Management of Biomedical Waste Code Review Training 2014

Provided by:
Florida Dept. of Health
in Indian River County
Environmental Health Section
772-794-7440

This training will provide you and your staff part one of the required Initial and/or Annual Biomedical Waste Training

"Code Review" is an overview of 64E-16 Florida Administrative Code (FAC) Biomedical Waste

Today we are covering:

- Definition and Identification of Biomedical Waste
- Records and Training
- Segregation
- Storage
- Labeling
- Transport
- Procedure for Decontaminating Biomedical Waste Spills
- Contingency Plan for Emergency Transport
- Procedure for Containment

Who regulates Biomedical Waste in FL?

Florida Statute (FS) 381.0098 gives the **Department of Health** the regulatory authority over the proper management of biomedical waste.

Who regulates Biomedical Waste in FL?

Florida Administrative Code (FAC) 64E-16 provides the specific requirements regarding the proper *storage*, *disposal*, *transport* and *treatment* of biomedical waste.

Biomedical Waste: an Environmental Health Program

The objective of the biomedical waste program is to protect health care workers, environmental-service staff, waste haulers, and the general public from risks associated with potentially infectious biomedical waste.

How do we do that?

The Environmental Health Division permits and inspects biomedical waste facilities to ensure that this waste is disposed of properly.

Who do we regulate?

- **Generators**
- **Transporters**
- **Storage Facilities**
- **Treatment Facilities (except incineration)**

Generators:

Places or persons that generate biomedical waste in the course of routine business.

Examples:

- **Hospitals**
- **Clinics**
- **Dentists**
- **Tattooists**
- **Acupuncturists**
- **Veterinarians**
- **Doctors Offices**
- **Nursing Homes/Assisted Livings**
- **And, more!**

Storage Facilities:

Businesses that store packaged biomedical waste for longer than 3 days, at a generator, or in a transport vehicle, or in an interim facility prior to pick-up by a transporter.

Transporters:

Businesses that are registered with the state to transport Biomedical Waste from generators or storage facilities to the final treatment facility.

Treatment Facilities:

- Any process, including steam, chemicals, microwave shredding, or incineration, which changes the character or composition of biomedical waste to render it noninfectious by disinfection or sterilization.

Autoclave

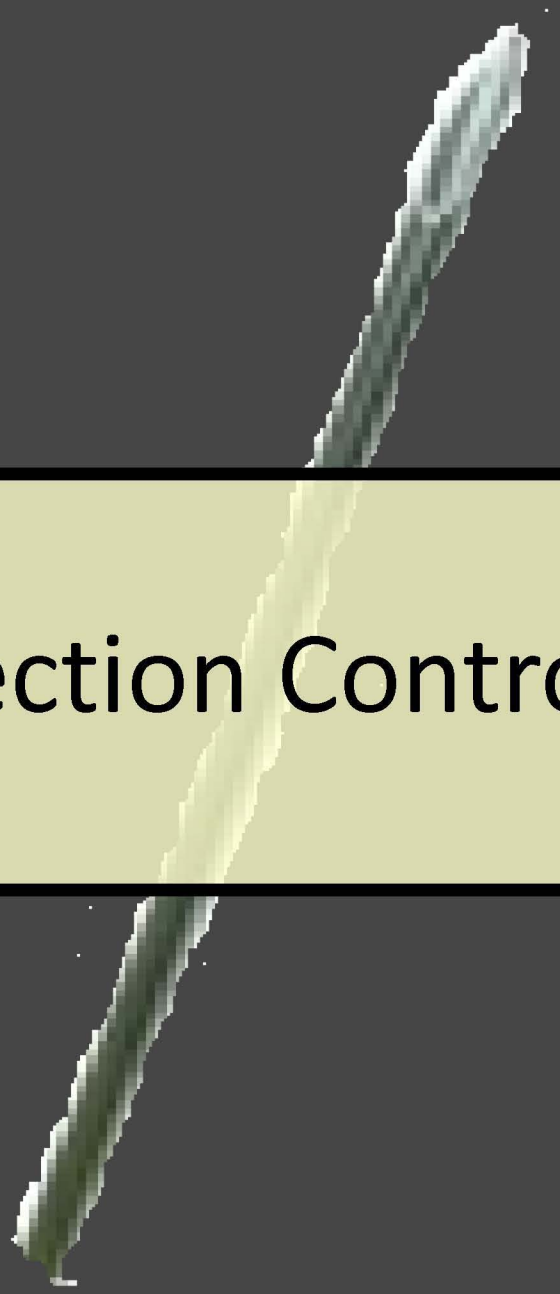
Who is at risk?

