

Ebola Virus Disease Regulated Medical Waste

Requirements for Regulated Medical Waste (RMW)

10 NYCRR Part 70

- Subpart 70-1 Application and Definitions
- Subpart 70-2 Management of Regulated Medical Waste
- Subpart 70-3 Requirements for Autoclaves Used to Treat Regulated Medical Waste

Applies to hospitals, residential health care facilities, diagnostic and treatment centers, clinical laboratories

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10 NYCRR Part 70

Subpart 70-2 Management of Regulated Medical Waste

- 70-2.1 Waste management plan
- 70-2.2 Containment and storage
- 70-2.3 Treatment and disposal
- 70-2.4 Transfer of regulated medical waste for off-site treatment
- 70-2.5 Record keeping

Typical Approaches Used for RMW

On-Site Treatment

- RMW generated and packaged
- Treated on-site by autoclaving
- Treated RMW is picked up by a waste management company for disposal into an appropriate land fill

On-Site Treatment Off-Site

- RMW generated and packaged
- Waste management company takes the untreated RMW and brings it to a location for treatment by autoclaving or incineration
- Treated RMW or ash from incinerated RMW is disposed into an appropriate land fill

Ebola Virus Disease (EVD) Regulated Medical Waste (RMW)

First Concern

If a facility is using an autoclave to treat Ebola Virus Disease (EVD) RMW on-site, have they shown that the autoclave works for the types of EVD RMW that is expected to be generated?

Response:

Prepared guidance describing the requirements for autoclave operation and steps that need to be taken to validate that the autoclave can effectively treat the types of waste being generated.

Unexpected Development 1

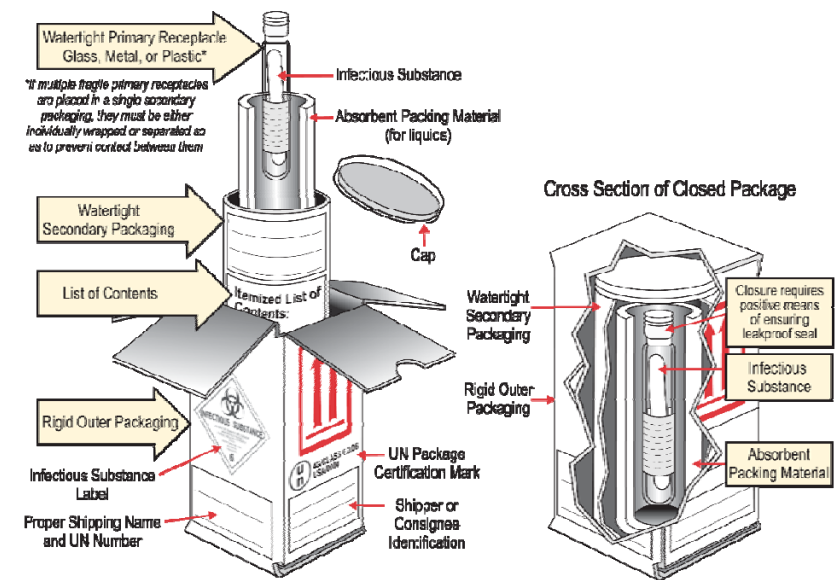
U.S. Dept. of Transportation

- Since Ebola is a Category A agent, any untreated EVD RMW must be packaged as category A agent.
- Category A packaging for the types and volumes of EVD RMW did not exist.

Waste Management Companies

- Refused to take any EVD RMW from any facility that treated the waste by autoclaving.
- Refused to transport or treat any EVD RMW.

Packing and Labeling of Category A



Note 1: The smallest external dimension of the outer packaging must not be less than 100 mm (3.9 inches)
Note 2: The primary receptacle or the secondary packaging must be capable of withstanding without leakage an internal pressure producing a pressure differential of not less than 95 kPa
Note 3: Follow package manufacturer's closure instructions

Resolutions

U.S. Dept. of Transportation

- Issued emergency special permit to allow specific waste management companies to transport untreated EVD RMW.
 - Described special packaging requirements for the transportation of untreated EVD RMW.
1. EVD RMW inside a primary bag is treated with an Environmental Protection Agency (EPA)-registered hospital disinfectant with a label claim for a nonenveloped virus.
 2. After closing the primary bag, the outside of the bag is disinfected with an EPA registered hospital disinfectant with a label claim for a nonenveloped virus and the primary bag placed into a secondary bag.
 3. The outside of the secondary bag is disinfected with an EPA registered hospital disinfectant with a label claim for a nonenveloped virus and placed into a category A 55 gallon container.
 4. After disinfecting the 55 gallon container, it is placed into a 95 gallon drum.

