

3.04 INFECTIOUS WASTE PROGRAM

This program contains requirements for practices designed and implemented to protect University employees, students, visitors and the general public from the hazards of infectious waste that is generated as a result of University-related activities.

A. SCOPE

This program is applicable to all personnel that generate infectious waste. Infectious waste must either be treated prior to disposal or otherwise isolated in the process of disposal to ensure a minimum exposure to UNM's faculty, staff, students, patients, visitors and the public.

B. DEFINITIONS

Infectious Waste includes, but is not limited to, the following types of wastes when they pose a probable risk of transmitting disease to humans due to their inherent nature or due to the presence of infectious contamination:

- *Contaminated Sharps*; Used sharp objects, including needles, syringes, scalpel blades, Pasteur pipettes, and broken glass.
- *Contaminated Animal Material*; Carcasses, body parts, bedding, and other contaminated material from animals that were exposed to pathogens in research, in the production of biologicals, or in the testing of pharmaceuticals. Blood, organs, or other tissue from experimental animals infected with HIV/HBV/HCV.
- *Human Blood and Blood Products*; Liquid, semi-solid, and solid human blood and blood products, including whole blood, serum, plasma, platelets, and serosanguineous fluids. Also, those body fluids which have the potential to harbor pathogens such as the Human Immunodeficiency Virus (HIV), Hepatitis B Virus (HBV), and Hepatitis C Virus (HCV) and which include blood, semen, vaginal secretions, lymph fluids, cerebrospinal fluids, synovial fluids, pleural fluids, peritoneal fluids, pericardial fluids and amniotic fluids. All body fluids in situations where it is difficult or impossible to differentiate between body fluids.
- *Microbiological Laboratory Waste*; Cultures and stocks of infectious agents and associated biologicals from clinical research laboratories, discarded live and attenuated vaccines, and disposable culture dishes and devices used to transfer, inoculate, and mix cultures from any clinical research, medical diagnostic and teaching laboratory, or industrial laboratory.
- *Other Potentially Infectious Materials*; Saliva from dental procedures and human dialysis waste materials.
- *Pathological Waste*; Any unfixed human or animal tissues, organs and body parts, removed during surgery, autopsy or biopsy, other than intact human skin. Recognizable anatomical remains, including human fetal remains measured to be 500 grams or greater, must be

disposed of by incineration or interment unless such remains have been contaminated with a regulated hazardous chemical or radioactive substance. Such contaminated remains must be disposed of at an approved hazardous or radioactive waste management facility.

- *Special Pathogens*; Disposable equipment, instruments, utensils, and other materials or items which require special precautions because of contamination with infectious pathogens capable of causing illness through casual exposure (e.g., nonpercutaneous exposures such as inhalation of aerosolized particles or droplets or contact with mucous membranes). This applies primarily to laboratory generated waste contaminated with agents classified as requiring special handling under Biosafety Levels 3 & 4 by the *Biosafety in Microbiological & Biomedical Laboratories* publication, HHS #93-8395 (CDC). However, for rare specific pathogens (e.g. Lassa Fever, Ebola, and Creutzfeldt Jakob) special handling may be indicated for clinical items, which could contain infectious materials. The New Mexico Department of Health should then be consulted for advice in these rare situations.

Infectious Waste Disposal - Management, removal, and elimination of biologic, infectious, pathologic, and dental waste. The concept includes blood, mucus, tissue removed at surgery or autopsy, soiled surgical dressings, and other potentially infectious materials requiring special control and handling. Disposal may take place where the waste is generated or elsewhere.

Occupational Exposure - Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

Potentially Infectious Materials - Includes the following body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids. Includes any unfixed tissue or organ (other than intact skin) from a human (living or dead); HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

Regulated Waste - liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

Sharps - Material that is very sharp in nature or can become very sharp when broken or bent, and that can easily puncture the skin. This includes needles, syringes, intravenous (IV) tubing with attached needles, scalpel blades, razor blades, laboratory slides, hard plastic capable of breaking or shattering, Pasteur pipettes, broken glass and all other devices with physical characteristics capable of puncturing, lacerating or otherwise penetrating the skin.

Universal Precautions is an approach to infection control. According to the concept of Universal Precautions, all human blood and other human body fluids containing visible blood, semen, and vaginal secretions, are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens. Universal precautions also apply to tissues and to the following fluids: cerebrospinal, synovial, pleural, peritoneal, pericardial, and amniotic fluids. Universal precautions do not apply to feces, nasal secretions, sputum, sweat, tears, urine and vomitus unless they contain visible blood. Universal precautions do not apply to saliva except when visibly contaminated with blood or in the dental setting where blood contamination of saliva is predictable.

C. SPILLS

All personnel who perform the cleanup of infectious waste spills must have had bloodborne pathogen training within the last year, and must wear appropriate Personal Protective Equipment. Spillage of potentially infectious materials must be cleaned with detergent followed by disinfection with a dilute bleach solution (1:10 dilution) or other germicidal disinfection registered with the Environmental Protection Agency (EPA) to kill tuberculin, HIV and Hepatitis B agents. Consult the SRS Bloodborne Pathogen Program, Section 3.02 of the SRS Manual, for additional information regarding spill cleanup.

