Infectious Waste Management Program

Contact: Director of Risk Management, 541-956-7061

1. Rogue Community College is committed to the safety of all employees and students concerning exposure to infectious waste in the workplace. Rogue Community College is also committed to complying with all applicable federal, state and local health and safety codes and regulations. To ensure that all affected employees and students are provided with the necessary information concerning the dangers of infectious waste pathogens, the following Infectious Waste Program has been established. All employees and students of Rogue Community College will participate and comply with all sections of the Infectious Waste Program.

2. The written Infectious Waste Program is reviewed annually by an RCC Committee with representatives from the following departments:

    a. Athletics
    b. Dental Assistant
    c. EMS
    d. Facilities
    e. Massage Therapy
    f. Medical Assistant
    g. Nursing
    h. Phlebotomy
    i. Risk Management
    j. RVC Science
    k. RWC Science
    l. Sterile Processing Technician

3. The written Infectious Waste Program is then updated and maintained by the Rogue Community College Risk Management Department. A printed copy of the program is available at the Risk Management office and online at https://web.roguecc.edu/risk-management/campus-environmental-health.

4. This program describes procedures for the proper handling and disposal of infectious waste from instructional, clinical, labs and commons areas at RCC. These procedures are based on state and federal law, requirements from the Centers for Disease Control or CDC, and National Institutes of Health, or NIH, and good laboratory practices. Failure to manage infectious waste properly could result in personal injury and death, fines or criminal prosecution.

5. This program has been developed in order to minimize the risk of exposure to those who may come into contact with infectious waste generated at RCC including but not limited to:

a. lab workers generating and collection infectious waste during work in the lab,
b. support staff retrieving, transferring, and autoclaving the infectious waste,
c. custodial staff
d. facilities staff (plumbers, electricians, HVAC, welders, etc.), emergency personnel, and infrequent visitors to the lab,

6. Federal, State and Local Agencies
    a. Oregon Department of Environmental Quality
    b. Oregon Health Authority
    c. Oregon OSHA
    d. Oregon Department of Transportation
    e. Centers for Disease Control
    f. National Institute of Health

7. Definitions
    a. Red bag waste - items saturated or visibly contaminated with blood or other potentially infectious materials: bandages, gauze, personal protective equipment such as gloves, gowns, goggles, plastic tubing.
    b. Saturated waste - means waste that contains enough body fluid that it would cause dripping of the body fluid from the waste container, with or without compaction.
    c. Sterilization - means, for purposes of these rules, any process which changes infectious waste so that disease causing agents contained within it are rendered non-infectious at the time the process is completed.
    d. Storage - means the temporary containment of infectious waste in a manner that does not constitute treatment or disposal of such waste.
    e. Treatment - means incineration, sterilization or other method, technique or process approved by the Oregon Health Authority that changes the character or composition of any infectious waste so as to render the waste noninfectious.

8. Infectious waste is considered a solid waste and includes:
    a. Sharps, which includes:
        i. needles
        ii. IV tubing with needles attached
        iii. scalpel blades and razors
        iv. sharp dental wire and appliances
        v. microscope slides and covers contaminated with an infectious agent
        vi. pasteur pipettes contaminated with an infectious agent
        vii. serological pipettes contaminated with an infectious agent
        viii. laboratory glassware contaminated with an infectious agent
        ix. pipette tips contaminated with an infectious agent
        x. lancets
        xi. glass tubes that could be broken during handling and

b. Biological wastes, which includes
    i. Blood and blood products
    ii. excretions
    iii. exudates
    iv. secretions
    v. suctionings
    vi. other body fluids that cannot be directly discarded into a municipal sewer system
    vii. and waste materials saturated with blood or body fluids, but does not include diapers soiled with urine or feces.
    viii. Needleless access devices
c. Cultures and stocks, which includes:
    i. etiologic agents and associated biologicals, including specimen cultures and dishes and devices used to transfer, inoculate and mix cultures, wastes from production of biologicals, and serums and discarded live and attenuated vaccines.
    ii. "Cultures" does not include throat and urine cultures.
d. Pathological waste, which includes:
    i. biopsy materials and all human tissues,
    ii. anatomical parts that emanate from surgery, obstetrical procedures, autopsy and laboratory procedures
    iii. and animal carcasses exposed to pathogens in research and the bedding and other waste from such animals.
    iv. "Pathological waste" does not include teeth or formaldehyde or other preservative agents.

