are not be refilled or reused.

6) Persons working in healthcare areas who come into direct contact with patients are prohibited from wearing artificial fingernails or extenders, especially in high-risk patient populations (e.g., immunocompromised). Natural nails are to be maintained at a short (1/4) inch or less length. If nail polish is worn, it must not be chipped or peeling.

7) Hand jewelry should be kept at a minimum (e.g., wedding band) in patient care areas to enhance hand hygiene.

E. Human Specimens and Those Infected with Bloodborne Diseases

1) Specimens of blood, body fluids, tissues, or other potentially infectious materials are placed in an impervious container that is leak-proof during collection, handling, processing, storage, transport, and/or shipping. Specimens that are transported outside of the facility must be marked with a biohazard sign or color-coded. For instructions on transporting specimens, cadavers and anatomical material, review the Human Tissue Use & Transfer Policy.

2) Specimens placed in a primary container must be placed in a labeled or color coded secondary container that prevents leakage when the inside container becomes contaminated or is punctured.

3) Specific biohazardous labeling of specimens is not required because employees are trained to follow Standard Precautions when handling all specimens and they recognize the container as containing specimens of blood, body fluid, tissues or other potentially infective material. However, biohazardous labeling is required if the specimen is leaving UNMC.

4) Biohazard labeling of individual specimen containers during collection or processing of such specimens is not required. If the specimen container is stored, transported, shipped, or packaged in a secondary container, securely closing and labeling (or color-coding) is required for the secondary containers. For example, if blood tubes are transported in the phlebotomy tray, the individual tubes would not require biohazard labeling; however, the tray needs to be labeled. Labeling includes the use...
of red container or a biohazard symbol (see discussion of labeling under Signs and Labeling).

5) The shipment of materials such as blood body fluid, tissue or other potentially infectious material requires the worker to follow regulatory requirements for the applicable mode of transportation (e.g., air, ground). See Shipment of Hazardous Materials or Dangerous Goods Policy for further details.

F. General

1) In order to eliminate or minimize transmission of bloodborne pathogens from contaminated environmental surfaces, activities such as eating, drinking, smoking, applying cosmetics, (exception, hand lotion), and handling contact lenses are prohibited in laboratory areas, patient care areas and other areas where there is potential for exposure to blood, tissues, body fluids, and other potentially infected materials.

2) In addition to direct contamination of food or drink by blood or other potentially infectious material (OPIM), containers of food and beverage may also become contaminated, resulting in unsuspected contamination of the hands. In order to prevent food and drink from being contaminated by the leakage/spilling of specimen containers, contact with contaminated items, or the performance of activities (e.g., laboratory analysis) that could generate splashes, sprays, or droplets of blood or OPIM, food and drink shall not be stored in cabinets, shelves, counter tops, bench tops, refrigerators, or freezers where blood and other potentially infectious materials are present.

3) Employees are taught to perform procedures in a way that reduces the risk of generation of droplets of other potentially infectious materials.

4) The use of sprays, brushes, and high pressure in equipment lines is particularly hazardous as it may cause unnecessary splashing, spraying, spattering, or generation of droplets of blood or OPIM.

G. Contaminated Equipment

1) Contaminated equipment is decontaminated prior to servicing. If that is not possible, at least partial decontamination, such as flushing lines and wiping the exterior must be accomplished.

2) The equipment is labeled as to the portions which remain contaminated in order inform downstream servicing/repair employees of the hazard and precautions they need to take.

H. Mouth Pipetting - Mouth pipetting/suctioning of blood or other potentially infectious material is prohibited.

1. Waste Receptacles Waste receptacles for regulated waste must be closable and constructed to contain all contents and prevent leakage of fluids during handling, storage and transport. Receptacles must be labeled with a biohazard sign, or color-coded red.

2. Examination and Maintenance
   a) Labs using protective shields are checked by the primary investigator or a designee to make certain shields are readily available and in good repair.
   b) Lab exhaust hoods are inspected annually. Inspections are coordinated through Facilities Management.
   c) Sharps disposal containers are checked regularly to verify these items are replaced as frequently as is needed by research personnel.

III. PERSONAL PROTECTIVE EQUIPMENT (PPE)

A. Provision and Maintenance

1. PPE of appropriate size will be provided for the various personnel who will be using them. Protective equipment that requires washing (such as aprons or gowns) will be laundered by a contracted laundry service.

2. Employees and students are responsible for inspecting the integrity of personal protective equipment before use. Damaged or defective equipment should be repaired, destroyed, or replaced immediately.
B. Appropriateness for the Task
   1. Under normal conditions of use, PPE should not permit blood, body fluids, tissues, or other potentially infective materials to reach work clothes, street clothes, undergarments, skin, eyes, or mucus membranes.
   2. Supervisors/Primary Investigators and employees need to assess the likelihood of exposure during a task resulting in splashing, spraying, or soaking of clothing and provide/utilize protective clothing as appropriate. PPE should be worn for the duration of the procedure.

C. Appropriate Use of PPE
   1. UNMC may select and provide any combination of appropriate PPE as long as they are sufficient to protect employees and students from the type of exposure reasonably anticipated during performance of their duties.
   2. Interference with proper performance of a procedure or improper fit is not acceptable reasons to disregard the use of a protective barrier.
   3. Protective barriers are provided in appropriate sizes and kept in accessible and convenient locations.
      1. Supervisors, Primary Investigators, Infection Control Specialist, or designee must train employees and students on the proper selection, use, and indications for protective barriers.
      2. Supervisors or primary investigators are responsible to make sure that workers/students wear PPE when needed.

D. Gloves
   1. Gloves must be worn when there is reasonable likelihood of hand contact with blood, body fluids, tissues or other potentially infectious material. This includes, but is not limited to, contact with mucous membranes, or non-intact skin, performance of vascular access procedures, and handling of contaminated items or surfaces.
   2. Disposable single-use gloves are used, (sterile or non-sterile) depending on the purpose for use (such as working with cultures or infected animals).
   3. Powdered latex gloves are not used.
   4. Gloves must be replaced as soon as practical when contaminated, or as soon as feasible if they are torn, punctured, or when the ability to provide an effective barrier is lost.
   5. Disposable gloves must not be washed or decontaminated for reuse.
   6. Gloves are changed after direct contact with each procedure or when the integrity of the glove has been compromised.
   7. Gloves are removed when care is completed.
   8. Hands are washed immediately following the removal of gloves.
   9. If the employee/student is allergic to the gloves provided, this must be documented on an incident report and the individual seen in The Nebraska Medical Center Employee Health. Reasonable accommodations will be made to provide an alternative product. This might include non-latex gloves or simply changing to another brand of gloves.
  10. Utility gloves may be used for cleaning tasks and may be decontaminated and reused if the integrity of the gloves is not compromised. Gloves must be discarded if there are signs of cracking or peeling, being torn or punctured, having discoloration, or exhibit other signs of deterioration.

E. Protective Clothing
   1. Employees must wear protective clothing such as (but not limited to) gowns, aprons, lab coats, or similar outer garments.
   2. Fluid retardant gowns, aprons, and other protective clothing must be worn during tasks and procedures that are likely to generate splashes of blood, body fluids, or other potentially infective materials.
   3. Surgical caps and hoods, shoe covers, and/or boots must be worn in instances when gross contamination can reasonably be expected - such as autopsies or surgical procedures.
   4. In some situations, it may be necessary for protective clothing or specific areas of the clothing to have reinforcement (e.g., elbow or chest area) to prevent liquid penetration, such as during autopsy or during lengthy animal surgical procedures where soaking of clothing are likely.
5. Gowns shall be worn one time only.
6. Laboratory coats may be used as a protective cover in areas of the laboratory where risk of splashes is minimal.
7. Protective clothing is removed immediately when penetrated by blood, body fluids, other potentially infectious materials, or hazardous chemicals and is not worn outside the work area.

F. Masks/Eye Protection
1. Masks must be worn in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin length face shields whenever there is the possibility that splashes, spray, spatter, or droplets of blood or other infectious materials could be generated which could contaminate eye, nose, and/or mouth (mucus membranes).
2. Eye protection shall be worn during procedures that are likely to generate droplets of blood, body fluid, or any other potentially infectious materials. Procedures requiring the use of eye protection for Standard Precautions include, but are not limited to, the following:
   a. Emptying tubing or containers with blood, body fluids, tissues, or other potentially infectious materials for disposal
   b. Suctioning
   c. Insertion of invasive devices as well as other invasive procedure
   d. Preparing specimens for examination
   e. Dissection
   f. Pouring fluids
   g. Adding fluids together
   h. Vortexing solutions
   i. While performing scrubbing in the operating room
   j. During work on the sewer system, such as plunging a drain or snaking a pipe.
3. Approved types of eye protection for blood, body fluids, tissues, and other potentially infectious materials include the following: goggles, face shields, glasses with side shields, and a mask with protective shields. Ordinary prescription glasses should not be used as the only source of protection; however, some protective devices that fit over glasses are acceptable. A potential user needs to contact the UNMC Safety
4. Departmental supervisors are responsible for having appropriate eye protection available.

