

# **Managing Biomedical Waste: What FL Healthcare Facility Employees Need to Know**

## **Background**

### **Identification of Biomedical Waste**

Healthcare facilities are among the major producers of waste. This is of concern to you not only as a healthcare worker (HCW), but as a member of your community as the diseases that can spread from healthcare-related waste products can be a challenge to treat. Biomedical waste is a potential health hazard that can be managed by minimum sanitary practices such as:

### **Biomedical waste management includes:**

- Ensuring proper isolation at the source
- Using appropriate packaging
- Appropriate international color coding
- Minimizing employee exposure to biomedical waste in a workplace
- Designating waste storage areas
- Ensuring safe disposal.

### **Training**

This module will provide information that can help you from risks associated with potentially infectious biomedical waste. This information must be reviewed before you perform any work that would require you to handle biohazardous materials or waste. Records of your training must be maintained on site for 3 years. Compliance with Section 381.0098, Florida Statute and Chapter 64E-16, Florida Administrative Code (FAC) states that all employees must receive training upon hire and annually on:

### **Biomedical Waste Training Requirements:**

- Biomedical Waste Management Code
- Facility-Specific Biomedical Waste Management Plan
- Any Plan and/or Code Changes

## **Generators**

### **Who regulates waste in FL?**

Florida Statute (FS) 381.0098 authorizes the Department of Health to have oversight of the proper management of biomedical waste. The Environmental Health Division of the Department of Health issues permits and inspects biomedical waste Generators, Storage Facilities and Transporters. It is the job of the Environmental Health Division to ensure that generated waste is disposed of properly, following the Biomedical Waste Management Plan. To view the FL Biomedical Waste requirements, click on the link below

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[http://www.floridahealth.gov/environmental-health/biomedical-waste/documents/64E16\\_1.pdf](http://www.floridahealth.gov/environmental-health/biomedical-waste/documents/64E16_1.pdf)

## Generators

### Who generates waste?

The FL Administrative Code defines a “biomedical waste generator” as a place or person(s) that generate biomedical waste during the course of routine business. If you are working in a nursing home or assisted living facility, you are working in a “biomedical waste generator”. There are other types of facilities included in this definition that you may not have considered, such as:

- Tattoo & body piercing shops
- Dental offices
- Physician offices
- Veterinary clinics

### Definitions Associated with Biomedical Waste Management

What *is* biomedical waste? There is often confusion as to what is and is not considered waste that requires special handling and disposal. As an employee in a healthcare facility, you may be exposed to both medical and biohazardous waste. These are not always the same thing, and often need to be handled quite differently. It is important to know which category the waste falls into, and treat it per facility and state protocols. (2,4)

**Biohazardous waste** - also called infectious waste (such as blood and body fluids), is waste contaminated with potentially infectious agents or other materials that are deemed a threat to public health or the environment.

**Body Fluids** - Human secretions that have the potential to harbor pathogens such as HIV and hepatitis. This includes blood, blood products (plasma), semen and vaginal secretions, cerebrospinal, synovial (joint), pleural (lung), and peritoneal (abdomen) fluids. Unidentifiable body fluids shall also be considered biomedical waste.

**Medical waste** - Waste generated in labs or clinical settings that is not infectious or contaminated, but could appear hazardous to outsiders. This includes medical sharps, such as needles and razors.

**Biomedical waste** - Same as Regulated Medical Waste.

**Mixed Waste** - Any waste that contains biological materials along with either chemicals, or radioactive materials, or both, is considered mixed waste.

**Red bag waste** - Solid waste destined for off-site disposal as red bag waste can be collected directly in the red bags lining a biobox. If a satellite container is used, the

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container must have the universal biohazard symbol displayed on the outside of the container. Collection bags can be red or orange in color and must also have the biohazard symbol.

(12)

### Medical Waste

As a HCW, you may generate waste during resident care or be responsible for disposing of generated waste. Items that fall under medical waste (not infectious or contaminated) and do not require special segregation, labeling, or transport are listed below. They are *not* considered to be biomedical waste *unless* they are visibly contaminated with blood or the resident is known to have an infectious disease.

