

# MEDICAL WASTE MANAGEMENT

## I. INTRODUCTION

Medical waste disposal has become a growing concern for most medical facilities because of increasing regulations and growing public perception. To address these concerns, the University of Alabama has selected West Med to collect and dispose of your facility's medical waste. West Med owns and or operates biomedical waste facilities to dispose of medical waste for many medical facilities throughout the state.

This manual has been prepared to acquaint health care personnel with some of the current methods used in infectious waste management. The manual is intended to assist medical personnel in identifying what materials are generally regarded as medical waste. It is intended as a guideline for those who deal with the segregation, labeling, packaging and collection of medical waste. The manual includes additional information related to West Med requirements on packaging and collection procedures.



## II. MEDICAL WASTE DEFINITION AND REGULATIONS

### Defining Medical Waste

The definition of infectious waste has long been a topic of debate and a subject of controversy. The medical industry, along with state and federal health agencies, has long realized the need for a more specific definition of infectious waste.

Below are the definitions of what the Alabama Department of Environmental Management considers medical waste:

- a) **Animal Waste** - carcasses and body parts of animals exposed to human infectious agents as a result of the animal being used for the production and/or testing of biologicals and pharmaceuticals or in research. Bulk blood, blood components and potentially infectious body fluids from these animals shall be handled as specified in (b) for human blood and body fluids. All materials discarded from surgical procedures involving these animals, which are grossly contaminated with bulk blood, blood components, or body fluids, shall be treated as specified in (g) surgical waste.



- b) **Blood and body fluids** – all human bulk blood, bulk blood components (serum and plasma, for example), and bulk laboratory specimens of blood, tissue, semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal

fluid, pericardial fluid, and amniotic fluid. Precautions do not apply to feces, nasal secretions, sputum, sweat, tears, urine or vomitus unless they contain visible blood. Free-flowing material or items saturated to the point of dripping liquids containing visible blood or blood components would be treated/handled as bulk blood and bulk blood components.

- c) **Microbiological waste** - discarded cultures and stocks of human infectious agents and associated microbiologicals; human and animal cell cultures from medical and pathological laboratories; cultures and stocks of infectious agents from research and industrial laboratories; waste from the production of biologicals; discarded live and attenuated vaccines; culture dishes and devices used to transfer, inoculate and mix cultures. Only those animal vaccines, which are potentially infectious to humans (Strain 19 Brucellosis Vaccine, Feline Pneumonitis Vaccine, contagious Eczema Vaccine for sheep, Newcastle Disease Vaccine, Anthrax Spore Vaccine, and Venezuelan Equine Encephalitis Vaccine) shall be considered microbiological waste.



- d) **Pathological Waste** – all discarded human tissues, organs, and body parts which are removed during surgery, obstetrical procedures, autopsy, laboratory, embalming, or other medical procedures, or traumatic amputation. Extracted teeth are not included in this definition.
- e) **Renal Dialysis Waste** – all liquid waste from renal dialysis contaminated with peritoneal fluid or with human blood visible to the human eye. Solid renal dialysis waste is considered medical waste if it is saturated, having the potential to drip or splash-regulated blood or body fluids contained in (b) above.

- f) **Sharps** – any used or unused discarded article that may cause punctures or cuts and has been or is intended for use in animal or human medical care, medical research, or in laboratories using or utilizing microorganisms. Such waste includes, but is not limited to hypodermic needles, IV tubing with needles attached, scalpel blades, and syringes (with or without needle attached). Items listed above which have been removed from their original sterile containers are included in this definition. Glassware, blood vials, pipettes, and similar items are to be handled as sharps if they are contaminated with blood or body fluids.



- g) **Surgical Waste** – all materials discarded from surgical procedures which are contaminated with human bulk blood, blood components, or body fluids, including but not limited to, disposable gowns, dressings, sponges, lavage tubes, drainage sets, underpads and surgical gloves. Discarded surgical material is considered medical waste if it is saturated, having the potential to drip or splash regulated blood or body fluids contained in (b) above. Extracted teeth are not included in this definition.

### **Medical Waste Regulations**

As a result of increased public awareness and environmental concerns, many local, state and federal agencies are now creating disposal guidelines across the

country. Most disposal regulations require that medical waste be autoclaved or incinerated to treat the material prior to landfilling.

In October, 1990, the Alabama Department of Environmental Management (ADEM) made changes in their administrative code concerning medical waste.

Effective January 1991, each generator of medical waste shall prepare, maintain and update as necessary a written plan to ensure proper management of medical waste. This plan must be available to ADEM upon request. This booklet will address the ADEM requirements that pertain to medical waste generators.

### **III. WASTE HANDLING PROCEDURES**

#### **General**

West Med provides services to your medical facility consisting of collecting medical waste from the storage facility and treating it in an approved facility. The wastes are placed in disposable, leak resistant boxes or reusable containers provided by West Med for transport to an approved facility. Once a container is filled and prior to being loaded on West Med refrigerated trucks; an adhesive barcode label is placed on the container. The label is used to identify the container and record the location, time, and date of its pickup. West Med driver signs a manifest attesting to the date and quantity of waste collected. This provides documentary proof that Stericycle has handled your waste responsibly from pickup through final disposal.