IV. HOUSEKEEPING
The buildings and research labs are maintained in a clean condition.
A. Removal and Disposal of PPE
   Personal protective equipment must be removed before leaving the work area.
   1. Gloves and other disposable PPE are properly disposed of in a waste container.
   2. Reusable PPE such as lab coats should be left in an area designated for storing contaminated lab coats.
   3. Lab coats or gowns going to the laundry should be placed in a laundry bag at the point of use for later transport to the laundry.
B. Cleaning and Maintenance
   1. Procedures and policies have been developed for cleaning and maintenance which includes cleaning of reusable receptacles.
   2. Even if plastic liners are used, trash containers routinely used for contaminated items are cleaned and decontaminated on a regular schedule by the UNMC biohazard waste contractor.
   3. All reusable buckets, pails, cans and other receptacles used for research or patient care and are related to research or patient care that are intended for reuse must be inspected and decontaminated on a regularly scheduled basis, or cleaned and decontaminated immediately if there is visible contamination.
   4. Cleaning schedules and methods will vary according to various factors.
5. While extraordinary attempts to disinfect or sterilize environmental surfaces such as walls or floors are rarely indicated, routine cleaning and removal of soil are required.

6. Environmental Services, in conjunction with the primary investigator/department supervisor must determine and implement an appropriate written schedule of cleaning and decontamination based upon:
   a. The location within the facility, (e.g., animal surgery operatory versus outside corridor)
   b. Type of surface to be cleaned, (e.g., hard-surfaced flooring versus carpeting)
   c. Type of soil present, (e.g., gross contamination versus minor splattering)
   d. Tasks and procedures being performed, (e.g., laboratory analyses versus routine clerical duties).

C. Blood Spills/Other Potentially Infectious Material (OPIM)
   1. Blood spills are cleaned immediately and the area disinfected with a 1:10 solution of sodium hypochlorite 5.25% (bleach) or a phenolic solution.

   **Small Spill**
   - Contain spill
   - Absorb blood/OPIM
   - Disinfect

   **Large Spill**
   - Contain spill
   - Secure area
   - Absorb blood/OPIM
   - Disinfect

   **On campus contact EVS**
   - Pager 888-3876 (Clarkson)
   - Pager 888-3877 (University)

   **Off campus contact immediate supervisor**

   2. Fresh solutions of household bleach are made up monthly, provided that they are in an opaque container and used for decontamination of sites following initial cleanup (i.e., wiping up) of spills of blood or other potentially infectious materials.

   3. Contact time for bleach is ten minutes.

   4. Gross contamination must be cleaned up first with a soap and water solution, to ensure the disinfectant is completely effective, and then the spill is to be cleaned with the bleach solution.

D. Acceptable solutions for disinfection, cleaning, and decontamination of the environment, equipment, and work surfaces at UNMC are determined by the Department of Healthcare Epidemiology.

E. Exposure Prevention
   1. To prevent exposure of the employee and student to blood, body fluids, tissues, or other potentially infective materials remaining on a work surface from a previous procedure, all work surfaces must be cleaned and disinfected after completion of each procedure, when they are overtly contaminated during a procedure, and at the end of the work shift.

   2. Employers shall not allow employees/students to place their hands into containers whose contents include reusable sharps contaminated with blood or OPIM. The intent is to prevent conditions of use in which the contents cannot be seen and safely handled, (i.e., workers/students must not reach into sinks filled with soapy water in which sharp objects have been placed. Such a circumstance would require the use of a strainer type basket to hold the instruments, and forceps to remove the items).

F. Protective Coverings
   Protective coverings, such as plastic wrap, aluminum foil, or imperviously-backed absorbent paper are acceptable methods of protecting items and surfaces against contamination. However, these coverings must be replaced as soon as possible after they become contaminated or at the end of the work shift if they have become contaminated during the procedure. This does not eliminate the need to decontaminate the surface area if overtly contaminated.

G. Trash Containers
   1. The federal standard requires that trash containers used to collect regulated waste be closable. It is not necessary to cover trash containers during use.
2. The container must be covered prior to removal to prevent spillage during handling, storing, transporting, or shipping.

H. Handling Broken Glass
1. Since contaminated broken glass (e.g., glass capillary tubes, lab specimen dishes, phlebotomy tubes, etc.) is capable of inflicting percutaneous injury and direct inoculation of bloodborne pathogens into the bloodstream, broken glassware which may be contaminated must not be picked up directly with the hands.
2. Only mechanical means are to be used to clean up broken glassware, sharps, or other infectious waste (brush, dustpan, tongs, forceps, etc.) and must be properly decontaminated or discarded after use and the broken glass placed in a sharps container, or be disposed of accordance with UNMC Waste Handling Policy.
3. Vacuum cleaners are not appropriate for cleanup of contaminated broken glass.

V. LAUNDRY
A. Precautions for Laundry Standard Precautions will be used with soiled laundry and reusable protective clothing worn to prevent occupational exposures.
B. All used laundry will be considered contaminated. Laundry guidelines include:
1. Appropriate personal protective equipment will be used by employees for protection against occupational exposure when handling laundry.
2. Contaminated laundry is placed in containers at the location where it is used but sorting or rinsing laundry is prohibited.
3. Bags or containers from areas other than patient care areas in which laundry is placed and transported must be labeled or color-coded, sufficiently to permit employees to recognize the containers as having contaminated contents.
4. Laundry is collected in cloth linen or plastic laundry bags at the point of use before transportation.
5. Double bagging is not necessary unless the bag is torn or the outside is contaminated.
6. Wet contaminated laundry must be placed and transported in bags or containers that prevent soak-through or leakage to the exterior.
7. Bagged linen will be transported to the laundry facility in appropriate containers.
8. All used laundry is treated as contaminated and is handled as little as possible.
9. Employees who have contact with contaminated laundry must wear gloves and other appropriate personal protective equipment.

V. SIGNS AND LABELS
A. Labeling
1. Specific labeling (biohazard symbol or the use of red bags or containers) is required to warn of potential hazards. Contaminated equipment, containers of regulated waste, refrigerators, freezers, or other containers used to store, transport, or ship blood, body fluids, tissues, or other potentially infectious materials must be labeled. The standard requires:
   a. Warning labels must include the universal biohazard legend and symbol followed by the term biohazard.
   b. Biohazard label must be fluorescent orange or orange-red, or predominantly so, with lettering or symbols in contrasting color.
   c. The labels must be either an integral part of the container or affixed as close as feasible to the container by a string, wire, adhesive, or other method to prevent their loss or unintentional removal.
   d. Red bags or container may be substituted for specific labeling.
   e. Biohazard signs are attached to refrigerators and freezers containing blood, body fluids, tissues, or other potentially infectious materials.
   f. Regulated waste is placed in red or labeled biohazard containers.
g. Contaminated equipment sent for servicing or repair must meet with specifications above and must be labeled with a biohazard sign stating which parts are contaminated.

h. Specimens transported out of UNMC shall be labeled with a biohazard sign.

i. Specimens, infectious or other, shipped off campus by carrier(s) (e.g., UPS, Federal Express, etc.) will be packaged and labeled in accordance with the Department of Transportation (DOT) and the International Air Transportation Association (IATA). See Shipment of Hazardous Materials or Dangerous Goods Policy for further direction.

B. Labeling Tissue Specimens
1. Extracted teeth which are being discarded or used as specimens are subject to the containerization and labeling provisions of the standard.
2. Extracted teeth may be given to the patients. In these situations, the teeth are not subject to the containerization and labeling provisions of the standard.

C. Labeling is not required for:
1. Individual containers of blood, body fluids, tissues, or other potentially infectious materials that are placed in secondary labeled containers during storage, transport, shipment, or disposal.
2. Specimen containers if the facility uses Standard Precautions when handling all specimens.
3. Laundry bags or containers if the facility uses Standard Precautions for handling all laundry.

VII. REGULATED WASTE
A. Waste Management
It is the policy of UNMC to manage waste in a manner designed to protect employees, students, contractors, and visitors as well as the environment. Waste handling is accomplished in a cost-effective manner in accordance with all applicable local, state, and federal regulations and laws.

B. Biohazardous Waste
1. UNMC follows the OSHA definition for biohazardous waste which includes:
   a. Liquid or semi-liquid blood or other potentially infectious materials.
   b. Contaminated items that release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed.
   c. Items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling.
   d. Contaminated sharps.
   e. Pathological and microbiological waste containing blood or other potentially infectious materials.