9. College Departments that Generate Infectious Waste
    a. Dental Assistant
    b. EMS
    c. Facilities
    d. Massage Therapy
    e. Medical Assistant
    f. Nursing
    g. Phlebotomy
    h. Risk Management
    i. RVC Science
    j. RWC Science
    k. Sterile Processing Technician

10. Responsibilities
    a. RCC President:
        i. Provide support for the RCC Infectious Waste Management Program through appropriate staffing and funding.
    b. Executive Team/ Administration:

i. Provide support for the RCC Infectious Waste Management Program through insuring implementation of the program in their areas of responsibility.
ii. Provide visible support for the RCC Infectious Waste Management Program.

c. Deans / Directors / Program Coordinators:
    i. Insure departmental implementation of the RCC Infectious Waste Management Program within their department(s).
    ii. Each area is responsible for providing all necessary supplies such as personal protective equipment, soap, bleach and labels.
    iii. Provide visible support for the RCC Infectious Waste Management Program, by instilling safety attitudes/behaviors through leadership by example.
d. Risk Management Office (EHS)
    i. Administers the RCC Infectious Waste Management Program and provides technical assistance in the implementation of the college wide program.
    ii. Provides, coordinates training for all identified employees.
    iii. Arranges for disposal and transportation of infectious wastes through a qualified vendor.
    iv. Maintains required documentation.
e. Supervisors
    i. Shall be responsible for ensuring their employees comply with the provisions of this plan.
    ii. Ensure employees receive required training annual training.
    iii. Document training which should be conducted with all new personnel and annually thereafter.
f. Faculty
    i. Shall be responsible for ensuring students in classes generating infectious waste comply with the provisions of this plan.
    ii. Shall take the appropriate steps to ensure the safety and well-being of the students. The Principal Investigator, faculty member or other person with operational responsibility shall assure compliance with these requirements within his/her laboratory or area of responsibility

11. Hazardous Glass and Plastic
    a. Items that could cut or puncture skin or trash-can liners. This waste stream must be boxed to protect custodial staff. It goes directly to the landfill without any treatment.
    b. Items that can puncture, cut or scratch if disposed of in normal trash containers.
        i. Pasteur pipettes
        ii. Other pipettes and tips (glass or plastic)
        iii. Slides and cover slips

iv. Broken or fragile glass including chemically contaminated glass unless the chemical poses a significant hazard.
v. Bags of misc. plasticware that has been autoclaved to remove bio contamination.

12. Specific Equipment
    a. The RCC Risk Management Department will procure and provide each department at the college with the following items as needed in order to ensure consistency:
        i. Red sharps disposal containers
        ii. Hazardous Glass and Plastic disposal boxes
        iii. Red Infectious disposal bags
        iv. Red Infectious Waste Cans and Stands

13. Standard Disposal Procedures
    a. RCC operates normally under what is designated as standard disposal procedures for all infectious waste. Those procedures are outlined below.

14. Infectious Waste Storage and Temperature
    a. Infectious waste shall be segregated from other wastes by separate containment at the point of generation.
    b. Enclosures used for storage of infectious waste shall be secured to prevent access by unauthorized persons and marked with prominent warning signs.
    c. Pathological waste, biological waste and cultures/stocks shall be treated or disposed within seven days of generation, unless it is refrigerated (between 33- and 48-degrees Fahrenheit) or frozen (less than 32 degrees Fahrenheit). Refrigerated or frozen infectious waste may be stored 30 days prior to treatment or disposal.
    d. Infectious waste, except for sharps, shall be contained in disposable red plastic bags or containers made of other materials impervious to moisture and strong enough to prevent ripping, tearing or bursting under normal conditions of use. The bags or containers shall be closed to prevent leakage or expulsion of solid or liquid wastes during storage, collection or transportation.
    e. Prior to being treated, sharps contained in a leak proof, rigid, puncture resistant container which is taped closed or tightly lidded to prevent loss of the contents may be stored indefinitely.
    f. All bags, boxes or other containers for infectious waste and rigid containers of discarded sharps shall be clearly identified as containing infectious waste.
    g. Infectious waste contained in disposable bags is placed for collection, storage, handling or transportation in a disposable or reusable cardboard box for Jackson County and a reusable rubber container in Josephine County. The containers shall have a tight-fitting cover and remained closed at all times except when waste is being added to the container. They will also be kept clean and in good repair. The container will be labeled on the outside of the container with the

words Infectious Waste and the international biohazard symbol on the sides so as to be readily visible from any lateral direction when the container is upright RCC utilizes containers is Josephine County that are provide under contract with Southern Oregon Sanitation. Each time a reusable container for infectious waste is emptied, the container is washed and decontaminated by Southern Oregon Sanitation unless the surfaces of the container have been protected from contamination by a disposable red liner, bag or other device removed with the waste.