- Health Care Community
- Sanitation Workers
- Housekeeping Staff
- General Public

How is the general public at risk??

When biomedical waste is dumped in the street!!!

Infection Control



TRANSMISSION of INFECTIONS

- It is important to understand two things about infection

  1. The various ways infections can be transmitted.

  2. The way the infection can be b[illegible]en.

CLIENT and WORKER RISKS

- Mucous Membrane: A membrane lining all body passages that communicate with the air, such as the respiratory and alimentary tracts, and having cells and associated glands that secrete mucus. Also called *mucosa*.

CLIENT and WORKER RISKS

HIV: Human Immunodeficiency Virus

- Blood/body fluid transmission
- Symptoms: Initially, if any are flu-like

  Years later swollen lymph nodes, diarrhea, fever, weightloss, cough
- Treatment: Anti-HIV drugs blocks the virus
- No treatment of HIV = AIDS within 10 years
- No vaccine

CLIENT and WORKER RISKS

Hepatitis B (HBV):

- Blood/Body Fluid Transmission
- Symptoms, if present:
  - are the same as HAV
  - will begin 90 days or so after exposure and last up to 6 months
- 90% adult recovery life-long immunity to HBV.
- 10% develop more chronic HBV
- Can be fatal
- Vaccine available

CLIENT and WORKER RISKS

Hepatitis C (HCV):

- Blood Transmission
- Symptoms

  are similar to HAV, but often absent or very mild

  occur 2 weeks to 6 months after exposure
- Acute illness is uncommon
- 60%-70% chronic infection w/chronic liver disease.
- More fatal than HBV
- No vaccine available

INFECTION CONTROL ISSUES

How to interrupt the chain of infection:

- **Aseptic techniques**
  - Handwashing
  - Standard Precautions
- **Prevention & Control**
  - Sanitizing, Antisepsis, Disinfection & Sterilization

Handwashing

When?