2. Biohazardous waste is considered to be waste type capable of producing an infectious disease in humans includes at a minimum blood, body fluids, tissues, and discarded inoculated culture media.
   a. Biohazardous waste (including waste to be transported off campus) is placed in rigid or semi-rigid leak proof containers, which are clearly marked with a biohazard label. These containers are closed in such a manner that they are completely sealed before transport.
   b. The transportation of biohazardous waste is regulated by the Department of Transportation (DOT). It is transported under the proper shipping name “Regulated Medical Waste”. All shipping requirements, including training certification for those signing the shipping manifests, must be followed. If you are responsible for signing a Stericycle shipping paper prior to transport, you must be trained and certified in accordance with the applicable DOT regulations governing the transport of Regulated Medical Waste.
   c. Sharps and contaminated broken glass must be disposed of in leak-proof, rigid, puncture-resistant, and break-resistant containers. These
containers must be sealed shut when they are three-fourths full and placed with the biohazardous waste for pick up and disposal.
d. Clean glass will be disposed of in clean cardboard boxes or in designated containers.
e. Items that are only slightly soiled with drainage such as small bandages will not be considered biohazardous (regulated) waste.
f. Biohazardous (regulated) waste that has been decontaminated need not be labeled or color-coded.
g. Biohazardous (regulated) waste containers must prevent leakage and be labeled or color-coded red, and closed prior to handling, storing, transporting, or shipping.

VIII. HEPATITIS B VACCINATION

A. Vaccine Availability
   1. UNMC makes Hepatitis B vaccination available and free to all employees who are at risk of exposure to blood, body fluids, tissues, infected animals, and other potentially infectious materials during the course of performing their duties.
   2. A declination form is signed and placed in the employee’s health record in The Nebraska Medical Center Employee Health if vaccine is refused.
   3. After signing a declination form an employee may opt to be vaccinated. If they remain in a job designated by their manager to be at risk for exposure to bloodborne pathogens the vaccine will be provided free of charge by Employee Health.

B. Hepatitis B Vaccination in Colleges. Colleges shall follow UNMC policy regarding the vaccination of students with the potential for exposure to blood and other infectious material. UNMC Student Health will provide information to students regarding efficacy, safety, methods of administration and the benefits of being vaccinated.
   1. A series of three vaccinations and a positive titer are to be completed at the student’s expense prior to matriculation. If a student has started the series and cannot complete it before the semester begins, with permission from Student Health (402-559-5158) and at the expense of the student, the student must complete the series and have a positive titer within the first two semesters of enrollment. Should a student have a negative titer following the first three Hepatitis B vaccinations, the student will be required to complete a second series of three vaccinations and a Hepatitis B antibody titer within one to two months of the last dose of the vaccine, as recommended by the Centers for Disease Control (www.cdc.gov/vaccines/spec-grps)
   2. Students must have at least two Hepatitis B vaccinations before having patient contact.
   3. Hepatitis B Vaccination is not given when:
      • The student has documentation of previously completed vaccination series.
      • Antibody testing reveals the student is immune.
      • The student has documented proof the vaccine is contraindicated for medical reasons.
   4. In accordance with the U.S. Public Health Service (USPHS) guidelines, routine booster doses of Hepatitis B vaccine are not recommended or given except as necessary when part of a post-exposure evaluation. If a booster dose(s) is recommended by the U.S. Public Health Service (USPHS), appropriate steps will be taken to comply with the recommendations.
   5. Students who do not respond to the primary vaccination series (per titer) will be revaccinated with a second (three-dose) vaccination series and repeat titer. Non responders to the second vaccination series are then tested for HBSAG. If the HBSAG is negative, no further vaccination is necessary. If the HBSAG is positive, the student is counseled regarding precautions to prevent HBV infection.
C. Hepatitis B Vaccination of Employees
1. Hepatitis B Vaccination is offered at the pre-employment physical to all employees or within 10 working days of assignment to those individuals who may be exposed to blood, body fluids, tissues, or other potentially infectious materials during the course of performing their duties and without regard to the frequency of such exposures. The vaccine is given in the standard dose and through the standard route of administration as recommended in the CDC guidelines (Appendix V).
2. Hepatitis B vaccination is not given when:
   a. The employee has documentation of previously completed vaccination series.
   b. Antibody testing reveals the employee is immune.
   c. The vaccine is contraindicated for medical reasons.
   d. The employee signs declination form (Appendix IV).
3. With all new hires or transfer positions, The Nebraska Medical Center Employee Health will maintain documentation stating whether the employee started the Hepatitis B vaccination, declined, was considered not applicable, or is immune by titer.
4. The Nebraska Medical Center Employee Health provides a documentation record to all employees when Hepatitis B immunization is given.
5. Participation in a prescreening program is not a prerequisite for receiving Hepatitis B vaccination.
6. Any employee who decline Hepatitis B vaccination must sign a Hepatitis B vaccine declination form. This form is placed in the employee’s health record in The Nebraska Medical Center Employee Health.
7. If an at-risk employee initially decline Hepatitis B vaccination, but at a later date decides to accept the vaccination, the vaccine will be provided at that time without cost to the employee.
8. Currently, routine booster doses of Hepatitis B vaccine are not recommended or given except as necessary when part of a post-exposure evaluation. Should a booster dose(s) be recommended by the U.S. Public Health Service (USPHS) at a future date, such booster dose(s) will be provided according to standard recommendations for medical practice and at no cost to the employee.
9. All employees with ongoing potential exposure risk to blood and OPIM will be tested for HBsAB one to two months after completion of the three dose vaccination series per USPHS guidelines. (MMWR June 29, 2001; 50 RRII; 1- 42)
10. Employees who do not respond to the primary vaccination series (per titer) are offered revaccination with a second (three-dose) vaccine series and retested for HBsAB. Non responders to the second series of the vaccine are then tested for HBsAG. If the HBsAG is negative, the employee is informed as to their susceptibility to Hepatitis B disease. If the HBsAG is positive, they are medically evaluated.

IX. BLOOD AND BODY FLUID POST-EXPOSURE EVALUATIONS AND FOLLOW-UP
A. Bloodborne Pathogen Exposure
   A bloodborne pathogen exposure incident is defined as a specific eye, mouth, or other mucus membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee/student job duties (e.g., Category I or II).
B. In the event of a blood or body fluid exposure, the employees and student should:
   1. Wash the affected area immediately with soap and water (eyes and other mucus membranes should be flushed with water).
   2. DO NOT WAIT. Report immediately to The Nebraska Medical Center Employee Health or call the post exposure paging system for risk
assessment and assistance in determining needed healthcare follow-up. The post-exposure paging system is accessed as follows:

Number Location
9-888-OUCH (6824) On campus
(402)-888-OUCH (6824) Calling from off campus
1-(402)-888-OUCH (6824) Calling from long distance

3. Inform the appropriate supervisor/instructor.
5. Principal investigators using biohazardous agents in the research setting are required to report any violation of the NIH guideline or any research-related accident/illness to the UNMC Office of Regulatory Officers. See IBC-24 Reporting Adverse Event. The post-exposure paging system is available 24 hours a day, 7 days a week.

C. Risk Management

1. The Nebraska Medical Center Employee Health nurses/case managers will assist in the risk assessment of an exposure incident to determine when medical evaluation and follow-up is necessary.

2. There is no fee involved for reporting or follow-up care related to a bloodborne pathogen exposure.

3. The employee and student may receive further directions regarding treatment and follow-up from the exposure.

D. Post-Exposure

1. An immediate confidential, post-exposure medical evaluation and follow-up is required following an exposure incident.

2. Follow-up should include at least the following elements:
   a. Identification and documentation of the source individual.
   b. Detailed documentation will include a minimum of the following: the route of exposure, device and its brand name involved, the circumstances under which the exposure occurred, engineering controls, PPE in use, work practices, location of incident, and procedure being performed.
   c. Testing the source individual’s blood as soon as feasible to determine Hepatitis B virus (HBV), Hepatitis C virus (HCV), and HIV infectivity. See the algorithm for determining HIV status. (Appendix VI).
   d. Written consent to test for HIV will be obtained from the source individual by The Nebraska Medical Center Employee Health/Risk Management (Appendix VII).

E. Consent for Testing

1. In the event that the source individual refuses to give consent for testing, Nebraska law allows blood of source individual to be tested, if it is available (1998 Nebraska Revised Statute, 71-514.03).

2. If blood is not available for testing, and consent for testing is refused, University Nebraska Medical Center Risk Management will be consulted immediately by the Case Manager.

F. When Status is known

1. When the HBV, HCV, and HIV status of the source individual is known prior to injury, the status will be documented.

2. Repeat testing is not necessary.

G. Availability of Information

1. The results of the source individuals testing will be made available to the exposed healthcare worker and student.

2. The healthcare worker and student will also be informed of applicable law, regulations and policies concerning disclosure of the identity, and the infectious status of the source individual.

H. Baseline Blood Collection and Testing of Personnel
Collection and testing of the exposed healthcare worker/student blood for HBV, HCV, and HIV serological status shall be collected.

1. The exposed employee and student blood shall be collected as soon as feasible and tested for HBsAB (when antibody status is unknown), HCV, and HIV after consent are obtained.

2. If the employee and student consents to baseline blood collection, but does not give consent at that time for HIV serologic testing, the blood sample shall be preserved for at least 90 days.

3. If, within 90 days of the exposure incident, the employee or student elects to have the baseline sample tested, such testing shall be done as soon as feasible.

I. HIV Post-Exposure Prophylaxis

1. Post-exposure prophylactic medications, when indicated, will be offered as per current recommendations from the Centers for Disease Control and Prevention/U.S. Public Health Services, or other professional governing bodies.