### Medical waste

- Non-contaminated syringes without needles
- Linen or gowns that are to be laundered and reused
- Gloves
- Incontinence products soaked with urine or feces
- Paper products containing sweat, vomit, saliva, or nasal discharge
- Empty specimen containers
- Any material resulting from medical care that is not biohazardous

### Biohazardous Waste

Biomedical waste, biohazardous waste and infectious medical waste are generally all considered to be the same and the terms may be used interchangeably. Their common denominator is that they are waste that have been, or may potentially be capable of producing an infectious disease. In this module, they are considered biomedical waste under Florida Administrative Code: Biomedical Waste Management, Chap 64-E-16 and your facility-specific Biomedical Waste Management Plan. Examples of biomedical waste you may encounter as a HCW include:

### Biomedical waste includes:

- Disposable paper products containing body fluids from infected resident
- Non-absorbent, disposable devices contaminated with blood or infectious secretions that cannot be treated (ie: personal protective equipment)
- IV tubing with visible blood
- Used, absorbent materials containing blood or blood products (wet or dry)
- Used medical sharps

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## Labeling

### Storage/Containment/Transport of Biomedical Waste

Proper labeling of biomedical waste alerts the HCW that the package contains facility generated materials that must be handled differently now. Labeling requirements apply to medical sharps containers, red bag waste, and storage/segregation areas. Containers and storage areas must have a clearly visible International biological hazard symbol that is 1' diameter or larger. Additionally, it must contain one of the phrases listed below.

### Labeling

Labeling is a critical step to prepare hazardous materials for transport off-site. Environment Protection Agency (EPA) and Occupational Safety & Health Administration (OSHA) regulations specify how containers of biohazardous waste must be marked to identify them as such. Warning labels must be placed on any containers of biomedical waste within the facility, containers used to transport waste, refrigerators that contain blood or other potentially infectious material. (5, 10) Labels must be in English and located prominently so all can see. The date that the container was generated must be visible. Identifying biomedical waste includes labeling as seen below.

### Identify Biomedical Waste Through Proper Labeling:

#### BIOMEDICAL WASTE

- BIOHAZARDOUS WASTE
- BIOHAZARD
- INFECTIOUS WASTE
- INFECTIOUS SUBSTANCE



### Red Bag Waste

Red bags used for containment of biomedical waste must meet specific requirements. Code requires they must:

- Be puncture resistant (not puncture proof)
- Have international biological hazard symbol
- Contain one of the phrases: "BIOMEDICAL WASTE", "BIOHAZARDOUS WASTE", "BIOHAZARD", "INFECTIOUS WASTE" or "INFECTIOUS SUBSTANCE"
- Have 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 D1922-89



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- Red bag documentation must be kept by the facility with the Management Plan
- ## Storage

### Collection, Segregation and Storage General Guidelines

Containment of biomedical waste is necessary to protect all health care workers and waste haulers. Environmental-service and nursing services staff in particular are at-risk if containment protocols are not in place or followed. Proper containment involves segregation at the point of use and:

#### Proper Containment

- Medical sharps placed into the sharps container in the immediate vicinity
- Contaminated absorbent waste placed in red bags resident's room or treatment room
- Contaminated non-absorbent waste placed in red bags in resident room or treatment room
- Filled sharps containers should be secured at the point of origin
- Secure tightly by sealing or tying



#### Facility Storage

The Florida Administrative Code for Biomedical Waste Management is very specific regarding facility storage areas for biohazardous material, both indoor and outdoor. Biomedical waste must be contained at the point of origin (where it is generated) and segregated from non-biomedical waste. Storage areas must be located in buildings that are under contract with a licensed pest control firm, with a 30-day storage limit at each point of origin, per regulations.

#### INDOOR STORAGE



**Indoor storage:** infectious waste must be segregated from other types of waste. The floors and walls of the storage room must be easy to clean and are located away from visitor and resident traffic. The room should be restricted by means of a door and lock. It must have biomedical waste receptacles containing red bag liners and a lid. Both the receptacle and liner must have the biohazard symbol and phrase "biohazardous" or the equivalent. Biohazardous waste receptacle must be leak-proof, moisture proof, and sturdy enough to prevent spillage. Biomedical sharps should

be in a leak proof, break-resistant in moderate pressure containers that are tightly sealed and labeled with Biohazard Symbol during storage or transport.

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## Outdoor Storage



**Outdoor storage:** This is the area in the facility where packaged biomedical waste awaits pick up by a waste hauler or transporter. Nursing homes or ALFs that store bagged biomedical waste for longer than 3 days must store in an interim outdoor storage building prior to pick-up by a transporter/waste hauler. Waste must be secured to prevent unauthorized access. Red bags retrieved from resident care areas within the facility must be placed into larger transport

containers for pick up by the contracted biomedical waste transporter. All biomedical waste red bags are to be labeled with facility name and address.

