Human Resources

South Cove Community Health Center

Infectious Medical Waste Program

Presents:

Infectious Medical Waste

- Information
- Guidance on Segregation of Wastes
- and Waste Reduction

Why Infectious Waste is Regulated

- To minimize the potential for the spread of disease from a medical setting to the general public
- To reduce the overall amount of infectious medical waste produced.
- To help protect the environment
- To reduces medical facilities' treatment expenditures

Who Regulates Infectious Waste?

- The Department of Transportation (DOT) regulates the transportation of Infectious waste.
- Trained employees must be retrained every 3 years.

Diseases Caused by Bloodborne Pathogens

- Malaria
- Rabies
- Syphilis
- Tularemia
- Viral Hemorrhagic
- Fevers
- Arboviral infections
- Brucellosis
- Creutzfeldt
- Jakob Disease
- Hepatitis C
- Leptospirosis
- HIV / AIDS
- Hepatitis B

What is Infectious Medical Waste?

- Infectious Medical Waste is defined as medical waste capable of producing an infectious disease.

- Waste is considered Infectious when it is:
  - Contaminated by an organism that is pathogenic to healthy humans
  - The organism is not routinely available in the environment
  - The organism is in significant quantity and virulence to transmit disease.

Infectious Wastes Specifically Are

- Blood and blood products in a free flowing, unabsorbed state
- Contaminated sharps
- Isolation Wastes
- Laboratory wastes
- Unfixed pathological tissues

Infectious Laboratory Wastes

- Cultures
- Etiological agents
- Specimens
- Stocks
- Related contaminated wastes
- Vaccine vials

Pathological Wastes

- Fixed Pathological wastes are not Infectious Medical Waste
- Unfixed Pathological wastes must be incinerated
  - Wastes containing pathological items must be appropriately labeled to ensure they are incinerated

Infectious Isolation Wastes

- Wastes generated from the care of a patient who has or is suspected of having a disease caused by a CDC
- Class 4 agent, listed below CLASS 4 VIRAL AGENTS
  - Alastrim, Smallpox, Monkey pox, and White pox.
  - Hemorrhagic fever agents, including Crimean hemorrhagic fever (Congo),
  - Junin, and Machupo viruses
  - Herpes virus simiae (Monkey B virus)
  - Lassa virus
  - Marburg virus
  - Tick borne encephalitis virus complex, including Russian spring-summer encephalitis, Kyasanur forest disease, Omsk hemorrhagic fever, and Central European encephalitis viruses
  - Venezuelan equine encephalitis virus
  - Yellow fever virus

Disposal of Isolation Wastes

- Isolation wastes that do not meet the definition of infectious medical waste should be separated and disposed in the general waste stream
  - Disposable gowns
  - Face masks
  - Shoe covers
- All waste from an isolation room should be treated with caution and the appropriate Personal Protective Equipment (PPE) must be worn during handling and disposal.

What about OSHA

- In order to ensure that all employees can safely perform their normal duties without undue health risks, a Bloodborne Pathogen (BBP) Standard was developed to protect employees with occupational exposure to bloodborne pathogens such as:
  - -HIV
  - –HbV
- Employers are required to evaluate engineering controls to reduce or eliminate employee exposure from risks such as:
  - Adoption of a needleless system

Bloodborne Pathogen Standard

- Employers must
  - Ensure that Universal Precautions are observed
  - Provide free Hepatitis B vaccination series
  - Provide all necessary PPE and ensure that is it used
  - Provide BBP training at hire, and annually thereafter
  - Maintain records of all training
  - Maintain an Exposure Control Plan, update annually
  - Record exposure incidents and follow up activities

Bloodborne Pathogen Standard

- Defines Infectious Medical Waste as:
  - Liquid or semi-liquid blood or other potentially infectious materials (OPIM)
  - Contaminated items that would release blood or OPIM in a liquid or semi-liquid state if compressed
  - Items caked with dried blood or OPIM that would dislodge during handling
  - Contaminated sharps
  - Pathological and microbial wastes containing blood or OPIM

Examples of Other Potentially Infectious Material (OPIM)

- Any body fluid with visible blood
- Amniotic fluid
- Cerebrospinal fluid
- Pericardial fluid
- Peritoneal fluid
- Pleural fluid
- Saliva in dental procedures
- Semen/vaginal secretions
- Synovial fluid
- Anywhere body fluids are indistinguishable

Infectious Waste Is Not

- Used personal hygiene products such as:
  - tissues
  - feminine products
  - diapers
- Gauze and dressings containing small amounts of blood
- Fixed pathological tissues
- Uncontaminated medical tubing and devices
  - Tubing with any visible fluid blood must be disposed of with other biohazard waste

Preventing Disease Transmission

- The single most effective measure to control the transmission of Bloodborne Pathogens is:

Universal Precautions:

- Treat all human blood and other potentially infectious materials like they are infectious for Hepatitis B and HIV

Blood and Fluid Borne Pathogen Exposures

- Exposures to blood and fluid borne pathogens in the medical setting typically occur by one of the following ways:
  - Puncture from contaminated needles, broken glass, or other sharps
  - Contact between non-intact (cut, abraded, acne, or sunburned) skin and infectious body fluids
  - Direct contact between mucous membranes and infectious body fluids
- Example: A splash in the eyes, nose, or mouth

Transmission of Blood and Fluid Borne Pathogens

- An exposure incident does not guarantee disease transmission. Several factors affect transmission:
  - Infected Source – the disease stage of the source
  - Means of Entry - severity or depth of the puncture wound, broken skin, or direct contact with mucus membrane
  - Infective Dose - the amount and type of fluid, as well as the amount of infectious agent in the fluid Blood is the fluid of greatest concern
  - Susceptibility of Host – whether the host is immunocompromised