2. These medications should be started within two (2) hours of the exposure. See algorithms for post-exposure prophylaxis and determining HIV status. (Appendix VI).

J. Counseling

1. Every healthcare worker or student will be provided necessary counseling regarding their exposure.

2. Such counseling will include, when appropriate:
   a. Recommendations for treatment
   b. Follow-up care and testing
   c. Reporting of illness
   d. Safer-sex guidelines
   e. Any other information necessary and relevant to the exposure.

3. The healthcare worker or student will be given an opportunity to ask questions.

4. Additional counseling will be provided as necessary and/or as requested in the post exposure period.

5. Employee Assistance Program (EAP) is also available, if desired.

K. Evaluation of Reported Illness

1. Employees and students will be advised to report illnesses in the post exposure period.

2. These illnesses will preferably be evaluated in The Nebraska Medical Center Employee Health. The Emergency Department or the individual’s personal physician may also be seen, however, The Nebraska Medical Center Employee Health should be notified.

3. In the event the illness is determined to be a result of the employee/student previously reported exposure, UNMC Worker Compensation representative or other designated Case Manager(s) will be notified.

L. Post-exposure follow-up is offered with any occupational exposure incident.

1. All evaluations, procedures, vaccinations, and post-exposure management are confidentially provided to the employee through The Nebraska Medical Center Employee Health at a reasonable time and place at no cost to the employee/student and according to the current recommendations provided by the U.S. Public Health Service.

2. All medical evaluations and procedures are performed by or under the supervision of a licensed physician or another licensed healthcare professional. All laboratory tests and treatment are performed by an accredited laboratory and are processed at no cost to the employee/student/volunteer.

M. Information Provided to the Healthcare Professional

1. A copy of 29 CFR 1910.1030 (Bloodborne Pathogen Standard) will be kept on file in The Nebraska Medical Center Employee Health. All
medical care records due to an occupational exposure or for Hepatitis B prophylaxis will be kept according to this federal standard.

2. An UNMC incident report must be completed (preferably by the involved employee/student) for every blood and body fluid exposure.

3. Information on the report shall include:
   a. A description of the exposed individual’s duties as the relate to the exposure incident
   b. Documentation of the route of exposure and injury site
   c. Device and brand name
   d. Circumstances under which the exposure occurred
   e. All medical records relevant to the appropriate treatment of the employee including vaccination status.

N. Written Opinion
1. The Nebraska Medical Center Employee Health will provide a written post exposure report to the employee/student within 15 days of the completion of the initial evaluation.
2. This report will identify:
   a. Whether Hepatitis B vaccination was recommended
   b. Whether or not the employee/student received the vaccination.
3. The Nebraska Medical Center Employee Health case managers must also note that the employee or student has been informed of the results of the evaluation and told of any medical condition resulting from exposure to blood or any other potentially infectious materials which may require further evaluation or treatment.
4. All other findings or diagnoses will be kept as confidential (as required by state and federal regulations) and shall not be included in the written report (Appendix VIII).

O. Records
1. Following completion of a post-exposure follow-up, all exposure records will be maintained and in accordance with 29 CFR 1910.20.
2. This record will be located in The Nebraska Medical Center Employee Health for employees and students and will consist of a copy of the information provided to the employee or student as well as the individual’s name, social security number, and a copy of the individual’s Hepatitis B status; dates of all Hepatitis B vaccinations, and any records relative to the individual’s ability to receive vaccination (however, student Hepatitis B vaccination records will be maintained in UNMC Student Health).
3. The exposure record shall also include a copy of all results of any post-exposure evaluations, including examinations and medical testing, and follow-up procedures as well as a copy of the written opinion provided by The Nebraska Medical Center Employee Health healthcare professional.

P. Record Retention
1. All records are confidential and employee records are retained for the duration of employment plus 30 years, in accordance with 29 CFR 1910.20.
2. Student exposure records are maintained as required by law/statute.

Q. Record Confidentiality
Medical records of occupational exposures will not be disclosed or reported without the employee’s written consent, except as required by law.

X. TRAINING

A. Training
1. All employees and students with potential occupational exposure to bloodborne pathogens must participate in a training program. Training is available on-line through UNMC’s Employee Self Service (ESS).
2. UNMC incurs all costs, including employee salary.
3. The training will be required at the time of employment and annually thereafter.
4. Additional training will be done when new tasks or modifications occur which may create new exposures.
5. Training must be:
   a. Provided by an individual who is knowledgeable in the subject matter.
   b. Available during regular working hours.
   c. Provided at a location reasonably accessible.
   d. Documented by appropriate records and kept for at least three years.

B. Training Records
1. Training records are kept electronically in blackboard.
2. These records include:
   a. Dates of training sessions.
   b. Contents and summary of training sessions.
   c. Names and qualifications of persons conducting the training (this information is kept in the Department of The Nebraska Medical Center Healthcare Epidemiology).
   d. Names and job titles of all persons attending the training sessions.
3. Training records shall be maintained by the employer and made available for examination and copying upon request to OSHA investigators, the employee, or an employee representative in accordance with 29 CFR 1910.20.

C. Trainers
1. Healthcare Epidemiology personnel will be thoroughly familiar with the standard to develop training programs.
2. Individuals, such as departmental managers or their designees, who will assist with the training, such as train-the-trainer programs, will need to be trained by an Infection Control Specialist or a Department of The Nebraska Medical Center Healthcare Epidemiology designee.

D. The Training Includes:
1. Access to a copy of the OSHA Standard.
2. Explanation of the epidemiology, symptoms and mode of transmission of bloodborne pathogens.
3. Explanation of the exposure plan and where the employee may find copies of the plan.
4. Explanation of appropriate methods for recognizing tasks and other activities that may involve exposure to blood and body fluids.
5. Explanation of the use and limitations of methods that will prevent or reduce exposure which includes appropriate engineering controls, work practices, and personal protective equipment.
6. Explanation of the type, proper use, location, removal, handling, decontamination and disposal of personal protective equipment.
7. Explanation of the basis for selection of personal protective equipment.
8. Information on the Hepatitis B vaccine which includes the benefits of vaccination, efficacy, safety, method of administration, and the fact that the vaccine is offered by UNMC free of charge to at risk employees.
9. Explanation of the appropriate actions needed and persons to contact in an emergency involving blood or possibly infectious materials.
10. Explanation of procedure to follow should an exposure occur which includes reporting, evaluation, and available medical follow-up provided through the OUCH pager/The Nebraska Medical Center Employee Health Risk Management.
11. Explanation of labels, sizes, and color-coding used to identify hazards.
12. Provision of an opportunity for interactive questions and answers with the person conducting the training.

E. Appropriate Training Material
1. Only material that is appropriate in content and vocabulary to the employee and student educational level, literacy, and language shall be used.
2. If an employee or student is only proficient in a foreign language, the supervisor will make arrangements to have the information interpreted.

F. Training Methods
1. Informal discussions while the employee or student is working would not be considered appropriate training.
2. Training is available on-line through UNMC’s Employee Self Service (ESS).
3. Training is provided and approved by The Nebraska Medical Center Healthcare Epidemiology (559-3980).

G. Accountability
1. Employees, students and their departmental managers are held accountable for initial and annual bloodborne pathogen training.

H. Who Shall Be Trained
1. The standard requires that employers shall ensure that all employees with occupational exposure risk must be trained.
2. OSHA has explained that this includes full or part-time, temporary and per diem employees.
3. According to OSHA, professional credentials do not necessarily ensure that the individual is familiar with all the provisions of the standard.

XI. COMPLIANCE

Employees not in compliance with the plan are subject to disciplinary action in accordance with UNMC Corrective and Disciplinary Action policy.

References:
3. 1998 Nebraska revised Statutes, 71-514.03.
5. “OSHA Directives Enforcement Procedures for the Occupational Exposure to Bloodborne Pathogens”, United States Department of Labor, Dir. No. CPL 2-2.44D.
Appendix 1

Glossary

**Blood:** Human blood, human blood components, and products made from human blood, (The Nebraska Medical Center BBP Policy, 2001). The term "human blood components" includes plasma, platelets, and serosanguinous fluids (e.g., exudates from wounds). Also included are medications derived from blood, such as immune globulins, albumin, and factors 8 and 9, (OSHA CPL 2-2.44D).

**Bloodborne Pathogens:** Microorganisms that are present in human blood and that can cause diseases in humans; while HBV, HCV and HIV are specifically identified in the standard, the term includes any pathogenic microorganism that is present in human blood or other potentially infectious material (OPIM) and can infect and cause disease in persons who are exposed to blood containing the pathogen. Pathogenic microorganisms can also cause diseases such as malaria, syphilis, babesiosis, brucellosis, leptospirosis, arboviral infections, relapsing fever, Creutzfeldt-Jakob disease, adult T-cell leukemia/lymphoma (caused by HTLV-I), HTLV-I associated myelopathy, diseases associated with HTLV- II, and viral hemorrhagic fever, (OSHA CPL 2-2.44D).

