**TITLE:** Regulated Medical Waste Handling and Disposal

**POLICY:** This policy and procedure conforms with the requirements established in the State of Florida, Department of Health and Rehabilitative Services, Chapter 64E-16, effective June 3, 1997, Florida Administrative Code "Biomedical Waste", and contains a plan that shall identify, handle, and manage biomedical waste at UF Health Jacksonville.

The plan includes procedures for onsite segregation, handling, labeling, transport, storage, permitting, and treatment of biomedical waste generated by the facility, and a contingency plan for spills. A written training program shall also be made a part of this plan.

To provide guidance and insure compliance with federal, state, and county guidelines regarding the safe handling and disposal of Regulated Medical Waste (RMW) at UF Health Jacksonville. Per definitions below, UF Health Jacksonville requires that all visibly contaminated items originating from the patient population be considered RMW. As such, any blood, saturated on permeable (absorbent material) or visible blood on non-permeable surfaces (tubing, vessels, sharps, etc.) are to be considered Biomedical Waste and shall be disposed of according to the instructions and guidelines contained herein. Attachment (A) provides examples on how various waste streams are to be safely disposed.

**DEFINITIONS:**

1. Biomedical Waste - Any solid or liquid waste which may present a threat of infection to humans, including non-liquid tissue, body parts, blood, and blood products, and body fluids from humans and other primates; laboratory and veterinary waste which contains human disease-causing agents; discarded sharps. The following are also included:
   A. Used, absorbent materials saturated with blood, blood products, body fluids, or excretions or secretions contaminated with visible blood; and absorbent material saturated with blood or blood products that have dried.

   B. Non-absorbent disposable devices that have been contaminated with blood, body fluids or secretions or excretions visibly contaminated with blood, but have not been treated by an approved method.

2. Biomedical Waste Generator - A facility or person who produces biomedical waste.

3. Body Fluids - Those fluids which have the potential to harbor pathogens, such as human immunodeficiency virus and hepatitis B virus and includes blood, blood products, lymph, semen, vaginal secretions, cerebrospinal, synovial, pleural, peritoneal, pericardial and amniotic fluids. In instances where identification of the fluid cannot be made, it shall be considered to be a regulated body fluid.

4. Body excretions - such as feces and secretions that include nasal discharges, saliva, deep respiratory sputum, sweat, tears, urine and vomitus shall not be considered biomedical waste unless saturated or visibly contaminated with blood. **Standard**

Precautions will be used at all times.

5. Contamination - Soiled by any biomedical waste.

6. Decontamination - The process of removing pathogenic microorganisms from objects or surfaces, thereby rendering them safe for handling.

7. Disinfect ion - A process which results in a minimum Log 6 kill against the vegetative organisms listed in Table 1, and a minimum Log 4 kill against Bacillus Stearothermophilus spores utilizing steam or a minimum Log 4 Kill against Bacillus Subtilis spores utilizing dry heat, chemicals or microwave shredding.

8. Point of Origin – The room or area where the biomedical waste is generated.

9. Restricted - The use of any measure, such as a lock, sign, or location, to prevent unauthorized entry.

10. Saturated - Soaked to capacity. (More soiled surface than clean).

11. Sealed - Free from openings that allow the passage of liquids.

12. Sharps - Objects capable of puncturing, lacerating, or otherwise penetrating the skin. This includes all syringes, ampules and flashback protectors.

13. Sterilization - A process which results in a minimum Log 6 kill against Bacillus Stearothermophilus spores utilizing steam or a minimum Log 6 kill against Bacillus Subtilis spores utilizing dry heat, chemicals, or microwave shredding.

14. Transfer - The movement of biomedical waste within a facility.

15. Transport - The movement of biomedical waste away from a facility.

16. Transport Vehicle - A motor vehicle, as defined in Section 320.01 F.S., used for the transportation of biomedical waste.

17. Treatment - Any process, including steam, chemicals, microwave shredding, or incineration, which changes the character or composition of biomedical waste to render it non-infectious by disinfection or sterilization. Specific Authority 381.006, 381.0098 FS. Law Implemented 381.006, 381.0098, Amended 4-2-90, 12-14-92, 1-23-94, 8-2095, 6-3-97, Formerly 10D-104.002.

18. Visible Contamination – The visible presence of blood (liquid or dried) on any surface or inside any tubing, vessel, or other container.

**PROCEDURE:**

1. Segregation, Handling and Record Keeping
   A. Segregation and Handling
      1. Biomedical waste mixed with hazardous waste, as defined in Chapter 62-730, F.A.C., Hazardous Waste, shall be managed as hazardous waste.