h. Infectious waste shall not be compacted before treatment and shall not be placed for collection, storage or transportation in a portable or mobile trash compactor.
i. Generators that produce 50 pounds or less of infectious waste in any calendar month shall be exempt from the requirements pertaining to storage times and temperatures. RCC generates less than 50 lbs. per calendar month on a normally basis and is thus exempt from the above requirements. If RCC were to generate more than 50 lbs. of infectious waste per month, the requirements listed above would go into effect immediately.

15. Handling and Transport
    a. Only properly trained and RCC authorized personnel can handle or transport untreated or treated infectious waste.
    b. RCC uses a licensed infectious waste vendor.

16. Treatment and Disposal of Infectious Waste
    a. Pathological wastes shall be treated by incineration in an incinerator that provides complete combustion of waste to carbonized or mineralized ash. The ash shall be disposed of as provided in the regulations. However, if the Department of Environmental Quality determines that incineration is not reasonably available within a waste shed, pathological wastes may be disposed of in the same manner provided for cultures and stocks.
    b. Cultures and stocks shall be incinerated as described in the regulations or sterilized by other means prescribed by Department of Human Services rule. Sterilized waste may be disposed of in a permitted land disposal site if it is not otherwise classified as hazardous waste.
    c. Liquid or soluble semisolid biological wastes may be discharged into a sewage treatment system that provides secondary treatment of waste.
    d. Sharps and biological wastes may be incinerated, or sterilized by other permitted means. Sharps may be disposed of in a permitted land disposal site only if the sharps are in containers as required by the regulations and are placed in a segregated area of the landfill.
    e. Infectious waste disposal is managed by an appropriate waste disposal vendor and the pick-up schedule is based on campus and amount of waste generated during any given term. More information on vendor and the pick-up schedule for a specific department can be obtained from the Risk Management department.

Similar to hazardous waste disposal, a shipping document specific to infectious waste is generated that travels with the waste shipment. After each shipment, Risk Management obtains these shipping documents from the disposal vendor.

17. Enhanced Disposal Procedures
    a. RCC normally operates under what is designated as standard disposal procedures. However, RCC at the direction of the Director of Risk Management, may move to Enhanced Disposal Procedures. The differences between standard and enhanced disposal procedures is outlined below:
        i. All personal protective equipment will be considered infectious waste and will be disposed of as infectious waste regardless of whether the equipment has been visibly contaminated with blood or any other bodily fluids.
        ii. No personal protective equipment will be disposed of in the regular trash.
        iii. All items that have come in contact with any bodily fluids will be treated as infectious waste even if they do not meet the normal saturation standard.

18. Specific Requirements for Autoclaving (Sterilization)
    a. The following departments at RCC maintain autoclaves and use them for sterilization of infectious waste prior to other disposal methods:
        i. RVC Science
        ii. RWC Science
        iii. Sterile Processing Tech
        iv. Dental
        v. Medical Assistant Lab
        vi. Medical Assistant Simulation Lab
    b. Responsibilities
        i. All operators of autoclaves are responsible for operating the autoclave in accordance with the parameters defined in this document when that autoclave is being used to decontaminate potentially infectious regulated medical wastes. Operators are also responsible for running monthly tests in accordance with the instructions in the kits supplied by Environmental Health & Safety. Departmental or facility “owners” of autoclaves are responsible for maintaining autoclaves in good working order and having the autoclaves tested annually by a qualified technician. Environmental Health & Safety BSO is responsible for distributing autoclave test kits, incubating returned test vials, providing operators with a report of test results, and maintaining campus-wide record system for the testing program. Environmental Health & Safety BSO is responsible for providing training and guidance on effective decontamination methods to the research community as needed.
    c. Definitions