#### **Protective Equipment**

All West Med personnel involved in the handling of medical waste are provided with and required to use protective clothing and equipment in order to minimize direct contact with potentially infectious materials. At a minimum, gloves and jumpsuits or coveralls are worn by all personnel handling medical waste. Gloves are constructed of materials that inhibit exposure to chemotherapy wastes. Dedicated protective outerwear is provided to West Med employees to shield their clothing from the potential of infection. These garments are laundered daily along with other infectious linen.

At the treatment facility other protective equipment used to increase worker safety are boots and eye goggles. Boots lessen the potential of an employee absorbing infectious agents by stepping in spills or contacting leaking containers. Eye protection is always worn when overhead loading or stacking of containers occurs to eliminate the potential for leaks or spillage entering the eyes.



### **Segregation**

Medical waste should be separated from the general waste stream at the point of generation. Segregation is best accomplished at the point of generation by those trained in the identification of medical waste. All material classified as potentially infectious, based upon University of Alabama policies and procedures should be discarded into lined containers that meet ADEM's packaging and labeling regulations.

Many health care institutions produce other types of waste that require special disposal or treatment. Materials considered hazardous, explosive or radioactive should never be placed in the container used to store medical waste. Listed below are materials, which should not be placed in medical waste containers:

- Radioactive materials
- Bulk cytotoxic materials
- Hazardous materials (compounds listed on EPA's hazardous materials list)
- Explosive materials (including aerosol cans)
- Other materials as per article I in our service agreement'



### **Packaging and Labeling**

Careful packaging is important to maintain the integrity of the containers through handling, storage, transportation and treatment. Proper packaging also prevents the occurrence of leaks and spills of medical waste and provides additional protection to the healthcare worker handling medical waste.

West Med supplies its customers with either disposable boxes or reusable containers for segregation and storage of medical waste. In compliance with the new ADEM regulations, the outermost container will contain the following:

- a) The generator's name and address
- b) The date the waste was packaged in its outermost container.
- c) One of the following words or phrases used in conjunction with the International Biological Hazard Symbol: "Medical Waste" or "Bio-Hazardous Waste" or "Infectious".

These containers should be impermeable to moisture and have a strength, which shall prevent ripping, tearing, or bursting under normal conditions of use. Sharps shall be placed directly into leak proof, rigid, puncture resistant containers (sharps containers) and sealed to prevent loss of contents under normal handling procedures. These containers shall be clearly labeled as to the contents.



### **Storage**

The regulations state that storage of medical waste by the generator shall not exceed seven calendar days from the date initial storage begins unless the waste is refrigerated at a temperature less than 45 degrees Fahrenheit.

Prior to pick-up, the containers should be stored in a dry, weather-protected area that minimizes exposure to the general public. This area should be restricted to authorized personnel only and identified by the International Biological Hazard Symbol to indicate the type of activity within the area.





### **Contingency Plan**

A concern in handling medical wastes involves controlling spills or leaks resulting from container integrity.

It is important that all leaking boxes and spills are handled immediately. Leaking boxes should be repackaged into large leakproof plastic bags. Any spilled liquid or material present should be sprayed with a germicidal solution, covered with an absorbent material to soak up the liquid, and then cleaned up and packaged.

Medical Waste spills should be thoroughly disinfected to avoid any potential for infection to a facility's staff and/or the general public.

### **Medical Waste Management Plan**

Within 90 days of the effective date of this Division, each generator of medical waste shall prepare, maintain, and update as necessary a written plan to ensure proper management of medical waste. This plan must be made available to the Department upon request. This plan shall address the following if applicable to the generators:

- a) Type of Medical waste generated: animal, blood, and body fluids, microbiological, pathological, sharps, surgical and medical waste.
- b) Proper segregation, packaging and labeling procedures of untreated medical waste intended for off-site transportation: Sharps are placed in puncture proof containers. All RCRA and other non-medical waste is placed on containers other than those designated for medical waste or in the case of RCRA waste handled as appropriate.
- c) Treatment method to be utilized on-site: N/A
- d) Transporter of any untreated medical waste transported off-site:  
Name: West Med  
Address: 27 Industrial Park Drive  
Woodstock, AL 35188  
Telephone: (205)938-3333  
Contact: George West
- e) Storage Facilities utilized: West Med (same as d)

- f) Treatment/processing facilities utilized: West Med (same as d)  
[ADEM Treatment Facility Permit: TRT5120710-0401](#)
  
- g) Disposal Facilities: West Med (same as d)  
[ADEM Transporter Permit Number: TRN2139201](#)  
[DOT Identification Number:](#)
  
- h) Frequency of medical waste removed off site: weekly
  
- i) Training of Employees:
  - a) Steps taken to minimize the exposure of employees to infection agents:  
UA employees are provided gloves, masks, and other PPE as needed. All employees have received training concerning Bloodborne pathogens and medical waste management.
  
  - b) Individual responsible for training: Supervisor of generating area.
  
- j) Each generator of medical waste shall notify the Alabama Department of Environmental Management in writing within 90 days from the effective date of the new regulations (October 2, 1990). This notification shall address the following:
  - a) Name and address of generator.
  
  - b) Name and telephone of responsible person.
  
  - c) Street address, including nearest city, of generator's facility.
  
  - d) A person who will be in charge of the generation of medical waste after the effective date of the Division must submit the above notification and prepare a written Medical Waste Management Plan prior to initiating any waste generation, treatment, transportation, or disposal activity.

For more information regarding medical waste management on campus contact EHS at 205-348-5905.