**CDC:** Centers for Disease Control and Prevention

**CFR:** Code of Federal Regulations

**Clinical Laboratory:** A workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.

**Contaminated:** Marked by 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 soiled with blood or other potentially infectious materials or that may contain sharps.

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

**Decontamination/Disinfection:** Rendering 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.

**DOT:** Department of Transportation

**EAP:** Employee Assistant Program (UNMC)

**Engineering Controls:** Means controls that isolate or remove the bloodborne pathogens hazard from the workplace. Examples include needleless devices, shielded needle devices, blunt needles, and plastic capillary tubes, (OSHA CPL 2-2.44D).

**Exposure Incident:** A specific eye, mouth, or other mucous membrane, non intact skin, or parenteral contact with blood or other potentially infectious materials that results from an employee performing his or her duties, (The Nebraska Medical Center BBP Policy, 2002). "Non-intact skin" includes skin with dermatitis, hangnails, cuts, abrasions, chafing, acne, etc, (OSHA CPL 2-2.44D).

**Hand washing Facilities:** Locations that provide an adequate supply of running potable water, soap, and single-use towels or hot-air drying machines.

**HBsAB:** Hepatitis B surface Antibody

**HBsAG:** Hepatitis B surface Antigen
HBV: Hepatitis B virus

HCV: Hepatitis C virus

HEPA Filters: High-Efficiency Particulate Air filters

HIV: Human Immunodeficiency Virus

HIV and HBV Production Facilities: These facilities are engaged in industrial scale, large volume, or high concentration production of HIV or HBV.

HIV and HBV Research Laboratories: This refers to a laboratory which produces or uses research laboratory scale amounts of HIV or HBV. Although research laboratories may not have the volume found in production facilities, they deal with solutions containing higher viral titers than those normally found in patient's blood. Academic research laboratories are included in this definition.

Occupational Exposure: Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from employees performing their duties, (The Nebraska Medical Center BBP Policy, 2002). The term "reasonably anticipated contact" includes the potential for contact as well as actual contact with blood or OPIM. Lack of history of blood exposures among designated first aid personnel of a particular manufacturing site, for instance, does not preclude coverage. "Reasonably anticipated contact" includes, among others, contact with blood or OPIM (including regulated waste) as well as incidents of needle sticks. For example, a compliance officer may document incidents in which an employee observes uncapped needles or contacts other regulated waste in order to substantiate "occupational exposure", (OSHA CPL 2-2.44D).

OSHA: Occupational Safety Health Administration

Other Potentially Infectious Material (OPIM):

A. The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal 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.

B. Any unfixed tissue or organ (other than intact skin) from a human (living or dead);

C. HIV-containing cell or tissue cultures, organ cultures, and HIV - or HBV - containing culture medium or other solutions;

D. Blood, organs or tissues of experimental animals who are infected with HIV or HBV, (OSHA 1910.1030).

Parenteral Exposure: Exposure occurring as a result of piercing the skin barrier (e.g., subcutaneous, intramuscular, intravenous routes) through such events as needle sticks, bites, cuts, and abrasions, (The Nebraska Medical Center BBP Policy, 2002). This definition includes human bites that break the skin, which are most likely to occur in violent situations such as may be encountered by security personnel in emergency rooms or psychiatric wards, (OSHA CPL 2-2.44D).

PEP: Post Exposure Prophylaxis

Personal Protective Equipment (PPE): Specialized clothing or equipment worn by an employee or student to protect against a hazard.

Regulated Waste: Regulated waste refers to the following categories of waste which require special handling, at a minimum: liquid or semi-liquid blood or OPIM; items contaminated with blood or OPIM and which would release these substances in a liquid or semi-liquid state if compressed; items that are caked with dried blood or OPIM and are capable of releasing these materials during handling; contaminated sharps; pathological and microbiological wastes containing blood or OPIM.
Research Laboratory: A laboratory producing or using small but significant amounts of HIV, HCV, or HBV. Research laboratories may produce high concentrations of HIV, HCV, or HBV but not in the volume found in production facilities.

Sharps: Any object that can penetrate the skin, including, but not limited to, needles, scalpels, and broken capillary tubes.

Sharps Container: Made of a variety of products from cardboard to plastic. Each sharps container must be either labeled with the universal biohazard symbol and the word "biohazard" or be color-coded red. Sharps containers must be rigid, break-resistant, closable, puncture resistant, and leak proof on sides and bottom. Sharps containers must be able to be closed in such a manner as to be completely sealed.

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 Precautions: An approach of infection control in which all human blood/body fluids or animals infected with infectious agents are treated as if known to be infectious from HIV, HBV, HCV and other bloodborne pathogens.

Sterilize: The use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.

TB: Mycobacterium tuberculosis

Work Practice Controls: Mandated procedures or policies that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., by prohibiting recapping of needles using a two-handed technique).
Appendix II

Research Laboratories Conducting HIV/HBV Research and Production

A. Definition of HIV/HBV Research and Production Laboratories

**Research laboratory** means a laboratory which produces or uses research laboratory scale amounts of HIV or HBV. Although research laboratories may not have the volume found in production facilities, they deal with solutions containing higher viral titers than those normally found in patient’s blood. Academic research laboratories are included in this definition.

Laboratories that conduct research on blood and other Body fluids unrelated to HIV or HBV, or that use unconcentrated blood or blood components as the source of HIV or HBV, are not considered research laboratories for the purpose of this paragraph, (CPL 2-2.44D, pg 51).

**Production facilities** are those engaged in industrial scale, large volume, or high concentration production of HIV or HBV, (CPL 2-2.44D, pg 51).

B. Biosafety Manual

A biosafety Manual must be prepared or adopted and periodically reviewed. It must be reviewed and updated at least annually, or as often as necessary. Personnel shall be advised of potential hazards, required to read instructions on practices and procedures, and required to follow them.

C. General Requirements

1. Research laboratories dealing with human pathogens must determine the level of risk.
2. They must meet the requirements of the Biosafety Committee in addition to meeting the following criteria:
   a. Laboratory door must be kept closed when work involving HIV and HBV is in progress.
   b. Contaminated materials that are able to be decontaminated at a site away from the work area must be placed in a durable, leak proof, labeled or color-coded container that is closed before being removed from the work area.
   c. Written policies must be established to ensure access to the work area is limited to authorized persons who:
      1) Have been advised of the potential biohazard.
      2) Have been trained in necessary procedures.
      3) Meet specific entry requirements.
      4) Comply with entry and exit procedures.

D. Work Areas

1. Work areas and animal rooms shall be separated from areas that are open to unrestricted traffic flow within the building and warn of the hazards associated with bloodborne pathogens.
2. Passage through two sets of doors shall be the basic requirement for entry into the work area from access corridors or other contagious areas.
3. Separation of the high-containment work area from access corridors to other areas or activities may also be provided by a double-doored clothes-change room (showers may be included), airlock, or other access facility that requires passing through two sets of doors before entering the work area.
4. Surfaces of doors, walls, floors, and ceilings in the work area shall be water resistant so that they can be easily cleaned. Penetrations in these surfaces shall be sealed or capable of being sealed to facilitate decontamination.
5. Access doors to the work area or containment module shall be self-closing.

E. Identifying Biohazardous Agents

1. A universal biohazard symbol must be posted on all access doors when other potentially infectious materials or infected animals are present in the work area or containment module.
2. The biohazard sign shall also include:
   a. Special requirements for entering the area.
   b. The name and telephone number of the laboratory director or other responsible person.
3. The sign shall be fluorescent orange-red or predominantly so, with lettering or symbols in a contrasting color.

F. Ventilation System
   A ducted exhaust-air ventilation system shall be provided.
   1. This system shall create directional airflow that draws air into the work area through the entry area.
   2. The exhaust air shall not be recirculated to any other area of the building, shall be discharged to the outside, and shall be dispersed away from occupied areas and air intakes.
   3. The proper direction of the airflow shall be verified (i.e., into the work area).
   4. Routine maintenance and/or replacement of all filters and traps shall be included in maintaining the air ventilation system.

G. Biological Safety Cabinets
   Work with blood, body fluids, tissues or other potentially infectious material is not permitted on the open bench. Work must be conducted in certified biological safety cabinets or other physical containment devices within the containment module. Certified biological safety cabinets (Class I, II, or III) or other appropriate combinations of personal protection or physical containment devices, such as special protective clothing, respirators, centrifuge safety cups, sealed centrifuge rotors, and containment caging for animals, shall be used for all activities with other potentially infectious materials that pose a threat of exposure to droplets, splashes, spills, or aerosols.

H. Certification of Biological Cabinets
   Specific containment equipment is required to minimize or eliminate exposure to the viruses.
   1. If the compliance officer determines that biological safety cabinets (BSC) have been chosen as the means of containment, they must be certified (Class I, Class II, or Class III, as appropriate) when installed or moved, and at least annually.
   2. The compliance officer should check that a dated tag is affixed to the BSC indicating who performed the certification.
   3. Alternatively, a certification report attesting to a minimum inward face velocity of at least 75 linear feet per minute and the integrity of the HEPA filters should be reviewed by the compliance officer.
   4. The report must be dated and signed by the trained technician performing the measurements and integrity tests.
   5. Alternatively, appropriate combinations of PPE or physical containment devices, (examples listed in the Federal Standard) will be accepted.