i. “Potentially infectious wastes” needing to be autoclaved include the following:
ii. Biological waste, which includes blood and blood products, excretions, exudates, secretions, suctionings and other body fluids that cannot be directly discarded into a municipal sewer system, and waste materials saturated with blood or body fluids, but does not include diapers soiled with urine or feces.
iii. Cultures and stocks, which includes etiologic agents (of disease) and associated biologicals, including specimen cultures and dishes and devices used to transfer, inoculate and mix cultures, wastes from production of biologicals, and serums and discarded live and attenuated vaccines. Cultures does not include throat and urine cultures.
iv. Gloves and other disposable personal protective equipment used as barriers when handling biological wastes or cultures and stocks.

d. Procedures:
i. Waste Collection - All potentially infectious wastes (see definition above) in laboratories must be collected into autoclavable bags adorned with a biohazard symbol. Such wastes shall be segregated at the point of collection from ordinary wastes that are not potentially infectious (i.e., paper towels, supply wrappers, etc.)
ii. Autoclavable bags used for the collection of potentially infectious wastes are to be placed within a leak-proof secondary container with a lid. These containers must be adorned with a biohazard symbol in red. Commercially available waste receptacles are available for this purpose, but any cleanable, leak-proof container with a lid may be used. Waste collection bags are not to be removed from these secondary containers until such time as they are to be placed directly into the autoclave or some other secondary container (shallow tub or tray, without lid) in preparation for autoclaving.
iii. Autoclavable bags should not be filled beyond approximately ¾ full, at which point they should be secured for autoclaving. It is recommended that autoclavable zip ties be used to secure tops rather than tying the bags off.
iv. Waste Treatment by Autoclaving - Remove secured autoclavable bags of waste from secondary container and place in a shallow pan. (If available, a rack that elevates the bag off the bottom of the pan and above the sides of the pan should be placed inside the pan.)
v. Affix a small piece of autoclave indicator tape to the outside of the bag. Alternatively, heat indicator bags may be used.
vi. Place the pan and bag inside the autoclave. Do not overload the autoclave; there should be at least 2 inches of space around each waste bag on all sides to allow access to surfaces by the steam. No other materials should be autoclaved in the same load.

vii. Run the autoclave at a chamber temperature of 121o C for 60 minutes*, using a dry materials cycle. * 121o C is the standard temperature for autoclave operation, and generally achieved when chamber pressure is 15-16 PSI. However, this pressure is dependent upon altitude; at higher altitudes the pressure must be increased to achieve 121o C. It is also important to recognize that the parameters of time and temperature have an inverse relationship; operation at higher temperatures will allow the time to be decreased, and operation at lower temperatures will require longer times. The 60 minute time specified is recommended, but must be validated by testing and adjusted accordingly.

viii. When the autoclave chamber and ambient pressure are the same, the chamber may be opened and the waste bag removed. Wear autoclave gloves when handling hot items. Also use caution when opening the chamber door, as hot steam will be released from the chamber.

ix. Place the treated waste bag inside a black plastic bag. The treated waste may now be discarded in the normal solid waste stream.

e. Validating Autoclave Performance

i. Each autoclave must have a functional monitoring or measuring device to ensure that the recommended temperature is achieved for the proper length of time on each load.

ii. Each waste bag decontaminated by autoclaving should have a heat-sensitive indicator such as a piece of autoclave tape attached to the outside of the bag.

iii. At least once each month, autoclaves used to decontaminate wastes shall be tested by using endospores from the bacterium Geobacillus stearothermophilus in a challenge test. Procedure for challenge test:

1. Testing should be done using BT Sure™ (Barnstead / Thermolyne, Inc., Debuque, IA) test vials, which can usually be read in 24 hours.
2. A vial containing a known number of endospores (e.g.,) is buried within the center of a bag of waste. This is facilitated by tying a piece of string to the vial and leaving the other end of the string trailing out the opening of the bag.
3. The waste bag is secured and autoclaved according to the standard operating procedure detailed above.
4. After the bag has cooled, the vial is retrieved and incubated at 55-60o C for the appropriate time required to read the results, up to 48 hours. If the vial contents turn from purple to yellow, this indicates viable spores survived the autoclaving process, grown, and produced acid by fermentation.
    a. If after 24 hours: yellow – failed the test (definite); purple – presumptive passed the test; continue to incubate up to 48 hours.
    b. If after 48 hours: vial remains purple, passed the test (definite, all spores killed).