      2. Biomedical waste mixed with radioactive waste shall be managed in a manner that does not violate the provisions of Chapter 10D-91, F.A.C. The biomedical waste shall be managed in accordance with the provision of Chapter 64E-16, F.A.C., after the radioactive component has decayed in storage as provided for in Chapter 10D-91, F.A.C., or is otherwise not regulated under Chapter 10D-91, F.A.C. The packaging requirements of Chapter 10D-91 F.A.C., shall be followed, unless the requirements of Chapter 64E-16, F.A.C., are more restrictive.

      3. Any other solid waste or liquid, which is neither hazardous nor radioactive in character, combined with untreated biomedical waste, shall be managed as untreated biomedical waste.

      4. All surfaces contaminated with spilled or leaked biomedical waste shall be decontaminated as part of the cleaning process.

      5. Linen soiled with biomedical waste will be bagged and sent to the Laundry to be laundered and re-used. (The Florida Administrative Code states that Chapter 64E-16 does not apply to linen that is to be laundered and re-used).

2. Operating Plan and Training
   A. This document constitutes the written operation plan for UF Health Jacksonville to manage biomedical waste in accordance with F.A.C. Chapter 64-16. This plan shall be available for review by department and facility personnel. This plan shall include the following: a description of training for personnel; procedures for segregating, labeling, packaging, transporting, storing, and treating, biomedical waste; procedures for decontaminating biomedical waste spills; and a contingency plan for emergencies. UF Health Jacksonville shall include procedures specific to each specialty if procedures vary. Plans shall be updated when regulations, facility policies, or procedures change.
      1. UF Health Jacksonville Safety Department and Respective Departments shall train new personnel who handle biomedical waste as part of their work responsibilities. This training shall be provided prior to commencement of duties related to biomedical waste handling. Refresher training shall be completed annually by all personnel who handle biomedical waste. Training shall detail compliance with the facility's operation plan. Each department that has employees that handle biomedical waste is responsible for having a supplement to the facility plan. This supplement would cover specific department procedures, training, and documentation to insure compliance to the facility's operation plan.

      2. A record of attendance shall be maintained for each employee, along with an

outline of the training program presented.

B. Documentation and Record Keeping
Contractors must keep an operating log at their facility that includes date of disposal, length of each cycle, total quantity of medical waste disposed of per cycle, and an estimate of the quantity of regulated medical waste per cycle.

3. Storage and Containment
   A. Storage
      1. Storage of biomedical waste at UF Health Jacksonville shall not exceed 30 days.

      2. Storage of biomedical waste in a place other than at the UF Health Jacksonville shall not exceed 30 days. The 30-day storage period shall begin on the day the waste is collected from the generator.

      3. UF Health Jacksonville's outside storage building/area shall be conspicuously marked with the international biological hazard symbol as described in paragraph 64E-16.004(2) (a), F.A.C., and shall be secured against unauthorized entry. The international biological symbol on this building/area shall be a minimum of six inches in diameter.

   B. Containment
      1. Packages of biomedical waste shall remain sealed until treatment. Ruptured or leaking packages of biomedical waste shall be placed into larger packaging without disturbing the original seal.

      2. All packages containing biomedical waste shall be visibly identifiable with the international biological hazard symbol and one of the following phrases: "BIOMEDICAL WASTE", "INFECTIOUS WASTE", OR "INFECTIOUS SUBSTANCES". The symbol shall be red, orange, or black and the background color shall contrast with that of the symbol or comply with the requirements cited in subpart Z of 29 CFR subparagraph 1910.1030(g)(1)(C), Occupational Exposure to Blood-borne Pathogen Standard.

      3. Bags
      Biomedical waste, except sharps, shall be packaged in impermeable, red, polyethylene or polypropylene plastic bags. Each plastic bag shall be constructed of a polychlorinated-free filler plastics and meet or exceed the following properties:
         a. Impact resistance of 165 grams and tearing resistance of 480 grams in both the parallel and perpendicular planes with respect to the length of the bag. Impact resistance shall be determined using ASTM D-1709-91 and tearing resistance shall be determined using ASTM-D-1922-89; and

         b. The incidental sum concentration of lead, mercury, hexavalent chromium and cadmium shall be no greater than 100 parts per million (PPM) for dyes used

in the coloration of bags.

4. Sharps Containers
   a. Sharps (whether with needles or needleless) should be discarded at the point of origin into sharps containers. Sharps containers must be sealed when full. A sharps containers is considered full when materials placed into it reach the designated fill line, or if a fill line is not indicated, when additional materials cannot be placed into the container without cramming. When new sharp containers are installed the expiration date will be written on the container using a permanent marker, e.g. Expires M/DD/YY.

   b. If items other than sharps are disposed of, the container must be removed in 30 days.

   c. Permanently mounted sharps container holders shall bear the phrase and the international biological hazard symbol described in paragraph 64E-16.004(2) (a), F.A.C., if this information on the sharps container is concealed by the sharps container holder.

   d. The international biological hazard symbol shall be at least one inch in diameter on sharps containers.