I. Appropriate Clothing
   1. Appropriate protective clothing must be worn in the work area and animal rooms.
      a. Protective clothing, including laboratory coats, gowns, smocks, uniforms, or other appropriate protective clothing shall be worn in the work area and animal rooms.
      b. This protective clothing must not be worn outside or removed from the work area, unless bagged for decontamination.
      c. Protective clothing must be decontaminated before laundering.
   2. Gloves must be worn when handling infected animals and when making hand contact with other potentially infectious materials. Special care must be taken to avoid skin contact and needle punctures.

J. Sharps
   Use of needles and syringes should be kept to a minimum and handled properly, as required. Puncture-resistant containers that sharps are placed in must be properly autoclaved or decontaminated before being discarded, reused, or incinerated.

K. Autoclave
   An autoclave for decontamination of regulated waste shall be available within or as near as possible to the work area.

L. Waste Disposal
   Before disposal, waste from work areas and animal rooms must be either incinerated or decontaminated by a method such as autoclaving which is known to effectively destroy bloodborne pathogens.

M. Vacuum Lines
   1. Vacuum lines must be protected with liquid disinfectant traps and high-efficiency particulate air (HEPA) filters, or filter of equivalent or superior efficiency.
   2. These items must be checked routinely and maintained or replaced as needed.
N. Infectious Spills
   1. Spills must be contained and cleaned up immediately by appropriate professional staff or others properly trained and equipped to work with potentially concentrated forms of infectious materials.
   2. Any employee or student with a potential bloodborne pathogen exposure should contact the OUCH pager at *9-888-6824 (OUCH). Employees with other injuries should report to The Nebraska Medical Center Employee Health during regular business hours. Students with other injuries should report to UNMC Student Health during regular hours. If an injury that is not a bloodborne pathogen exposure should occur over a weekend, holiday, or during off hours, the employee or student should report to TNMC emergency room.
   3. Any employee or student that suffers an injury in the lab involving lab animals, or is exposed to a hazardous biological or chemical that results in an exposure incident must be reported immediately to the laboratory director, the Director of Comparative Medicine (559-4034).
   4. An UNMC incident report must be completed in accordance with UNMC policies. The incident report can be found at http://www.unmc.edu/hr/Forms/UNMCIncidentReport.pdf.

O. Hand and Eye washing Facilities
   1. Hand and eye washing facilities must be readily available in each laboratory, as well as an autoclave for decontaminating waste.
      a. Each work area shall contain a sink for washing hands that is foot, elbow, or automatically operated and shall be located near the exit door of the work area. The hand washing facility must be supplied with at least tepid water, soap, and hand towels.
      b. Each work area shall have an eyewash facility readily available. The eyewash must supply a sufficient quantity of water to completely flush the eyes.
         1) A fifteen minute supply of continuous, free-flowing water is acceptable.
         2) The hands must be free to hold the eyelids open to aid in the complete flushing of the eyes.
   2. Eyewash and exposure showers must meet certain design criteria. Contact the UNMC Safety Office for details.

P. HIV and HBV Requirements for Training
   1. Employees must demonstrate proficiency in standard microbial practices and techniques and in the practices and operations specific to the facility before being allowed to work with HIV or HBV.
   2. Likewise, employers shall assure that employees have prior experience in the handling of human pathogens or tissue cultures before working with HIV or HBV.
   3. The employer shall provide a training program to employees who have no prior experience in handling human pathogens.
   4. Employees shall not handle human pathogens as part of their initial work activities until they have received HIV and HBV training.
   5. Work activities shall progress as techniques are learned and proficiency is developed. It is the employer’s responsibility to see that employees participate in work activities involving infectious agents only after proficiency has been demonstrated.
Appendix III

Animal Research Laboratories

Animal Laboratories Shall Meet the Following Criteria:

A. Facility Design
   The facility design of the laboratory should allow for compliance with federal, state, and local government safety requirements and meet relevant accreditation standards.
   1. Adequate space should be made available for storage of hazardous materials and for the collection, storage, and processing of wastes.
   2. Special consideration should be given to the ventilation system, space arrangement, layout, support areas, traffic patterns, and access to utilities and mechanical areas.
   3. The selection of mechanical systems and equipment should be based on reliability, operational integrity, projected length of service, and ease of maintenance.

B. Sharps
   The use of hypodermic needles and syringes is permitted only for parenteral injection and aspiration of fluids from laboratory animals and diaphragm bottles.
   1. Only needle locking syringes are permitted.
   2. Needles must not be bent, sheared, recapped, or removed from the syringe following use.
   3. Sharps must be discarded in accordance with UNMC Waste Handling Policy.

C. Personal Protective Equipment
   Appropriate protective clothing must be worn in the work area and animal rooms. This may include laboratory coats, gowns, smocks, or uniforms. Protective clothing, including laboratory coats, gowns, smocks, uniforms, or other appropriate protective clothing shall be worn in the work area and animal rooms.
   1. This protective clothing must not be worn outside or removed from the work area, unless bagged for decontamination.
   2. Protective clothing must be decontaminated before laundering.
   3. Gloves must be worn when handling infected animals and when making hand contact with other potentially infectious materials.
   4. Special care must be taken to avoid skin contact and needle punctures.

D. Infectious Waste
   Before disposal, waste from work areas and animal rooms must be either incinerated or decontaminated by a method such as autoclaving.

E. Maintenance
   A program of preventive maintenance should be developed to ensure continued safe operation of the facility.

F. Barriers
   Barriers should be used to help confine potential contamination to areas where it is generated and to control access to these areas:
   1. Animal biosafety level 3 facilities should use barriers to isolate animal areas from other, adjacent areas.
   2. Principal barriers that should be used include:
      a. Exhaust air ventilation systems, which provide directional air flow.
      b. Architectural barriers that control access to the animal facility and can prevent unauthorized people from accessing the animal facility.
      c. Airlocks that help to maintain air pressure differentials to ensure proper direction of airflow.

G. Ventilated Cages
   Ventilated caging systems which use exhaust fans to create a negative pressure gradient between the cage and the surrounding environment are useful in preventing the escape of bioaerosols from the animal environment when exhaust air is filtered with highly-efficiency-particulate-air (HEPA) filters.

H. Room Ventilation
   Room ventilation is an important engineering control used not only to maintain comfortable temperature and humidity in the work area, but also provides directional airflow and can prevent the migration of airborne contaminates to unprotected space in the facility.
1. Changing air continuously can reduce the concentration of airborne contaminants but does not replace the need for such containment devices such as chemical fume hoods, biological safety cabinets, and filter top cages.

2. High ventilation rates are important for providing acceptable environmental conditions for personnel. Cage cleaning and cage washing can result in high concentrations of particulate contaminants and very high heat loads from the cage washing equipment.

3. Local exhaust can be used in controlling contaminants at the point of generation. Canopy hoods and flexible exhaust ducts should be properly engineered and used to reduce occupational exposures to such hazards as animal dander and excreta liberated during cage cleaning, aerosols, and vapors generated during anesthesia or necropsy, and heat emanating from cage cleaning or waste decontamination. Local exhaust devices are particularly useful for controlling emissions from equipment or procedures that cannot reasonably be contained in a hood.

I. Work Practice Controls
Work practices are the most important element in controlling exposures.

1. Employees must understand the hazards associated with the procedures that they are performing, recognize the way in which they are exposed to those hazards, be able to select work practices that minimize exposures, and acquire, by means of training and experience, the discipline and skills necessary to sustain proficiency in the conduct of safe practices.

2. Categories of work practices to consider include:
   a. Practices to reduce the number of employees at risk of exposure:
      1) Restrict access to the work area.
      2) Provide warnings of hazards and advice about special requirements.
   b. Practices to reduce exposures by direct and indirect contact:
      1) Keep hands away from mouth, nose, eyes, and skin. Do not handle contact lenses while in the laboratory area.
      2) Wash hands when contaminated and when work activity is completed.
      3) Decontaminate work surfaces before and after work and after spills of a hazardous agent.

3. Use appropriate methods to decontaminate equipment, surfaces, and wastes.

4. Substitute less-hazardous materials whenever possible.

5. Wear personal protection equipment (e.g., gloves, gowns, and eye protection).
   a. Practices to reduce percutaneous exposures:
      1) Eliminate the use of sharp objects whenever possible.
      2) Use needles with self-storing sheaths or those designed to protect the user.
      3) Keep sharp objects in view and limit use to one open needle at a time.
      4) Use appropriate gloves to prevent cuts and skin exposure.
      5) Select products with puncture-resistant features whenever possible.
      6) Use puncture-resistant containers for the disposal of sharps.
      7) Handle animals with care and proper restraint to prevent scratches and bites.
   b. Practices to reduce exposure by ingestion:
      1) Use automatic pipetting aids; never pipette by mouth.
      2) No smoking, eating, or drinking should be allowed in work areas used for the care and use of research animals.
      3) Keep hands and contaminated objects away from face and mouth.
      4) Protect mouth from splash and splatter hazards with mask and face shield when performing procedures that are likely to cause splatters or spraying.
      5) Perform hand hygiene frequently.
   c. Practices to reduce exposure by inhalation:
      1) Use chemical fume hoods, biological safety cabinets, and other containment equipment to control inhalation hazards.
      2) Handle fluids carefully to avoid spills and splashes and the generation of aerosols.
      3) Use in-line HEPA filters to protect the vacuum system.