5. Test results, date, and run parameters of the test shall be recorded.

iv. RCC Risk Management manages a campus-wide testing program for waste treatment autoclaves using the procedure described above.

f. Detection Limits
   i. Testing by simple chemical indicator will tell only if the autoclave has reached the approximate normal operating temperature, but will not tell how long that temperature was maintained.
   ii. Validating performance by use of recording devices will tell both time and temperature, but will not ensure that materials within the center of the bag have been sterilized.
   iii. Validation by use of biological indicator spores is the only way to ensure complete sterilization.

g. Precautions
   i. Always wear thermal protection gloves when handling items that have recently been autoclaved.
   ii. Use caution when opening the door of the autoclave after a run, as steam will be released.
   iii. Personnel must use precautions to ensure placement and retrieval of test vials within a bag of potentially infectious waste does not result in exposures to infectious materials. Precautions should include as a minimum the use of appropriate PPE and mechanical methods (forceps, etc.) to place and retrieve the vial within the bag. If necessary, the vial may be run inside a bag of waste that has been “pre-cooked” by autoclaving.

h. Reporting and Documentation
   i. Records of repairs, service calls, and calibrations of autoclaves should be maintained by the user or department. Users must maintain records of any validation challenge testing as described in this program, or by equivalent methods approved by the RCC Director of Risk Management. Risk Management shall generate a report for each autoclave tested through the RCC campus-wide program, and a copy of that report will be transmitted to the individual RCC department. In addition, a summary of all tests performed for each autoclave shall be maintained in database form by Risk Management.

19. FAQ

a. Do unused needles or needles that have not come into contact with a patient, for example, needles used only to puncture IV-line ports or medicine vials, have to be treated as infectious waste?
   Yes. Needles present an injury hazard to health-care personnel and waste workers. Therefore, they should be stored, transported and disposed of in the same manner as needles used in direct patient care.

b. How about "clean" syringes? Are syringes that have not been exposed to hazardous waste, nor have had needles attached to them, considered to be "sharps?"
   No. ”Syringe” is defined in OAR 333-056-0020 as “an instrument for the injection of medicine or the withdrawal of body fluids that consists of a hollow barrel fitted with a plunger and a hollow needle.” Therefore, only syringes meeting this definition (i.e., with needle attached) are considered sharps. Non-sharps, i.e., syringes without needles attached, may be disposed of in a red infectious bag (if housing blood or other biologic waste) or in the trash (if they are non-infectious).
c. Do slides and test tubes need to be stored, transported and disposed of as "sharps?"
   Yes.
d. Is it acceptable to send sharps that have not been incinerated, autoclaved or otherwise treated by approved methods to a landfill for disposal?
   Yes. The Environmental Quality Commission's rules allow for non-compacted sharps to be disposed in a landfill without prior treatment. The sharps must be contained in a leak-proof, rigid, puncture-resistant container which is tightly closed or lidded to prevent loss of contents.
e. Because sharps may be disposed of in a landfill, can they be discarded along with my regular garbage?
   NO. Sharps need to be in segregated landfills and should NEVER be discarded with your regular garbage.
f. Are diapers soiled with urine or feces considered "infectious waste"?
   No.
g. Do linens soiled with blood or body fluids need to be treated as infectious waste?
   No. Linens are reused and therefore do not enter the waste stream. According to the Centers for Disease Control and Prevention, “Although soiled linen may harbor large numbers of pathogenic microorganisms, the risk of actual disease transmission from soiled linen is negligible…common-sense hygienic practices for processing and storage of linen are recommended."
h. Are disposable materials that are contaminated with blood or other body fluids considered to be "infectious waste"?
   Material contaminated with blood or other body fluids are subject to the infectious waste law if and only if they are saturated with blood or other body fluids. "Saturated" means that the fluid will ooze or drip out with or without compaction. Blood-stained bandages, dressings and sanitary napkins are not considered hazardous waste.
i. The law specifies that liquid or soluble semi-solid biological wastes may be discharged into a sewage treatment system that provides secondary treatment of waste. Is it also permissible to discharge this type of waste into a septic tank system?
   Yes.