

SECTION	VII.	Biological Safety
Chapter	3	Medical Waste
Revision Date		02/01
Review Date		10/2009

# **MEDICAL WASTE MANAGEMENT**

## **INTRODUCTION**

### **PURPOSE**

Regulated medical waste is a new designation for wastes that may contain pathogenic microorganisms which was previously termed “infectious waste”. Duke University must manage these types of waste in order to minimize potential personnel exposures and to assure environmentally sound disposal of medical waste.

### **RESPONSIBILITIES**

Departments shall ensure that all medical waste generators within their department comply with this policy.

Generators of medical waste shall:

- Minimize the amount of waste generated.
- Dispose of wastes according to the Duke Medical Waste Policy.

Medical Center Environmental Services is responsible for supplying and disposing of the sharps containers in patient areas and medical center.

OESO shall:

- Assist in the identification and classification of medical wastes.
- Assist in developing the appropriate procedures to handle and dispose of medical wastes in compliance with both North Carolina and Virginia Medical Waste laws, where needed.

## **PROCEDURES**

Regulated medical waste requires special packaging, labeling, and must be decontaminated prior to disposal. Categories of regulated waste include:

<b>Category</b>	<b>Description</b>
I	Liquid or semi-liquid human blood, human blood components and products made from human blood > 20 ml in volume.
II	Liquid volumes of human body fluids including semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid >20 ml in volume.
III	“Contaminated items that would release blood or body fluids in a liquid state when compressed”, such as soaked surgical sponges.
IV	“Sharps” including needles, syringes with attached needles, capillary tubes, slides and cover slips, scalpel blades.
V	“Pathological Waste” includes human tissues, organs and body parts, and the carcasses and body parts of all animals that were known to have been exposed to or infected with pathogens that are potentially dangerous to humans.
VI	“Microbiological Waste” includes cultures and stocks of infectious agents.

Specific waste handling practices will vary depending on the individual type of medical waste being generated, and consequently, general guidelines for a variety of different work areas are presented.

## **AREA SPECIFIC MANAGEMENT PRACTICES**

### ***Inpatient Areas***

- Bulk blood and body fluids (>20ml) such as those found in suction liners, blood bags, and pleurevacs are placed in the biohazard containers located in the soiled equipment rooms. The biohazard containers are shipped for incineration. Environmental Services (681-2727) is responsible for the collection and distribution of these containers. Urine and feces may be carefully poured down the sewer (commode).
- “Sharps” including needles, syringes with attached needles, slides and cover slips, or scalpel blades are placed in the puncture-resistant containers located in every patient room, the medication carts, and the code 5 carts. To prevent needlestick injuries, needles must not be recapped, purposely bent or broken by hand, removed from disposable syringes or otherwise manipulated by hand

- Environmental Services is responsible for supplying and disposing of the sharps containers in patient areas. If a box is found to be two-thirds full, it will be picked up and replaced. Needle boxes are packaged in biohazard boxes and sent for incineration.
- Solid waste from patient rooms (used gloves, masks, disposable gowns, gauze, etc.) are not regulated medical waste and need not be decontaminated prior to disposal as routine trash; however they must be sufficiently contained in leakproof bags for transport and disposal.

### ***Operating Rooms***

- Bulk blood and body fluids (>20ml) such as those found in suction liners, blood bags, and pleurevacs are placed in the leakproof bags in the operating room. The bags are placed in biohazard containers. Environmental Services personnel are responsible for the distribution, collection and disposal of these containers.
- Contaminated items that would release blood or body fluids in a liquid state when compressed (soaked surgical sponges) are also placed in the biohazard containers in the operating room.
- “Sharps” are placed in the puncture-resistant containers in each operating room. To prevent needlestick injuries, needles must not be recapped, purposely bent or broken by hand, removed from disposable syringes or otherwise manipulated by hand.
- Medical Waste that has been placed in the soiled utility rooms will be disposed of by Environmental Services OR cleaning staff. Personnel will routinely inspect these areas every 30 minutes and dispose of waste accordingly.
- Solid waste from the operating rooms (disposable gloves, masks, disposable gowns, gauze, etc.) other than that above are not regulated medical waste and need not be decontaminated prior to disposal as routine trash; however, they must be sufficiently contained in leakproof bags for transport and disposal.

### ***On-Site Clinics***

- Bulk blood and body fluids (>20ml) such as those found in suction liners, blood bags, and pleurevacs, as well as trace chemotherapy waste are placed in the biohazard containers located in the utility rooms of the clinics. Environmental Services is responsible for the distribution, collection, and disposal of these containers. Urine and feces may be carefully poured down the sewer.
- “Sharps” are placed in the puncture-resistant containers in areas of use through-out the clinics. To prevent needlestick injuries, needles must not be recapped, purposely bent

- or broken by hand, removed from disposable syringes or otherwise manipulated by hand.
- Sharps containers are placed in red bags and collected by Environmental Services for disposal in the biohazard containers.
- Solid waste from patient rooms (disposable gloves, mask, disposable gowns, gauze, etc.) is not regulated medical waste and need not be decontaminated prior to disposal as routine trash; however, they must be sufficiently contained in leakproof bags for transport and disposal.