J. Animal Handling
Safety precautions are necessary for animal handling and transport to prevent transmission of zoonotic agents to employees.
1. Employees should wear appropriate personal protective equipment specific to the potential exposures that may be associated with the animal being handled or transported.
2. These safety concerns apply to those who have access to the animal being transported as well as those who receive and use them.

K. Housekeeping
Special attention must be made to housekeeping details. All animal care areas, including areas in which hazardous materials are used and stored, should be kept clean in order to prevent clutter from becoming contaminated, thus leading to employee exposure.
1. Work surfaces should be wiped with disinfectant before work begins, immediately after any spill, and at the end of the work day.
2. Floors should be disinfected or decontaminated daily or weekly, as appropriate to the potential hazards.
3. Appropriate dust suppression methods should be routinely used such as wet mopping and the use of a HEPA-filtered vacuum cleaner.

L. Waste Disposal
Waste disposal should occur at scheduled intervals based on the amount of waste generated and the risk posed by the hazardous agents in the waste material.
1. Adequate space should be available for on-site collection, storage, treatment, and disposal of waste.
2. The disposal of hazardous wastes is subject to federal, state, and local regulations, which change frequently.
3. Environmental health and safety staff must keep all generators of hazardous waste informed of disposal procedures to ensure compliance with current requirements.

M. Cage Cleaning
When cleaning cages, contaminated shavings, feces, urine, and other potentially biohazardous, contaminated, or allergenic materials should be removed with methods that protect workers:
1. Biological safety cabinets are designed as bedding dump stations to protect workers from hazardous aerosols that could be generated during cage cleaning.
2. Protective clothing will protect workers from contact and percutaneous exposure.
3. Eyes, face, and body must be protected when working with hazardous chemicals.
4. Sharp edges on cages and ancillary equipment should be identified and eliminated.
5. Changes may need to be made in ventilation and work practices to avoid excessive heat exposure in cage washing areas.
6. Appropriate footwear should be worn to prevent accidents on wet, slippery surfaces. Likewise, protective shoes should be worn when moving carts and other heavy objects.
7. Personal protective equipment will protect the part of the body that is reasonably expected to come into contact with hazardous agents. Selection should be based on specific knowledge of the potential hazards, experience, and sound professional judgment.
   a. Nonpowdered latex, vinyl, or other appropriate protective gloves should be worn for handling potentially contaminated animals or hazardous materials.
   b. Care must be taken to ensure that the glove material provides an adequate barrier against the expected hazard.
   c. Glove length is selected to protect the area at risk.
   d. Disposable vinyl or nonpowdered latex examination or surgical gloves will not be reused.
   e. Heavy duty rubber gloves are commonly used for washing cages as these gloves hold up well when cleaning and disinfecting.
8. Uniforms, gowns, or laboratory coats should be worn to protect workers from animal urine and feces.
   a. Such garb should not be worn outside the work area (unless it is covered).
   b. Protective clothing should be selected so that it provides an adequate barrier against the type and extent of exposure expected (e.g., cage washing personnel should wear heavy rubber aprons and gloves to wash cages).
   c. Decontamination verses disposal of protective equipment is an important consideration as prices for reprocessing contaminated laundry can be more expensive than providing disposable gowns.
9. Safety glasses should be considered minimal eye protection and worn to prevent injury from projectiles, minor splashes, or contact of contaminated hands with eyes.
a. Goggles or face shields should be used for tasks involving infectious or hazardous liquids and especially when disinfectants and cleaning agents are used under pressure.
b. Surgical masks can provide some protection of the mouth from splashes.

10. Employees who need respiratory protection from exposure to aerosols should be enrolled in a respiratory program that is in compliance with OSHA standards. The selections and use of proper respiratory protection equipment should be coordinated through UNMC Safety Office and TNMC Employee Health. Managers must supply The Nebraska Medical Center Employee Health with a job description and a statement of necessity for fit testing for the position.
Appendix IV

Employee Health
Declination of Hepatitis B Vaccination

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring Hepatitis B virus (HBV) infection. I have 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.

I release The Nebraska Medical Center, its employees, and its medical staff from any and all adverse consequences that may arise as a result of my declining the vaccination. I understand that my signature below constitutes my acknowledgement that I have read and understood the Vaccination Information Statement (VIS) about Hepatitis B virus disease and vaccine.

_________________________________  ________________
Signature                      Date

Dept: ____________________________
# Appendix V

## Summary of Recommendations for Adult Hepatitis B Immunization

<table>
<thead>
<tr>
<th>Vaccine Name and Route</th>
<th>For Whom It Is Recommended</th>
<th>Schedule</th>
<th>Contraindications and Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis B</td>
<td>High-risk including household contacts and sex partners of HbsAg-positive persons; users of illicit injectable drugs; heterosexuals with more than one sex partner in 6 months; men who have sex with men; people with recently diagnosed STDs; patients in hemodialysis units and patients with renal disease that may result in dialysis; recipients of certain blood products; healthcare workers and public safety workers who are exposed to blood; clients and staff of institutions for the developmentally disabled; inmates of long-term correctional facilities, and certain international travelers. Note: Prior serologic testing may be recommended depending on the specific level of risk and/or likelihood of previous exposure. Il adolescents.</td>
<td>Three doses are needed on a 0, 1, 6m schedule. Alternative timing options for vaccination include: 0, 2, 4 months 0, 1, 4 months There must be 4 weeks between dose #1 and #2, and 8 weeks between doses #2 and #3. Overall there must be at least 4 months between doses #1 and #3. <strong>Schedule for those who have fallen behind:</strong> If the series is delayed between doses, do not start the series over. Continue from where you left off. May be given with all other vaccines but at a separate site.</td>
<td>Previous anaphylactic reaction to this vaccine or to any of its components. Moderate or severe acute illness.</td>
</tr>
<tr>
<td></td>
<td>Give IM Brands may be used interchangeably.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: In 1997, the NIH Consensus Development Conference, a panel of
<table>
<thead>
<tr>
<th>National experts, recommended that hepatitis B vaccination be given to all persons infected with hepatitis C virus.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ed. Note:</strong> Do serologic screening for people who have emigrated from endemic areas. When HbsAg-positive persons are identified, offer them appropriate disease management. In addition, screen their household members and intimate contacts and, if found susceptible, vaccinate.</td>
</tr>
</tbody>
</table>
### Appendix VI

**TABLE 1. Recommended HIV postexposure prophylaxis (PEP) for percutaneous injuries**

<table>
<thead>
<tr>
<th>Exposure type</th>
<th>HIV-positive, class 1*</th>
<th>HIV-positive, class 2*</th>
<th>Source of unknown HIV status†</th>
<th>Unknown source§</th>
<th>HIV-negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less severe†</td>
<td>Recommend basic 2-drug PEP</td>
<td>Recommend expanded ≥3-drug PEP</td>
<td>Generally, no PEP warranted; however, consider basic 2-drug PEP** for source with HIV risk factors††</td>
<td>Generally, no PEP warranted; however, consider basic 2-drug PEP** in settings in which exposure to HIV-infected persons is likely</td>
<td>No PEP warranted</td>
</tr>
<tr>
<td>More severe§§</td>
<td>Recommend expanded 3-drug PEP</td>
<td>Recommend expanded ≥3-drug PEP</td>
<td>Generally, no PEP warranted; however, consider basic 2-drug PEP** for source with HIV risk factors††</td>
<td>Generally, no PEP warranted; however, consider basic 2-drug PEP** in settings in which exposure to HIV-infected persons is likely</td>
<td>No PEP warranted</td>
</tr>
</tbody>
</table>

* HIV-positive, class 1 — asymptomatic HIV infection or known low viral load (e.g., <1,500 ribonucleic acid copies/mL). HIV-positive, class 2 — symptomatic HIV infection, acquired immunodeficiency syndrome, acute seroconversion, or known high viral load. If drug resistance is a concern, obtain expert consultation. Initiation of PEP should not be delayed pending expert consultation, and, because expert consultation alone cannot substitute for face-to-face counseling, resources should be available to provide immediate evaluation and follow-up care for all exposures.

† For example, deceased source person with no samples available for HIV testing.

§ For example, a needle from a sharps disposal container.

†† For example, solid needle or superficial injury.

** The recommendation “consider PEP” indicates that PEP is optional; a decision to initiate PEP should be based on a discussion between the exposed person and the treating clinician regarding the risks versus benefits of PEP.

††† If PEP is offered and administered and the source is later determined to be HIV-negative, PEP should be discontinued.