Waste Management Companies

- There are two companies that have agreed to transport untreated EVD RMW if it is packaged in accordance with USDOT requirements. However, none of the companies that typically autoclave waste are willing to treat EVD RMW waste by autoclaving.
- At this time, only one company in Texas has agreed to treat EVD RMW by incineration. However, there are no landfills that are willing to take ash from incinerated EVD RMW.

Unexpected Development 2

Handling of Liquid Waste

“Our local authorities told us that if we let an Ebola patient use the toilet they would take steps to have our sewer connection shut down”

- Part 70 states that regulated medical waste that is liquid or semi-liquid can be effectively treated by discharge into a sanitary sewerage system connected to a secondary treatment facility, except as specifically prohibited by the Commissioner of Health, or by local law or ordinance.

Resolution

- Pre- and post-treatment of toilets with bleach or other disinfectant
- Addition of solidifying agents to liquid waste and disposal of liquid waste
- Disposal into the sewer system as usual

Waste Management Plan

Many designated EVD treatment facilities are establishing new units for patient treatment and specialized labs for testing near the patient.

Each facility needs to look at their waste management plan to determine what needs to be modified to cope with handling EVD RMW.

Goal is to ensure that they are meeting regulatory requirements for RMW and to be sure that they have thought about all the steps in the process of handling and transporting EVD waste.

Components of an EVD Regulated Medical Waste Management Plan

A. Types of EVD RMW

Provide a description of the types of waste that would be generated during the care of a suspected or confirmed EVD patient. EVD RMW may include but not be limited to the following:

- Patient specimens collected for laboratory testing
- Waste generated from the testing of patient specimens in the laboratory
- Waste generated from any invasive procedures
- Personal protective equipment (PPE)
- Single use devices (Note: Recycling of SUDs that may normally be done is unacceptable for this waste stream)
- Disposable commodes, bed pans and/or urinals
- Items used for environmental cleaning and disinfection
- Sheets, food items, feces, urine, cubicle curtain, supplies, any/all other disposable items
- Stained ceiling tiles
- Mattress covers
- Mattresses with cracks/ tears/ penetrations
- Feces, urine and vomit, and liquid waste from washing
- Sharp objects (e.g. needles, syringes, glass articles) and tubing that has been in contact with the bloodstream
- All items in contact with the patient
- Furniture that has become compromised
- Disposable food trays, dishes, and cutlery
- Disposable dedicated medical equipment
- Materials used to clean up spills of infectious body fluids

B. Packaging of EVD RMW

Provide a procedure describing how EVD RMW will be packaged.

- The procedures should be consistent with USDOT packaging requirements for the transportation of untreated Category A RMW. Each facility should consult with the waste management company that they are working with to confirm that appropriate protocols are being used.
- The procedures should contain detailed information detailing where each step of the packaging (including disinfection of the outer surface of bags and the rigid container) is being performed (e.g., in the patient room, the laboratory, an ante-room, warm, or cold area). It is highly recommended that waste be double bagged in accordance with DOT requirements in hot areas and transferred to a warm or cold area for packaging into the category A barrel.
- The procedures should include a description of PPE that is used for packaging and disposal of the PPE.
- If liquid waste will be packaged, include procedures for the packaging of liquid waste and if a solidifier is used, how liquids will be solidified and packaged.
- Sharps waste must be packaged in an FDA-cleared sharps disposal container that is securely closed in accordance with the manufacturer's instructions to prevent leaks and punctures and placed inside the inner bags.

C. Handling and Transportation of EVD RMW within the facility

Provide policies and procedures for the transport of the EVD RMW from the point of generation to the point of storage/disposal. Point of generation may include the following:

- The patent isolation room; describe flow of waste within the unit
- The testing laboratories
- The emergency department
- Outpatient settings

If a contractor will be used to perform packaging and transport within the facility, the company's policies and procedures may be incorporated into the facilities procedures.

D. Storage of EVD RMW

Provide a description of the areas where waste will be stored, the length of time the waste will be stored, the capacity for the storage area and information pertaining to ventilation and environmental control. This would include areas such as the patient room, the testing labs, the emergency department, outpatient settings and areas for long term storage.

E. Details on transportation of EVD RMW for off-site treatment

Provide information on who will transport EVD RMW for treatment off-site including the name and contact information of the company.

F. Responsible Parties

Include names and contact information of staff responsible for monitoring compliance of the plan.

10 Designated Treatment Centers

For 5 of the facilities, a total of Hav11 reviews have been performed and written.

Of these 5, 3 have been approved.