Before and after handling biomedical waste

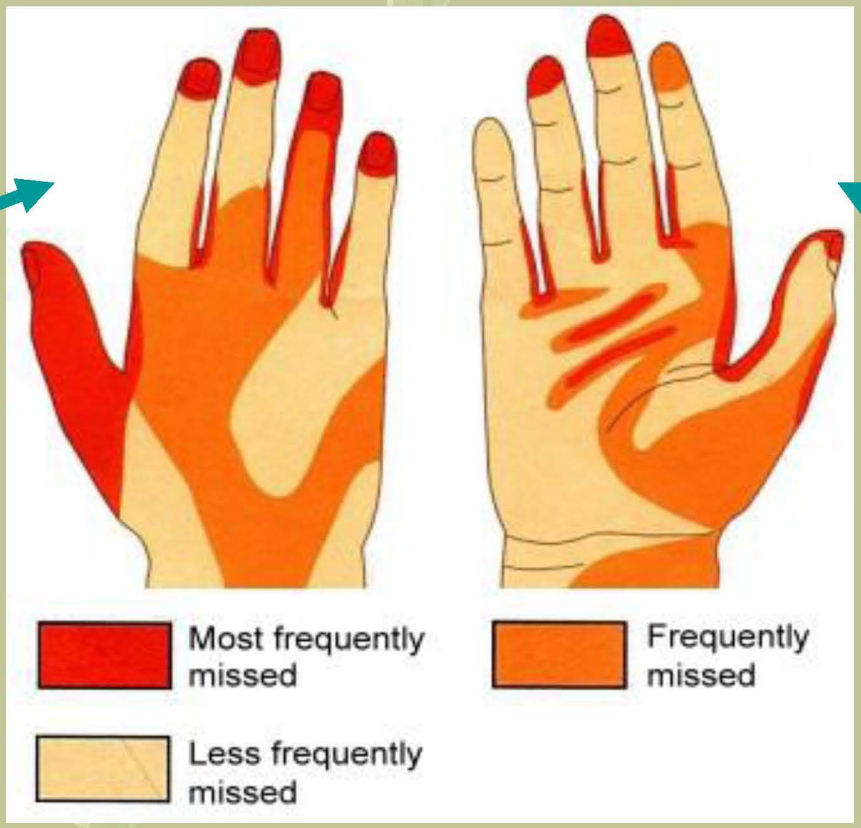
After each time gloves are removed

With what?

Liquid soap and hot running water. Dry with single use paper towels

AREAS MISSED DURING HANDWASHING

Back of hand



Front of hand (palm)

Reference: Taylor L. (1978) Nursing Standard

HANDWASHING TECHNIQUE

1. Palm to palm

2. Backs of hands

3. Interdigital spaces

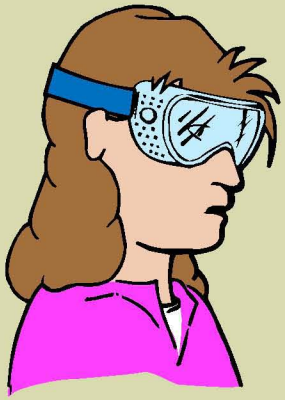
4. Fingertips

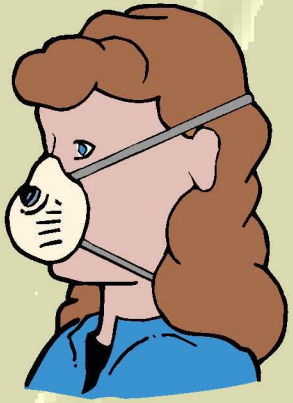
5. Thumbs and wrists

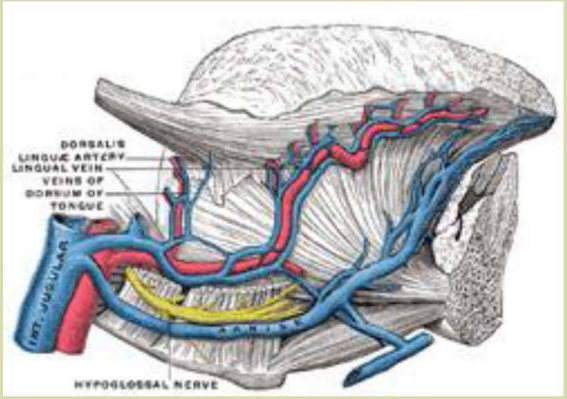
6. Nails

PERSONAL PROTECTIVE EQUIPMENT

- Sterile surgical gloves
- Protective eyewear
- Mask







What is Biomedical Waste?

- Any solid or liquid waste which may present a threat of infection to humans, including:
- non-liquid tissue, *blood, bloodproducts*, and body parts from humans and other primates;
- lab and veterinary wastes which contain human disease-causing agents;
- discarded sharps.

INCLUDES:

- Used, absorbent materials ***saturated with blood***, blood products, body fluids, or excretions or secretions contaminated with visible blood, and absorbent materials saturated with blood or blood products that have dried.

- 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.

Applies to Human or Primate!

- Tissue and body parts
- Blood and blood products
  - plasma
  - serum
  - cells & platelets
  - whole blood

Which Body Fluids are Biomedical Waste?

Those that have the potential to harbor bloodborne pathogens:

- semen
- vaginal
- lymph
- peritoneal
- synovial
- pericardial
- amniotic
- pleural
- cerebrospinal

Are all secretions and excretions Biomedical Waste?

