



Hazardous Pharmaceutical Waste Management

**Written by: Matthew Teeter,
*Environmental Compliance Consultant***

**TRIUMVIRATE
ENVIRONMENTAL**

Identifying Hazardous Pharmaceuticals



- Certain pharmaceuticals used in hospitals, medical centers and nursing homes are considered to be hazardous per local, state and federal hazardous waste regulations.
- Hazardous pharmaceuticals by law are not permitted to be disposed of via the sink, toilet, trash, red bag waste, sharps container or any other way of disposal other than hazardous waste disposal.
- These pharmaceutical wastes determined to be hazardous must be collected, stored and disposed of following local, state and federal hazardous waste regulations.
- It is important that each healthcare facility review and identify the pharmaceuticals used at their site and determine whether they are hazardous or not.

What makes a pharmaceutical waste hazardous?

Pharmaceutical wastes are hazardous either because of their characteristics or because they have been specifically listed in their waste form as hazardous by the Environmental Protection Agency (EPA).

The four characteristics making a waste are as follows:

- **Ignitability** – wastes can create fires under certain conditions, are spontaneously combustible, or have a flash point less than 140°F. Aerosols are also included within this group.
- **Corrosivity** – wastes that are a strong acid or base with a $\text{pH} \leq 2$ or ≥ 12.5 .
- **Reactivity** – wastes that are unstable under “normal” conditions. They can cause explosions, toxic fumes, gases or vapors when heated, compressed or mixed with water.
- **Toxicity** – wastes that are harmful or fatal when ingested or absorbed.



What makes a pharmaceutical waste hazardous?

Specifically listed hazardous pharmaceuticals fall into two categories, p-listed or u-listed waste. These products possess an active ingredient that has been specifically listed by the EPA as hazardous in its waste form.



P – listed wastes – sub list of wastes that are considered to be acutely hazardous wastes by the EPA and even empty containers of acutely hazardous wastes must be collected *i.e.* coumadin blister pack wrappers and nicotine patch and gum wrappers (state specific).



U-listed wastes – sub list of commercial chemical products that are considered to be hazardous waste by the EPA.

Collecting hazardous pharmaceutical wastes

All hazardous pharmaceutical waste must be collected per local, state and federal regulation. Federal regulations state that containers collecting hazardous wastes must be:

- Kept closed at all times unless actively adding to the container.
- Labeled with the words hazardous waste, the contents (no abbreviations) and the hazard.
- Kept unobstructed and able to be inspected at all times.
- Once full, dated with the fill date and removed either off-site or to a main accumulation area within 72 hours of becoming full.
- A new waste container may not be started until the full container has been removed.
- All satellite accumulation areas must be inspected weekly for the above items.

Keeping a compliant program

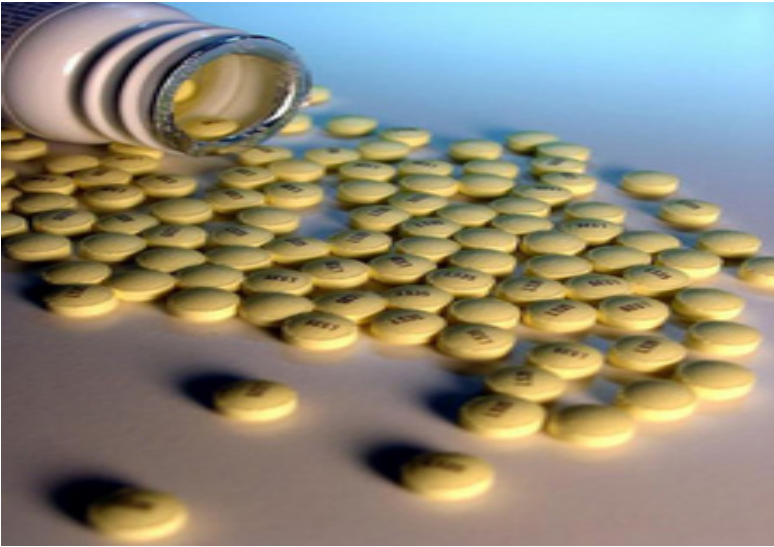
It is vital that all staff administering or working with these hazardous pharmaceutical wastes be trained appropriately.



Training should include the following:

- Which items are considered hazardous and need to be collected per local, state and federal regulations.
 - Inclusive of which forms are required to be collected *i.e.* needles, syringes, pills, empty containers and vials.
- How to appropriately manage the satellite accumulation area container per regulation.
- Who to call when the hazardous waste container is full.

Reverse Distribution



It is essential that healthcare facilities discuss with their reverse distribution company the process for credit and the items that their facility is ultimately getting credit for.

If you are sending hazardous pharmaceuticals for credit through your reverse distributor and knowingly not receiving credit, you may be in violation of hazardous waste regulations.



Cost of Non-Compliance

The cost of non-compliance with hazardous waste regulations can be up to \$37,500 per violation per day of non-compliance.

Both **EPA and state inspectors** are increasing their presence and inspecting hospitals on a more frequent basis now than ever before.

In addition to regulatory fines, the environment also bears the brunt of improper hazardous waste disposal. With research uncovering trace levels of pharmaceuticals in the surface, ground and drinking water, assuring proper collection of this hazardous waste stream at your facility is not only good for the environment, it is the law.



Steps to take before an Inspection



With the increasing potential for an EPA or state inspection, taking a systematic approach to pharmaceutical waste management can contribute to a compliant program. The below steps can help streamline that process.

- Characterize the pharmacy's formulary to determine what is hazardous and non-hazardous.
- Identify departments and other clinical areas that have the potential to use and dispose hazardous pharmaceutical waste.
- Establish a collection policy and procedure specific to the hospital.
- Identify collection points *i.e.* satellite accumulation areas.
- Train all nursing and pharmacy staff on the items that need to be collected and the hospitals specific collection policy and procedure.