D. INFECTIOUS WASTE HANDLING

All personnel will follow the policy on Standard Precautions which is located in the Health Sciences Center's Infection Control Manual. Impermeable (latex, vinyl or rubber) gloves must be worn by all employees handling, transporting or disposing of infectious material. Additional protective equipment such as masks, goggles, and protective aprons are available and recommended if there is a chance of spray, splatter, or soak through of infectious material.

E. WASTE SEGREGATION

All infectious wastes generated at UNM must be segregated from all other solid waste at the point of generation. This means that infectious waste will be placed in separate dedicated and designated containers. Non-hazardous solid waste that has been mixed with infectious waste will be managed as infectious waste.

F. IN-HOUSE TRANSPORT OF INFECTIOUS WASTE

Impermeable, non-leaking covered carts dedicated solely for infectious waste are recommended for in-house transport of red-bag material. Transport carts are to be identified by warning labels bearing the international biohazard symbol with the words "infectious waste."

Carts utilized to transport red-bag materials should not be overfilled and are to remain covered except when loading or unloading waste materials.

G. STORAGE AND CONTAINMENT

Infectious waste must not be stored for longer than forty-five days. All containers of infectious waste to be stored or disposed of must be clearly labeled, indicating the contents and potential health and safety hazards associated with the waste.

The following rules apply to all storage and containment of infectious waste:

1. Containment of infectious waste must be in a manner and location which affords protection from animal intrusion, does not provide a breeding place or a food source for insects and rodents, and minimizes exposures to the public.
2. Infectious waste must be segregated by separate containment from other waste at the point of generation.
3. Infectious waste must be contained in plastic bags inside rigid containers. The bags must be securely tied to prevent leakage or expulsion of solid or liquid wastes during storage, handling or transport. Fluid-filled containers (e.g. some suction containers, hemovacs) which cannot be opened should be placed in a red plastic biohazard bag and tied securely. A second bag should be used for added strength if indicated. Red bags will be transported to a secure area for proper storage and disposal. All sharps must be placed within rigid containers. All blood and microbiological culture-contaminated devices are disposed of in containers lined with red bags or designated sharps containers. Rigid containers must be kept closed at all times, with lids securely in place, unless waste is actively being added to or removed from the container.

Containers of blood, urine, stool, sputum, wound drainage, etc., should be emptied into a toilet. Gloves must be worn; other barrier precautions such as gowns, masks, and eye shields should be used if splashing is anticipated. Fluid-filled containers (e.g. some suction containers, hemovacs) which cannot be opened should be placed in a red plastic biohazard bag and tied securely. A second bag should be used for added strength if indicated.

At University Hospital, red bags and sharps containers are sealed and transported to the designated biohazard shed in the east court yard next to the compactor for proper storage prior to transport and disposal by an approved infectious waste management contractor.

NOTE: Red-bags shall be used for no other purpose than disposal of infectious waste. **Hazardous drug waste, including chemotherapeutic drug waste**, must be placed in yellow bags which are labeled as such. This waste must then be segregated from other infectious waste by labeling the red container into which the hazardous drug waste is placed as "**Incinerate Only**". Consult SRS's Hazardous Drug Handling and Disposal Program, #4.06, for information on infectious waste of this nature.

4. University Hospital Anatomical Pathology and Laboratory Waste -

- a. **Labor and Delivery:** Placental material is sealed in red biohazard bags. Items should be contained and secured to prevent leakage during handling or transport. Bags are then placed into transport containers located in Labor and Delivery. Environmental Services will transport this waste to north storage area located on the second floor where it will be picked up regularly for disposal by contracted infectious waste disposal company.
 - b. **Surgery:** Pathology waste, tissue, and body parts are taken to pathology for inspection. Items should be contained and secured to prevent leakage during handling or transport. Disposal is done through contracted infectious waste disposal company.
 - c. **Pathology Laboratory:** Pathology wastes or tissues are kept in containers or a refrigerator. Items should be contained and secured to prevent leakage during handling or transport. Disposal of this waste is accomplished through the contracted infectious waste disposal company.
 - d. **Clinical Laboratory:**
 - Bulk blood and blood products.
 - All microbiological lab wastes (defined as cultures of infectious agents, disposable culture dishes and devices used to transfer, inoculate and mix cultures).
 - All blood and microbiological culture-contaminated devices are disposed of in containers lined with red bags or designated sharps containers.
5. Sharps must be contained for storage, transportation, treatment, and disposal in leak-proof, rigid, puncture-resistant containers which are manufactured for the purpose of sharps containment and are taped closed or tightly lidded to preclude loss of contents. Containers should be conveniently located in all patient care areas. Sharps containers which are 2/3 full are sealed and transported by the individual departments to a secure area where they will be stored until collected for appropriate disposal. Any lab specimen in a disposable glass container (e.g. vacutainer, pipette, etc.) would be in this category.
6. All bags used for containment purposes must be red or orange and clearly identified in the following manner:
- a. They must contain the biological hazard symbol and a major message.
 - b. The major message must indicate the specific hazardous condition or the instruction to be communicated to the employee.
 - c. The biological hazard symbol must be readable at a minimum distance of five (5) feet or such greater distance as warranted by the hazard.
 - d. The biological hazard symbol and major message must be understandable to all employees who may be exposed to the identified hazard.