5. Outer Containers
   All outer containers shall be rigid, leak-resistant and puncture- resistant. Reusable outer containers shall be constructed of smooth, easily cleanable materials and shall be decontaminated after each use.

6. The international biological hazard symbol shall be at least six inches in diameter on outer containers 19” x 14” or larger, and at least one inch in diameter on outer containers less than 19” x 14”.
   a. Specific Authority 381.006, 381.0098 FS. Law Implemented 381.006, 381.0098, 395.002 (13), 395.1011, FS. History-New 6-19-89, Amended 4-2-90, 112-14-92, 1-23-94, 8-20-95, 6-3-97, Formerly 10D-104.004.

4. <u>Labeling</u>
   A. All packages containing biomedical waste shall be labeled as required by subsection 64E-16.005(1) (a) F.A.C.
      1. If a bag or sharps container is placed into a larger bag prior to transport, the label for the exterior bag shall comply with paragraph 64E-16.005(1), F.A.C. Inner bags and inner sharps containers are exempt from the labeling requirements of paragraph 64E-6.005(1), F.A.C.

      2. Outer containers shall be labeled with the transporter’s name, address, registration number, and 24 Hour telephone number prior to transport.

   B. The transporter may provide labels for bags or sharps containers that are generator-

specific, such as bar codes or specific container numbers. Use of these generator-specific labels satisfies the requirements of paragraph 64E-16.005(1) (a), F.A.C.

1. Specific Authority 381.006, 381.0098 FS. Law Implemented 381.006, 381.0098, 395.002(13), 395.1011 FS History-News 6-19-89, Amended 4-2-90, 12-14-92, 1-23-94, 8-20-95, 6-3-97, Formerly 10D-104.005.

5. Onsite Transfer Requirements
   A. All bagged medical waste must be closed by twisting and hand tying in a single knot that if the red bag was turned upside down there would be no spillage.

   B. Specimen bags with the biohazard label should only be used for biomedical waste.

   C. All specimen bags with the biohazard label should be properly discarded in a red bag.

   D. Packages of biomedical waste shall be handled and transferred in a manner that does not impair the integrity of the packaging.

   E. Trash chutes and automated transfer methods that disrupt the integrity of the package shall not be used to transfer biomedical waste between locations.

   F. Packages of biomedical waste shall not be compacted or subjected to mechanical stress at UF Health Jacksonville.

   G. Persons handling packages or cleaning spills of biomedical waste shall wear personal protective equipment as specified in subpart Z of 29 C.F.R. paragraph 1910.1030 (d) (3).

6. Bio-hazardous Waste Spills
   A. Small bio-hazardous spills shall be cleaned up by Environmental Services personnel, except when the spill is in the Laboratory or Pharmacy. Laboratory and Pharmacy personnel shall clean up small spills in their areas, per their respective department policies. For large spills, the Spill Team should be notified through Security (Code Orange). Personal protection equipment should be used at all times when cleaning up spills.

   B. Spillage of potentially bio-hazardous waste materials is to be disinfected with a dilute bleach solution containing 100 parts per million (l oz. Of bleach per gallon of water) or other disinfectant germicidal detergents which are registered with the Environmental Protection Agency (EPA) to kill tuberculin, HIV, and Hepatitis B agents.

   C. Spillage within the pneumatic tube system shall be cleaned by Facilities. The Safety Department may be consulted as needed

D. For hazardous chemical spills, contact the Spill Team through Security (Code Orange).

7. Biomedical Waste Generator Requirements, Permitting and Fees
   A. UF Health Jacksonville shall comply with all permitting and fee requirements stated in 64E-16.011 and 64E-16012 respectively.

   B. Administration of permitting requirements shall be the responsibility of the Director of Environmental Services or his designee.

   C. UF Health Jacksonville shall not negotiate for the transport of biomedical waste with a person who is not registered with the department as a biomedical waste transporter per paragraph 64E-16.006, F.A.C.

**REFERENCES:**

A-02-022 Pharmaceutical Waste Management

IC-01-005 Occupational Exposure to Blood-borne Pathogen Standard.

State of Florida, Department of Health and Rehabilitative Services, Chapter 64E-16 Section 320.01 F.S

Federal Register/Vol.56, No.235/Dec. 6, 1991/Rules and Regulations/Standard 1910.1030 Appendix A.

**APPROVED BY:**

Nancy Laguerre, Director of Environmental Services, November 2018

EOC Committee – November 2018