Can be if visibly contaminated *with blood*:

- urine
- feces
- sweat
- vomitus
- saliva
- tears
- nasal discharges

Discarded Sharps

This is biomedical waste which can puncture, lacerate or break the skin:

- Needles
- Syringes with needle attached
- Scalpels
- Contaminated broken glass
- Contaminated broken hard plastic

Segregation at Point of Origin

- **Biomedical waste other than sharps shall be packaged and sealed at the point of origin in impermeable, red plastic bags.**

- **Sharps shall be discarded at the point of origin into single use or reusable sharps containers.**

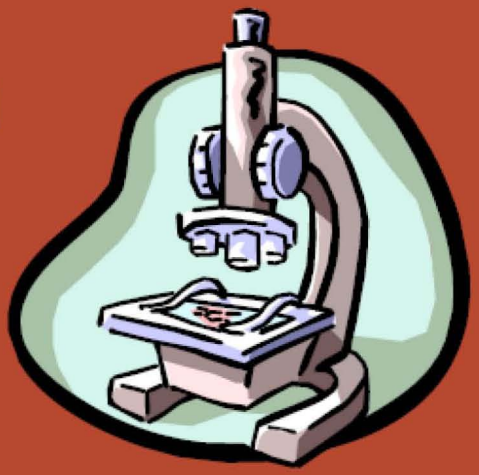
Does a red bag or sharps container have to be in an exam room at all times?

No…

Red bags can be stored in a drawer or cabinet and pulled out for use when needed. A sharps container can be portable and carried into the room at the time of injection and then returned to a storage area.

Some Laboratory Waste is Biomedical Waste

- Specimens
- Cultures
- Vaccines
- Biologicals
- Recombinants



Vaccine & Biomedical Waste Rule

- If the vaccine is a live or attenuated and the bottle is empty then it would go into sharps container.
  - One of the routes if bottle is full and not yet expired: Flu vaccine / Rx drug may be sent to a permitted reverse distributor (Permit 52) or permitted restricted drug distributor - destruction establishment (Permit 53). Audit trail to exist in accordance to Rule 64F-12.012(2)(d) & 64F-12.023(3)(a), F.A. C. Environmental regulations (e.g., EPA, FDEP / Florida Dept of Environmental Protection, etc) to also be followed.
- If the vaccine is a killed(dead) vaccine, then it can go into the regular solid waste stream (trash).

Also, Veterinary Waste

- Needles and needles with syringes attached
- Animals with zoonotic disease

Is this biomedical waste?

So what is considered biomedical waste?

Items either saturated or contaminated with blood or a managed body fluid...

- **Saturated cotton ball or gauze pad.**
  - **Blood soaked cotton ball**
  - **Saliva soaked gauze roll tainted with blood**

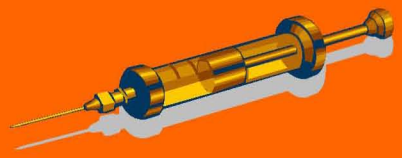
- **Blood or body-fluid contaminated disposable medical instruments.**
  - **Pap apparatus**
  - **Gloves**
  - **IV tubing**
  - **Urine cups**
  - **Test strips**

So what is considered biomedical waste?

Any item containing a sharp...

- **Urine cups with embedded sharp and urine draw-up straws.**

- **All syringes with needles attached.**
- **All finger stick devices.**



COMIXING

- All biomedical waste which is mixed with hazardous waste shall be managed as hazardous waste.
- All biomedical waste which is mixed with radioactive waste shall be managed as radioactive waste.
- All solid waste, other than hazardous and radioactive, which is mixed with biomedical waste shall be managed as *biomedical waste*.