## Transport

Your facility Biomedical Waste Plan must state if your facility will be treating their own waste or if it will be removed by an approved hazardous waste hauler. No biomedical waste can be compacted on-site by a healthcare facility. Your facility should have a contingency plan for emergency transport in case your current biomedical waste transport should not be able to meet your 30-day removal deadline. Click on the link below to view hazardous waste haulers approved by the State of Florida.

<http://www.floridahealth.gov/environmental-health/biomedical-waste/bmw-transporter-list.html>

## Off Site Transport

Law requires that a healthcare facilities store biomedical waste on site no longer than 30 days, at which time it must be sent off-site for processing. For biohazard bags, the clock begins when the first waste item is placed in the receptacle. For sharps, the clock starts when the container is full and sealed. Containers can only be removed by a licensed biomedical waste disposal firm. FL Statues require biomedical waste bags or boxes for transport:

- Be labeled with your facilities name, phone number, and address
- Have International Biohazard symbol and phrase clearly visible
- Be labeled with date of generation
- Be stored in area free from animals and pests



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## Exposure

### Exposure to Biomedical Waste: Prevention and Management

All HCWs who handle biohazardous waste as part of their job are expected to know how to manage exposure risks for themselves. Certain departments, such as Environmental Services, Nursing, and Lab workers are at greater risk of exposure related to the nature of their duties.

**Central Supply/pharmacy/lab** - Biohazardous waste that can puncture or cut the red bag or autoclave bag, but are not defined as sharps, must be placed in a smaller, sturdy container prior to being placed in the bag. Biomedical waste can be treated and disinfected by many procedures like, incineration or decontamination by heating with steam under pressure in an autoclave machine. If your job involves these procedures you must wear appropriate equipment and follow facility procedures.

**Nursing** - may be exposed to viruses, bacteria, and parasites via human excreta, body fluids, needles, and surgical instruments. Minimize exposure risk by wearing gloves, gowns, etc. if there is a risk of contact with body fluids during resident care. If the resident is on transmission-based precautions, you must wear the appropriate PPE before entering the residents room and remove prior to exiting the room. Bloody bedlinens or gowns must be handled with PPE and placed in red biohazard bag.

**Environmental Services** - when transferring/transporting biomedical waste within the facility, you must minimally wear a glove on the hand holding the bag. The hand that will be opening a door, pushing the elevator button, etc. should *not* a glove. Bloodborne Pathogen standards require that linen that is bloody or contains other potential contamination be placed and transported in red bags labeled as biohazardous. HCWs should wear appropriate PPE when handling the linen and follow Universal Precautions. Note: bloody linen does not have to be thrown away (6) Red biohazard bags should never go in a regular dumpster.

### Exposure to Biomedical Waste: Prevention and Management

If spill or contamination occurs, use this acronym to help you remember how to respond:

#### In case of biomedical waste exposure

Remove all persons in area

Avoid contact

Find spill kit

Tell your supervisor



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## Choose and Use Personal Protective Equipment (PPE)

OSHA's Bloodborne Pathogens Standard requires employers to provide the necessary PPE for employees to safely complete their normal duties. When handling biohazardous waste as or cleaning a spill or leak HCWs must wear Personal Protective Equipment (PPE). This specialized equipment provides a barrier against exposure to infectious medical waste. Work uniforms do not provide the level of protection needed. You should choose the PPE needed based on the level of contact. Examples of PPE include: (11)

## Avoid Exposure: Wear Appropriate PPE

- Lab coat
- Disposable gloves
- Safety glasses
- Mask with eye shield
- Shoe covers
- Disposable apron or gown

## Spill Kits

Decontamination or disinfection of surfaces protects future exposures and is a routine part of working with medical waste. Should there be a spill, leak or a surface contaminated with biomedical wastes, decontamination must be completed as soon as it is discovered. Facilities should have a designated "spill kit" available which has been purchased or assembled by the facility. You should know the location of spill kits in your work area and familiarize yourself with their contents. Items typically found in a biohazard spill kit include:



- Disinfectant wipes
- Fluid control solidifier
- Scoop, dust pan and hand broom
- Red biohazard bag
- Sharps container
- Disposable clean-up towels
- Gloves

## Decontamination and Emergency Handling of Biomedical Waste Spill

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A critical part of preventing exposure to residents, visitors, and co-workers includes proper cleanup and disinfection. Check with your facility as to the designated, approved disinfectants that you may use as it may differ based on the biomedical waste. Always wear PPE and use chemicals in a well-ventilated area.