### ***OFF-SITE CLINICS***

- Bulk blood and body fluids (>20ml) such as those found in suction liners, blood bags, and pleurevacs, as well as trace chemotherapy, are placed in the biohazard containers located in the utility rooms in the off-site clinics. Use a Duke preferred vendor (Stericycle: 886-338-5120) for collection and distribution of these containers. Urine and feces may be carefully poured down the sewer. If you do not yet have your site set up with the vendor, contact Duke Procurement (919-681-5900) for more information.
- “Sharps” are placed in the puncture-resistant containers in areas of use throughout the clinics. To prevent needlestick injuries, needles must not be recapped, purposely bent or broken by hand, removed from disposable syringes or otherwise manipulated by hand.
- Sharps containers are placed in red bags and collected when needed by a Duke preferred vendor for disposal in biohazard containers.
- Solid waste from patient rooms (disposable gloves, mask, disposable gowns, gauze, etc.) are not regulated medical waste and need not be decontaminated prior to disposal as routine trash; however, they must be sufficiently contained in leakproof bags for transport and disposal.

### *Clinical Laboratories*

- Biological wastes (patient specimens, cultures, or stocks of etiologic agents) are placed in autoclavable bags and collected by Environmental Services (681-2727). The waste is then packaged appropriately and sent off-site for incineration.
- Urine may be carefully poured down the sewer.
- “Sharps”, including needles, syringes with attached needles, slides and cover slips, capillary tubes, or scalpel blades are placed in the puncture-resistant containers located in areas of use throughout the laboratory. To prevent needlestick injuries, needles must not be recapped, purposely bent or broken by hand, removed from disposable syringes by or otherwise manipulated by hand.
- Sharps containers are closed when two-thirds filled and submitted to Environmental Services for proper disposal.
- Pipets are placed in a “pipet” biohazard box that is lined with small autoclavable bags. Pipet boxes are taped closed when filled and collected by Environmental Services.
- All anatomical pathological waste must be incinerated in a pathological incinerator. Such wastes may be disposed in a biohazard container for disposal by Environmental Services.
- Solid wastes from laboratories (disposable gloves, gauze, etc.) are not regulated medical waste and need not be decontaminated prior to disposal as routine trash; however, they must be sufficiently contained in leakproof bags for transport and disposal.
- Solid wastes contaminated with cultures of pathogenic organisms are disposed in autoclavable bags and submitted to Environmental Services for appropriate disposal.

### *ON OR OFF-SITE RESEARCH / TEACHING LABORATORIES*

Due to the closing of the City of Durham Landfill, all landfill waste, including autoclaved medical waste, must adhere to Virginia's Medical Waste Management Regulations.

**Orange** (not red), autoclavable bags must be used for regulated lab waste. Waste must be autoclaved for **90 minutes** at 250°F (121°C). Each bag is **tagged or labeled** with the date the bag was autoclaved, and the generator's name, address and telephone number before being discarded in the regular trash. Tags are available for purchase through the VWR stockroom. If an autoclave is not available, use a Duke preferred vendor (Stericycle: 886-338-5120) for medical waste collection and removal. If you do not yet have your site set up with the vendor, contact Duke Procurement (919-681-5900) for more information.

- Biological wastes (human blood products, cultures or stocks of etiologic agents) are placed in autoclavable bags and steam sterilized. The decontaminated bags are discarded in the regular trash
- All pathological waste must be incinerated in a pathological incinerator. Such wastes must be collected in leak-proof biohazard containers and submitted either to Environmental Services (681-2727) or the Vivarium staff for incineration.
- Urine may be carefully poured down the sewer.
- “Sharps”, including needles, syringes with attached needles, slides, and cover slips, capillary tubes, or scalpel blades are placed in the puncture-resistant containers located in areas of use throughout the laboratory. To prevent needlestick injuries, needles must not be recapped, purposely bent or broken by hand, removed from disposable syringes by or otherwise manipulated by hand. Sharps containers are closed when two-thirds filled. They are then placed in an autoclavable bag and steam sterilized. The decontaminated bags are discarded in the regular trash. .
- Pipets are placed in a “pipet” biohazard box that is lined with small autoclavable bags. Pipet boxes are taped closed and steam sterilized before disposal.
- Solid waste from laboratories (disposable gloves, gauze, etc.) are not regulated medical waste and need not be decontaminated prior to disposal as regular trash; however, they must be sufficiently contained in leakproof bags for transport and disposal.
- Solid wastes contaminated with cultures of pathogenic organisms are disposed in autoclavable bags and steam sterilized before disposal.

## **REFERENCES**

North Carolina Administrative Code (NCAC) 10G.1201-.1207, General Statute (GS) 130A-309.26, Effective Sept. 1, 1990

Virginia Department of Environmental Quality; Regulated Medical Waste Management Regulations; VR 692-40-01:1, June 29, 1994