Hazardous Pharmaceutical Waste

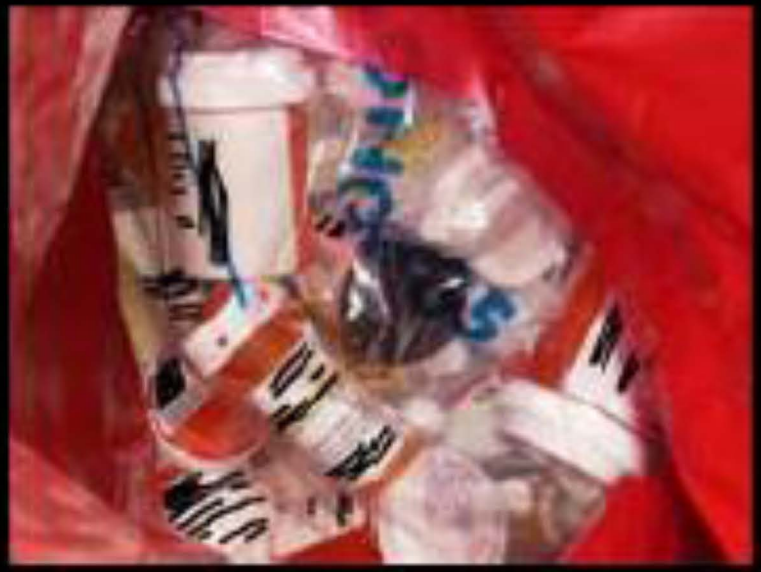
- Shall not be placed into the biomedical waste stream.
- All pharmaceuticals discarded by facility shall be reviewed for hazardous waste status.
- Either reverse distribute or following Dept. of Environmental Protection (DEP) rules on disposal
- List of hazardous pharmaceuticals on DEP website
  - http://www.dep.state.fl.us/waste/pharm/

What about Pharmaceutical Waste?

- **Pharmaceutical Samples**

  ss 499.028(9), F.S. requires all out- of- date drug samples to be returned to the manufacturer or distributor of that drug sample.

Patient Medications Should Not Be Disposed Into Red or Sharps Containers



What about Pharmaceutical Waste?

- ☑ **Chemotherapy Waste**
  - Sharps containing nonhazardous agents handle as biomedical waste
  - P & U Listed Hazardous Chemotherapy Drugs

What about people that generate biomedical waste at home?

Home users who administer their own injections should segregate and package their sharps in a manner that reduces the chance of exposure to the public.

Options:

Local sharps exchange program—send to Health Dept
or to local county transfer station
U.S. Postal Service approved mail-in sharps programs
Or
Other approved method by the Department

What is a Biomedical Waste Management Plan?

A site specific written plan to manage biomedical waste is required at all facilities. Plan must include:

- Description of training for personnel;
- Procedures for segregating, labeling, packaging, transporting, storing, and treating biomedical waste;
- Procedure for decontaminating biomedical waste spills
- Contingency plan for emergencies

Biomedical waste plans should be updated when:

- **Changes occur in the permitted facility**
- **The code is rewritten**

Records:

All biomedical waste transport and disposal records shall be maintained for a 3 year period and shall be available for review by the Department at time of inspection. These records are to include:

- Contracts with any and all transport companies;
- Manifests/Receipts from transport companies;
- Weight logs if the generator is transporting the waste.

Training:

The written management plan must include a description of the biomedical waste training provided.

That training outline must include a review of the Biomedical Waste Code and a review of the site specific management plan.

Training records for all new employees and annual training records thereafter are also required to be maintained for 3 years.

Storage and Labeling:

- Biomedical Waste cannot be stored at a generator facility for more than 30 DAYS!
- The clock starts the first time non-sharp biomedical waste is placed into a red bag or a sharps container;
- Or, when a sharps container, containing ONLY sharps (or other non-biomedical waste), is sealed.

Storage & Labeling:

- Filled containers and bags are to be secured at the point of origin and can be placed into larger transport containers for pick up by a contracted biomedical waste transporter.
- All biomedical waste containers are to be *labeled with your name and address*.

Storage:

Indoor storage areas shall have restricted access and be designated in the written operating plan.

They shall be located away from pedestrian traffic, be vermin and insect free, and shall be maintained in a sanitary condition.

