



**Department of Environmental
Quality Division of Waste
Management
Solid Waste Section**

March 2019



NCDEQ DWM - SWS

An introduction to the
North Carolina
Medical Waste Management Rules
CRA Conference - Charleston, SC
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The Healthcare Industry and Solid Waste

- Most solid waste generated by the healthcare industry [treating patients] is medical waste.
- NCDEQ, DWM – SWS defines what is medical waste [not required to be treated] **VS** what is regulated medical waste [required to be treated].
- Healthcare facilities often spend more resources than is necessary to treat medical waste that is not defined as regulated medical waste. This, in turn, increases the cost of healthcare and does not use resources efficiently.



Medical Waste - Definition

“Medical waste” means any solid waste which is generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biologicals, but does not include any hazardous waste... radioactive waste, household waste...

The definition does not mention solid waste generated from patient “accommodation.”

*North Carolina General Statutes (NCGS):

130A-290(17a), 130A-309.05, and 130A-309.26

*North Carolina Administrative Code (NCAC):

15A NCAC 13B .1200, “Medical Waste Management”

*North Carolina Administrative Code:

15A NCAC 13B, “Solid Waste Management”

specifically: 13B .0101, “Definitions”



Municipal Solid Waste Landfills - Disposal

- Medical waste may be disposed of in a [lined] municipal solid waste (MSW) landfill.
- Landfill operators may decline to accept a solid waste type for disposal, even if the state regulations allow the disposal of that solid waste.
- MSW landfills are engineered, monitored, and regulated. They are ongoing construction projects for the life of the landfill [construction, operation, and post closure].
- The removal of solid waste from a MSW landfill is prohibited.
- Solid waste is required to be covered with six inches of earthen material by the end of the operating day.



Regulated Medical Waste (RMW) - Definition

“Regulated medical waste” means blood and body fluids in individual containers in volumes greater than 20 ml, microbiological waste, and pathological waste that have not been treated ...

Roughly, up to 15 percent of the medical waste generated at hospitals is regulated medical waste.

Regulated medical waste ***must*** be treated prior to disposal.



Blood and Body Fluids

“Blood and body fluids” means liquid blood, serum, plasma, other blood products, emulsified human tissue, spinal fluids and pleural and peritoneal fluids.

Dialysates, urine, and feces are not considered blood and body fluids if not removed during surgery and autopsies.

Method of treatment: blood and body fluids in individual containers in volumes greater than 20 ml – incineration or sanitary sewage systems provided the sewage treatment authority is notified.



Microbiological Waste

“Microbiological waste” means and includes cultures and stocks of infectious agents. The term includes cultures of specimens from medical, pathological, pharmaceutical, research, commercial, and industrial laboratories.

Method of treatment: Incineration, steam sterilization (autoclave), microwave treatment or chemical treatment.

Ozonation is also used as a treatment.



Pathological Waste

“Pathological waste” means and includes human tissues, organs, body parts, secretions and excretions, blood and body fluids that are removed during surgery and autopsies; and the carcasses and body parts of all animals that were exposed to pathogens in research, were used in the production of biologicals or in the in vivo testing of pharmaceuticals, or that died of known or suspected infectious disease.

Method of treatment: Incineration.

Ozonation is also used as a treatment.



Noninfectious Medical Waste

Noninfectious medical waste and blood and body fluids in individual containers in volumes of 20 ml or less may be recycled, disposed of in a municipal solid waste landfill or sanitary sewer or treated by a treatment method as described in 15A NCAC 13B .1200.



Unregulated and Regulated Medical Waste

- Unregulated (aka: medical waste) – does not require treatment before disposal. It contains possible biohazardous materials [possibly infectious].
- Regulated (aka: regulated medical waste) – requires treatment before disposal. It contains blood and body fluids, microbiological, and/or pathological materials [infectious].
- Trauma scene cleanup is not, by definition, medical waste but may be biohazardous. Universal precautions apply.
- The North Carolina medical waste rules (15A NCAC 13B .1200) apply to medical wastes and regulated medical wastes.



Sharps - Definition

“Sharps” means needles, syringes, and scalpel blades. [NCGS 130A-309.26(a)(1)]

“Sharps” means and includes needles, syringes with attached needles, capillary tubes, slides and coverslips, and scalpel blades. [15A NCAC 13B .1201(11)]

It is generally accepted that:

other sharp objects such as lancets, auto injectors, connection needles and sets, exposed ends of dental wires, and objects that can penetrate the skin are considered a sharp.



Sharps Disposal

Sharps must be packaged in a container that is rigid, leak-proof when in an upright position, and puncture resistant.

A sharps container may be treated prior to disposal or transported directly to a municipal solid waste landfill for disposal.

Household waste is not, by definition, medical waste and can be disposed of in a municipal solid waste landfill. Sharps generated at a household should be packaged so as to meet the requirements for a sharps container.

Sharps shall not be compacted prior to off-site transportation; unless placed in a sealed compactor unit that is hauled-off for disposal by the transporter.

The medical waste rules do not require the treatment of sharps prior to disposal.



Pharmaceutical Waste

It is not acceptable to dispose of unwanted pharmaceutical drugs in the sanitary sewer system.

Most pharmaceutical drugs can be disposed of in a municipal solid waste landfill.

Ensure the pharmaceutical drug is not designated as a hazardous waste and that it does not exhibit the characteristics of a hazardous waste (corrosivity, toxicity, ignitability, and reactivity).

Pharmaceutical drugs may also be returned to the vendor, reused, or collected by a third party [for proper reuse, treatment, or disposal].



Did You Know?

Additional Information

Many generators of medical waste choose to have non-regulated medical waste treated prior to disposal.

Medical waste such as dressings, bandages, sponges, disposable instruments, used gloves, and tubing are not included in the definition of regulated medical waste and may be recycled or disposed of in a municipal solid waste landfill.

Healthcare providers are responsible to know what category of medical waste they generate and what recycling, reuse, and disposal options and treatment requirements exist.

Did You Know?

Additional Information

Prior to off-site transportation, blood and body fluids in individual containers of 20 ml or less shall be stored in a secured area and shall not be compacted.

Prior to off-site transportation, regulated medical waste shall be stored in a manner that maintains the integrity of the packaging. It shall not be compacted prior to treatment.

Medical waste generator and transporter information is not gathered or maintained by the NCDEQ, DWM - SWS.

Updates - Medical Waste Management Rules

Pending...

Updated/new medical waste management rules are in the process of being finalized. It is expected that the new rules will be effective by January 2020.

Blood and body fluids treatment: steam sterilization (autoclave).

Non-hazardous pharmaceutical waste shall be treated by incineration or returned to vendor, reused, or disposed of in a municipal solid waste landfill.

Trace chemotherapy waste shall be treated by incineration or ozonation.

The proposed medical waste rules do not greatly change the existing rules although, it streamlines packaging requirements and broadens treatment methods while strengthening existing oversight.

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Questions...



*Department of Environmental
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