- e. All employees must be informed as to the meaning of the biological hazard symbol and major message used throughout the workplace and what special precautions are necessary to ensure safety.
- f. The biological hazard symbol and major message must be affixed as close as safely possible to the hazard by a positive means that prevents their loss or unintentional removal.
- g. The biological hazard symbol must be as indicated below. The major message must be presented in written text and, at a minimum, must contain the words:

“BIOHAZARDOUS” or “INFECTIOUS WASTE” or “BIOMEDICAL WASTE”



- 7. All rigid containers must be labeled "**biomedical waste,**" or otherwise conspicuously labeled as holding infectious waste or placed in disposable bags used for other infectious waste. Disposable rigid containers must meet or exceed the standards for a classified strength of at least 200-pound mullen test.
- 8. If any non-infectious waste is placed in the same container as infectious waste, then the generator must package, label and mark the entire container as infectious waste.
- 9. Rigid infectious waste containers may be reused for infectious or non-infectious waste if they are thoroughly washed and decontaminated each time they are emptied. The surfaces of the containers must have been completely protected from contamination by disposable, unpunctured or undamaged liners, bags or other devices that are removed with the infectious waste. The surface of the containers must also be free from damage or punctures. Soiled multi-use containers used to contain red-bags must be cleaned with detergent followed by disinfection with a dilute bleach solution (1:10 dilution), or other germicidal disinfectant registered with the Environmental Protection Agency (EPA), to kill tuberculin, HIV and Hepatitis B and C agents.
- 10. Storage and containment areas must protect infectious waste from the elements, be ventilated to the outdoors, be only accessible to authorized persons, and be marked with a prominent warning sign on, or adjacent to, the exterior door gates. The warning sign must be easily read during daylight from a distance of 25 feet, and must possess the international biohazard symbol and major message as follows:



BIOHAZARD

11. Generators of infectious waste must place an absorbent material inside the liner of the rigid container equal to one (1) cup of absorbent material per each six (6) cubic feet of box area if the rigid container is to hold any containers which contain free liquids. If the rigid container is to hold containers which do contain free liquids, then enough absorbent material must be placed inside the liner of the rigid container sufficient to absorb 15% of the total volume of free liquids inside the rigid container.
12. Compactors, grinders or similar devices must not be used to reduce the volume of infectious waste before the waste has been rendered non-infectious unless prior approval has been obtained from SRS.

H. TREATMENT AND DISPOSAL

Infectious waste must be disposed of only at waste facilities authorized by UNM's Department of Safety and Risk Services (SRS) for disposal of infectious waste. If infectious waste is to be incinerated, it must only be incinerated through SRS in an infectious waste incinerator authorized under applicable Air Quality and Solid Waste Regulations and permitted under these regulations.

The treatment and disposal of infectious waste must be accomplished by one of the following methods:

1. Steam Sterilization

Steam sterilization (via autoclave) is no longer allowed at UNM to transform infectious waste into non-infectious waste and thus dispose of it into the normal trash unless authorized to do so through a signed agreement with SRS.

2. Discharge to Sewer

Infectious waste may be discharged to a sewage treatment system that provides secondary treatment of waste if (and only if) the waste is liquid or semi-solid, provided it is not hazardous chemical waste, radioactive waste or otherwise regulated waste. The sewage treatment systems for the cities of Albuquerque, Gallup and Los Alamos meet these criteria. Discharge to a sewage treatment system is via the sanitary sewer system.

3. Removal From Site

Infectious waste must be removed by staff from an approved infectious waste management contractor. It is highly encouraged that all infectious waste within a single building be brought to a controlled, central storage area within the building for pickup. Centralized waste accumulation areas are located in each building where infectious waste is generated.

NOTE: Human fetal remains must be disposed of by incineration or interment. Human fetal remains are defined as such when measured to be 500 grams or greater as defined by the State Medical Investigator. Recognizable human anatomical remains must be disposed of by incineration or interment unless such remains have been contaminated with a regulated hazardous chemical or radioactive substance. Such contaminated remains must be disposed of at an approved hazardous or radioactive waste management facility.

I. RESPONSIBILITIES

1. All departments that generate infectious waste will ensure that the procedures in this program are followed.
2. Individual departments will be responsible for the infectious waste generated and stored in their department until transport by UH Environmental Services or the approved infectious waste management contractor.
3. All infectious waste generators will be responsible for the following unless otherwise noted:
 - a. Transport of infectious waste (except for sharps at UH only) to a local, secure storage area.
 - b. Ensure that the storage area is kept clean and orderly.
 - c. **UNM-SRS and UH Environmental Services only at all facilities:** Maintain records/ manifests that document interaction with contracting agencies for the removal and processing of infectious waste generated at the facility.