§§ For example, large-bore hollow needle, deep puncture, visible blood on device, or needle used in patient's artery or vein.
Appendix VII

CONSENT FOR SEROLOGICAL TESTING FOR HIV ANTIBODIES

I have been informed that a sample of my blood will be drawn and tested to detect HIV antibodies. I have been informed of the purpose and potential uses of the test. By my signature below, I hereby acknowledge that I have read, or have had read to me, this information regarding HIV antibody testing. I have been given the opportunity to ask questions and any questions have been answered to my satisfaction. I acknowledge that I have given consent for performance of this blood test to detect HIV antibodies. I hereby release The Nebraska Medical Center from any liability or claims arising from the reporting of the results of my test to authorized persons.

Signature of Patient/Responsible Party

Relationship if Not Patient

Witness

Second Witness (If Telephone Consent)

Date

Time

REFUSAL OF SEROLOGICAL TESTING FOR HIV ANTIBODIES

I have read the previous consent and have been adequately informed regarding HIV antibody testing. I have decided not to consent to testing. I hereby release The Nebraska Medical Center from any liability or claims that may have resulted from my refusal to HIV antibody testing. If a health care provider has a significant exposure to blood or body fluid from me or equipment used on me, and if I or my next of kin or legal guardian refuse to consent to HIV antibody testing, and a sample of my blood is available, the sample shall be tested for the presence of infectious diseases.

Signature of Patient/Responsible Party

Relationship if Not Patient

Witness

Second Witness (If Telephone Consent)

Date

Time

HIV CONSENT FORM

CONSENT
NEBRASKA MEDICAL CENTER
HIV ANTIBODIES BLOOD TEST INFORMATION
AND CONSENT/REFUSAL FORM

In compliance with Nebraska and Iowa state law, written informed consent is required prior to performing a blood test for antibodies to Human Immunodeficiency Virus (HIV).

HIV antibody testing may be requested by your physician for diagnostic information and/or when a health care worker is exposed to blood/body fluids.

WHAT IS HIV? The Human Immunodeficiency Virus (HIV) is a virus which is the cause of AIDS. AIDS is a name given to a group of serious diseases which result from the suppression of the body’s immune system by the virus now commonly known as HIV.

WHAT IS THE TEST AND WHAT DOES IT TELL YOU? A sample of your blood will be tested to see if it contains antibodies to HIV which may indicate that infection has occurred. There are limitations to the accuracy of any chemical test and results are not 100% accurate. The test may be useful in clinical situations and may help you and your physician make decisions.

INDIVIDUALS MORE LIKELY TO BE INFECTED INCLUDE:
A. Men who have had sex with another man at any time since 1978.
B. Past and present users of intravenous drugs.
C. Recipients of multiple blood transfusions or blood products particularly in high-risk areas from 1978 to May 1, 1985.
D. Individuals with multiple sex partners or anyone who has had sex with persons in Category A or B.
E. Children born to HIV-infected mothers.

WAYS TO PREVENT OR REDUCE THE RISK OF EXPOSURE TO THE AIDS VIRUS - Abstain from multiple sexual relationships. As an alternative, maintain a monogamous relationship along with the use of condoms and spermicidal jellies. Do not use illegal injectable drugs or share needles with others. Use good handwashing techniques and wear latex gloves and other protective equipment when there is a chance of being exposed to another person’s blood or body fluids. Avoid any activity that involves the exchange of blood or body fluids.

WHAT POSITIVE HIV RESULTS MEAN - Your blood sample has been tested more than once and the test results contain antibodies to the AIDS virus (HIV). You have been infected with the AIDS virus and your body has produced antibodies. You have a definite risk for developing AIDS. Research has shown that most people with HIV antibodies have active virus in their bodies and can transmit the disease to others, even if they show no symptoms. You should consider yourself infectious and capable of passing the virus to others. If your test is positive and you have not engaged in high-risk activity, you may have a false positive. Further evaluation by your physician is recommended.

Positive HIV testing does not necessarily mean that you have AIDS, will get AIDS, or that you are immune to AIDS.

WHAT SHOULD I DO IF MY TEST IS POSITIVE - When test results are positive, it is likely that you will carry the virus in your body throughout your life. Protect others from the virus by following AIDS precautions in sex, drug use, waste disposal, and general hygiene. The best AIDS precautions are sex with a partner who is free of HIV infection and no illegal injectable drug use. Alternatives include the use of condoms along with spermicidal jellies. See your physician for a complete evaluation and care. Do not donate blood, plasma, sperm, body organs or other tissue. Do not share needles with anyone. Continue close and supportive relationships with family members and friends. Remember that the AIDS virus is not spread by ordinary nonsexual contact or affectionate behaviors that do not involve the exchange of body fluids. If the test is positive, in consultation with other data, a physician may possibly diagnose AIDS.

WHAT NEGATIVE HIV TESTING RESULTS MEAN - Negative test results mean no antibodies to the AIDS virus (HIV) have been found in your blood at the time of the test. Possible explanations for a negative test result are that you have not been infected with the AIDS virus or you may have been infected with the AIDS virus but have not yet produced the antibodies. Research indicates that most people will produce antibodies within 12 weeks after infection, while others produce antibodies at a slower rate. A very small number of people may not produce antibodies. If your test is negative, it does not mean that you have nothing to worry about. Repeated exposure to the AIDS virus will increase your chances of becoming infected. It does not mean that you are immune to the virus.

WHO WILL PERFORM THE TESTS - Testing will be performed through NMC Pathology Department for all health care worker related exposures. Patients who are not involved in health care worker related exposures may choose to have diagnostic testing performed anonymously at alternate test sites or by their own physician.

WHO WILL KNOW THE RESULTS - This test is confidential. Results of this test will be placed in your confidential medical record, however, if the test is positive, the law requires that the results be reported to the Douglas County Department of Health and may be investigated by them. If you are a minor and the test is confirmed positive, your parents or legal guardian will be informed of the test results. If you are tested because of an on the job exposure, results will be placed in the health care worker’s confidential file. Medical practitioners and/or health care personnel responsible for your care and treatment may know your test results. Further disclosure of the test results will not be made without your written consent except as required by law.
Appendix VIII

The University of Nebraska Medical Center Risk Management
985060 Nebraska Med Center
Omaha, NE 68198-5060

_(date)____

Dear ________________________,

Regarding your incident on _(date)____, as we informed you, the source (patient) testing results are:

Hepatitis B surface antigen: _(result)____
Hepatitis C antibody: _(result)____
HIV: _(result)____

Results of your blood tests drawn on _(date)____ are:

Hepatitis B surface antibody: _(result)____
Hepatitis C antibody: _(result)____
HIV 1/HIV 2 (AIDS testing): _(result)____

Source results as above are all Negative. No further lab testing recommended.

We recommend follow-up blood testing _(testing required)____ for you on the following date(s).

6 weeks due: _(date)____
3 months due: _(date)____
6 months due: _(date)____

You will be reminded when due.

Please contact Barb Wolford in Employee Health at 402 552-2193 if you have any questions or concerns.

Thank you.

This information is being provided to you as a result of a confidential medical evaluation and follow-up for a reported blood borne pathogen exposure. The source results are made available to you according to federal regulation. Under applicable laws and regulations you may not further disclose their identity and infectious status.

Confidential Report
Consistent with Federal Register, Bloodborne Pathogens - (29 CFR 1910.1030).

Healthcare Professional Signature: ___(signature)________________ Date: __________
Appendix IX

**Figure. Donning and Removing Personal Protective Equipment (PPE)**

**DONNING PPE**
Type of PPE used will vary based on the level of precautions required, e.g., Standard and Contact, Droplet or Airborne Isolation Precautions

**GOWN**
- Fully cover torso from neck to knees, arms to end of wrist, and wrap around the back
- Fasten in back at neck and waist

**MASK OR RESPIRATOR**
- Secure ties or elastic band at middle of head and neck
- Fit flexible band to nose bridge
- Fit snug to face and below chin
- Fit-check respirator

**GOGGLES/FACE SHIELD**
- Put over face and eyes and adjust to fit

**GLOVES**
- Extend to cover wrist of isolation gown

**SAFE WORK PRACTICES**
- Keep hands away from face
- Limit surfaces touched
- Change when torn or heavily contaminated
- Perform hand hygiene
REMOVING PPE
Remove PPE at doorway before leaving patient room or in anteroom; remove respirator outside of room

GLOVES
- Outside of gloves are contaminated!
- Grasp outside of glove with opposite gloved hand; peel off
- Hold removed glove in gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist

GOGGLES/FACE SHIELD
- Outside of goggles or face shield are contaminated!
- To remove, handle by “clean” head band or ear pieces
- Place in designated receptacle for reprocessing or in waste container

GOWN
- Gown front and sleeves are contaminated!
- Unfasten neck, the waist ties
- Remove gown using a peeling motion; pull gown from each shoulder toward the same hand
- Gown will turn inside out
- Hold removed gown away from body, roll into a bundle and discard into waste or linen receptacle

MASK OR RESPIRATOR
- Front of mask/respirator is contaminated – DO NOT TOUCH!
- Grasp bottom then top ties/elastics and remove
- Discard in waste container

HAND HYGIENE
Perform immediately after removing all PPE!