### **Procedure for Cleaning a Spill**

- Locate facility spill kit
- Put on appropriate PPE
- Cleanse the area with soap and water for removal of visible contaminants
- Wipe surface with a 1:10 bleach solution or equivalent per CDC guidelines
- Allow surface to air dry to ensure sufficient contact time
- Solids and sharps should be scooped up, not handled
- Non-disposable items should be decontaminated with the bleach solution
- Dispose of materials in a biomedical waste container
- Wash hands

### **Handling a biohazard spill**

Guidelines for handling a biohazardous spill are provided by the Environmental Health Services division of the Department of Health in *your* county. Click on link below to view guidelines for your county.

<http://www.floridahealth.gov/environmental-health/biomedical-waste/new%20contacts.html>

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## Inspections

### Inspection: Survey implications and Biomedical Waste

There are several agencies that will be monitoring your facilities compliance with handling biomedical waste. Both your local Health Department as well as Agency for Healthcare Administration (AHCA) will be conducting inspections.

**AHCA** - There are several Codes of Federal Regulations (CFR) that could be cited should state surveyors see violations of biomedical waste handling, including F tag 441 (infection control), F tag 309 (quality of care), and F tag 454 (physical environment). Examples of actions that may result in citation of these tags include: Biohazard storage rooms that do not meet regulations, mixing red bags with regular trash, staff failing to wear gloves when handling red bags or biohazardous material, staff inability to state where to find spill kit.

**Health Department** - biomedical waste storage exceeding 30 days, failure to limit access to waste storage to authorized persons only, failure to have a biomedical waste transport contingency plan (**\$267.52**), failure to have a Biomedical Waste plan or train staff are all items that the inspectors from the Health Department could cite.

## Contingency

### Communication

Effective May 30, 2017, the “Generator Improvements Rule” issued by the Environment Protection Agency (EPA) will take effect. This Final Rule brings improved risk communication for healthcare workers, waste handlers, and emergency responders regarding hazardous wastes accumulated on the facility property. This final rule requires healthcare facilities to have a contingency plan that: (3)

- Describes staff actions when responding to unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility
- Designates an “emergency coordinator” and lists their contact information
- Outlines facility contracts with local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services
- Includes a current listing of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications systems), with location and a physical description of each item on the list.
- Includes an evacuation plan for facility personnel with alternate evacuation routes should the primary routes could be blocked by releases of hazardous waste
- Outlines plan for biohazard waste removal if waste removal by contracted waste hauler is not possible within time guidelines

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## Communication through Record Keeping

There is documentation required to show compliance with County, State, and Federal biomedical waste regulations. Records should be kept for 3 years. Supporting documentation includes:

- Receipts from the licensed biomedical waste haul company showing each pick up
- Proof of red bags meeting criteria is available at each point of origin
- Current DOH biomedical waste permit/ exemption document (18) b. Current copy of Chapter 64E-16, F.A.C. (19) c.
- Copies of biomedical waste inspection reports
- Transport log

## Summary

Improperly disposed biomedical waste can create health issues within the facility and the community. Local, state, and federal regulations require healthcare facilities to have a plan to manage biomedical waste. As an employee, it is your responsibility to be familiar with this plan, know where supplies to contain and disinfect are located, and follow procedures when handling biomedical waste. All HCWs who handle biohazardous waste as part of their job are expected to know how to prevent exposure. If you are unsure, ask your supervisor.

Have additional questions? Contact the Florida Department of Health Biomedical Waste Program.

850.245.4250

[AskEH@flhealth.gov](mailto:AskEH@flhealth.gov)

Click on the link below to view a sample Biomedical Waste Plan

[http://www.floridahealth.gov/environmental-health/biomedical-waste/documents/CurrentDisclaimer\\_08.pdf](http://www.floridahealth.gov/environmental-health/biomedical-waste/documents/CurrentDisclaimer_08.pdf)

**YOU ARE NOW READY TO BEGIN YOUR TEST**

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