They shall be constructed of smooth, easily cleanable materials that are impervious to liquids.

Storage:

Outdoor storage areas, including containers and trailers, shall, in addition to the indoor criteria, be conspicuously marked with the international biological hazard symbol as described in paragraph 64E-16.004(2)(b), F.A.C.

Symbol shall be a minimum of six inches in diameter.

Area to be secured against vandalism and unauthorized entry.

Storage and Labeling:

RED BAGS:

- Red bags must comply with requirements covered in the code. There is a list online of approved red bags.
- Red bag information must be kept on file.

Storage and Labeling:

RED BAG Standards:

- Impact resistance of 165 grams ASTM D-1709-91
- Tear resistance of 480 grams ASTM D-1922-89
- Heavy metal concentration of less than 100 ppm

How do you know if the red bag meets the requirements?

Red Bag Quality Test Report Letter

- Written documentation that states that the testing has been performed by an independent laboratory and states the required tests, results, and heavy metal content.

Red Bag List

- Our compiled list of approved red bags and their manufacturers.

http://www.doh.state.fl.us/Environment/community/biomedical/redbags.htm

★ Burden of proof is on the facility

Storage and Labeling:

RED BAG Labeling:

- **Must have international biological hazard symbol**
  - - 6" diameter for bags 14" x 19" or larger
  - - 1" diameter for bags smaller than 14" x19"
- **AND, one of the following phrases:** "BIOMEDICAL WASTE",
- "BIOHAZARDOUS WASTE",
- "BIOHAZARD", "INFECTIOUS WASTE"
- or "INFECTIOUS SUBSTANCE"

Storage and Labeling:

SHARPS CONTAINERS:

- Puncture resistant (*not* puncture proof)
- Identified with the international biological hazard symbol - 1” diameter or larger
- Has BMW Phrase


WARNI


Medical Waste Systems
BIO-MEDICAL SERVICES CORP.
1924 JOY LAKE ROAD
LAKE CITY, GA 30260
IN EMERGENCY CONTACT
1-800-442-4272
BIOHAZARDOUS WASTE
UP
UP

Transport:

- Defined as “the movement of biomedical waste away from a facility”.
- Packaged biomedical waste must be transported off site by a registered transporter; or, if generator has more than one location, by a designated employee.
- Transport boxes are to be labeled with the transporter’s information.

Transport:

- Transport method must be outlined in your management plan and approved by the county health department.
- List of registered transporters are also available online.
- NOTE: Transport logs or manifests must be maintained at the facility.

Treatment Facilities

Stericycle Autoclave

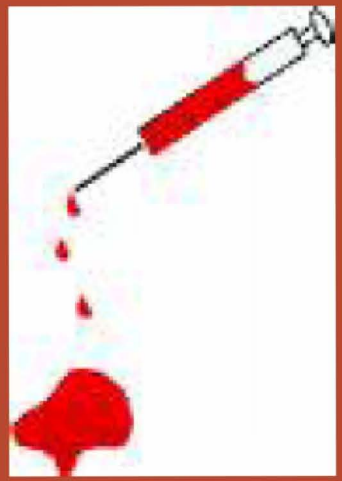
St. Joseph's Hospital Incinerator

Tampa, Florida

Decontaminating Biomedical Waste Spills

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

Spills:



- How your facility will clean and decontaminate accidental spills is required to be outlined in your written plan.
- You can use the tools provided on our webpage to make your own spill kit and write your own directions; or,
- You can purchase one of MANY, MANY pre-packaged spill kits with written instructions.

NOTE: Make sure your spill kit indicates cleaning of Bloodborne Pathogens.

Contingency Plan:

- Your written plan must include an alternative transporter in the event that your contracted transporter cannot follow through with original agreement. This is your contingency plan.


YES, CHRISSIE, I'D CALL THAT A NEEDLESTICK.

Need Assistance?
Give us a call…

Lauren Broom
Stacy Brock
772-794-7440

Now review your written operating plan with your staff! That is part two of the required training!

The End

January 2010