Prevention of Exposure

- Guidelines to reduce the risk of exposure:
  - Frequent hand washing
  - Use of standard barrier precautions
  - Regular cleaning and decontamination of work surfaces with a cleaning agent labeled as effective against Mycobacterium/TB
  - Vaccination against Hepatitis B
  - Proper infectious waste disposal

Exposure Incident Response

- Wash exposed area with soap and water
- Flush splashes to nose, mouth or skin with water
- Irrigate eyes with water or saline
- Be sure report the exposure to supervisor
- Follow your facility's exposure response plan
- Report all exposures, regardless of severity, for your safety

Collection of Infectious Waste

- Infectious medical wastes must be collected at the point of generation in the appropriate color coded bags
- Biohazard bags must be labeled with the international biohazard symbol and appropriate wording such as
  - "Biohazard"
  - "Biomedical Waste"
  - "Infectious Medical Waste"
  - "Regulated Medical Waste"

Collection of Sharps

- Must be collected at the point of generation, in a leak-proof and puncture-resistant container
- Containers must bear the international biohazard symbol and appropriate wording
- Containers should never be completely filled, nor filled above the full line indicated on box.

Liquid Infectious Medical Wastes

- Liquid infectious medical waste such as the contents of suction canisters, may be disposed of in several ways.
  - Placed directly in the biohazardous waste container
  - Poured down a sanitary sewer
  - Solidified using an approved disinfectant solidifier and discarded in the solid waste

Packaging and Storage

- Wastes shall be collected in a lined, cardboard box or reusable plastic container that is labeled with the biohazard symbol and appropriate wording.
  - Once the box or container is filled up to the bag lining, it must be sealed and the container then sealed shut.
  - Boxes must be labeled with facility name, address, phone and fax numbers, and the date
  - A full, sealed container can be stored on site for no more than 30 days

Shipping and Manifests

- Every load of waste shipped off site for destruction is tracked using a manifest system
  - The manifest is a multiple copy document that accompanies the waste to the treatment facility
  - Every individual who takes possession of the waste, including someone from your facility, must sign the manifest
  - As the waste generator, your facility is responsible for the waste until you receive the proof of destruction copy of the manifest
  - After you sign the Shipping Manifest, forward it to the COO.

Tracking Waste Through Destruction

- The proof of destruction copy of the manifest must be returned to your facility within 50 days from the date that the load of waste was picked up.
- Massachusetts Infectious Waste Program must be notified of any load that has not been accounted for within 50 days.
- All proof-of-destruction manifests must be kept on file at your facility for 3 years.

Bloodborne Pathogen Spill Kit

- All medical facilities must have a spill kit and all employees should know where the spill kit is located.
- It must contain the following items:
  - Absorbent material to manage ten gallons of fluid
  - One gallon hospital grade disinfectant and a spray bottle
  - Many large biohazard bags
  - 2 sets of disposable coveralls, boots, caps
  - 2 pair of heavy neoprene gloves
  - 2 pair of eye and respiratory protection devices
  - 100 yards of boundary marking tape, 1 roll of packing tape
  - First aid kit (facilities with an emergency room exempt)

What is Over Classification?

- The improper disposal of solid wastes that do not meet the definition of infectious medical waste, as if they were infectious
- It is the most common violation, with 98% of permitted facilities being cited
- It increases the financial burden on patients and taxpayers in the form of increased disposal costs for health care facilities

Problems with Over Classification

- When large volumes of plastics, common in medical waste, are incinerated there is an increased potential for atmospheric release of carcinogenic agents
- Increased medical waste generation increases the risk of costly accidents and spills due to the increased number of trucks required to haul the waste

Why Bother Segregating Waste?

- Costs for waste disposal
  - About $0.03 - $0.06 per pound to haul regular waste to a landfill
  - About $0.30 - $6.00 per pound to haul and treat as infectious waste

A Real Life Example

During an inspection of one southern West Virginia facility it was noted that the ER, ICU, Lab, OB, and OR departments were not segregating any waste. All waste was being disposed of as infectious. Management said the staff was too busy to segregate garbage.

In 1996 this facility generated 245,060 lbs. of infectious waste.

They paid $0.29 cents per pound to have their infectious waste hauled away and treated.

The Cost of Over Classification

The inspection revealed 90-95% over classification.

The total cost for disposal of infectious waste for 1996 was $71,067.40.

Meaning a cost savings potential of $64,000 to $68,000.

Teamwork Made it Possible

This same facility two years later:

- In 1998 they generated 114,000 pounds.
- A reduction of about 50%.
- In 2001 they generated 58,838 pounds.
- A total reduction of more than 76%
- This facility realized a $54,004 cost savings

Source Separation is the Key!

- Everyone needs to consider which waste stream an item goes in every time wastes are disposed
- We realize that you are busy, but it only takes a few seconds to separate waste items into the proper waste stream
- By properly segregating medical wastes, the weight of infectious waste can be drastically reduced in every facility

Examples of Routinely Over Classified Items

- Diapers (adult and baby)
- Paper towels
- Unsaturated dressings and chucks
- Wrappers and packaging
- IV bags and oxygen tubing
- Gloves with no visible contamination
- Urine catheters and bags
- Paper, newspapers, and food containers
- Urine cups and specimen containers with no visible blood
- Empty Medication vials and broken glass

- When you mix infectious waste and regular solid waste together, you are not permitted to separate them
- Once combined, the entire contents are considered infectious waste!

Contact Information

If you have any questions or comments regarding South Cove's Infectious waste program please contact the Human Resources Department