

Short Guide for Disposal of Healthcare Hazardous Waste (SQG and LQG)

The U.S. Environmental Protection Agency (EPA) defines hazardous waste as *any material which because of its quantity, concentration, or chemical, physical, or infectious characteristics may cause harm to human health or the environment if improperly treated, stored, transported or disposed of*. Many products used in healthcare facilities on a daily basis have the potential to harm the environment and must be disposed of as hazardous waste.

This short guide is intended for the following generator sizes:

- 1) If you generate between 100 kg (220 pounds) and 1000 kg (2200 pounds) of hazardous waste and less than 1 kg (2.2 pounds) of acute hazardous waste per month, you are a Small Quantity Generator (SQG). This would typically include sites such as surgery centers, community hospitals (25-100 beds), or, in some rare cases, very large clinic sites.
- 2) If you generate more than 1000 kg (2200 lbs) or more than 1 kg (2.2 pounds) of acute hazardous waste per month, you are a Large Quantity Generator (LQG). This designation typically applies to large hospitals (usually over 100-200 beds).

Remember that your staff needs proper hazardous waste training to be compliant with regulations. The training requirement for small quantity generators (SQG) is that you must train employees at least once within the first six months of the start of their hazardous waste duties. The training requirement for large quantity generators (LQG) is that you must train employees at least once within the first six months of the start of their hazardous waste duties, and at least annually thereafter. For our free downloadable training program, visit MnTAP's Waste Training Program Designed for Healthcare.

1) Pharmaceutical/Medication Waste

- All **partially used** vials of medications (with the exception of controlled substances) that have been evaluated and deemed hazardous waste are to go into a black box (pictured below) or another form of approved containment.
- **Empty medication vials** are not considered hazardous; they can go into the regular trash. Broken ampoules with jagged edges should be disposed of in a sharps container. You should not attempt to recycle medication vials as they are considered a contaminant at the recycling plant.
- All **expired and unused medications** may be sent back to a reverse distributor to receive credit. For information about reverse distribution, visit MnTAP's Healthcare Hazardous Waste page.
- **Dual waste** is a special class of waste because it is both infectious and hazardous. For example, if you administer an influenza vaccine via injection, but the patient becomes squeamish before the dose is completely administered, the law states that you must throw this sharp into a third container, called dual waste.
- It is generally **unlawful to accept medications** back from patients. Refer patients to their local county office for resources on household pharmaceutical collection options. MnTAP has some resources available for patients on the Healthcare Hazardous Waste page.

Black box location and disposal when full:

- Containers must be kept in a secure area that is either locked or supervised by staff who can prevent unauthorized access of the container.
- Full containers are to be placed into a secure and central hazardous waste storage area. A designated staff person must monitor the storage area and use MnTAP's **weekly check-off log** to note any issues in the storage room.



2) Chemical Waste

Unused, unwanted, or outdated chemicals, including laboratory chemicals that have been deemed as hazardous, should be placed in the hazardous waste storage area. The hazardous waste vendor will evaluate, sort, and dispose of them correctly. Empty containers can go into the regular trash or recycling. *A tip: When in doubt, let the vendor check it out.*

3) Batteries and Electronics

All batteries (including alkaline and rechargeable) should be retained for proper recycling and are likely being collected by your facility services department. Anything with a circuit board should also be collected for recycling by your facility services department. For large items (computers or medical equipment) contact your Biomed or IT department for assistance with proper donation or disposal. The U.S. EPA and MnTAP recommend the use of certified electronics recyclers, meaning the recyclers have met specific standards to safely recycle and manage electronics. Currently two accredited certification standards exist: the Responsible Recycling Practices (R2) and the e-Stewards® standards.

4) Infectious (Biohazard) Waste

There are generally three types of infectious waste generated by healthcare facilities:

- **Sharps waste** is defined as any item with projections capable of piercing the skin. This includes needles, blades, or scalpels. All sharps must be disposed of in properly designated containers.
- **Red bag waste** is appropriate for (1) blood waste, (2) laboratory waste, and (3) regulated human body fluids. This includes blood saturated items such as gauze, sponges, or dressings. It also includes live or attenuated vaccines that are infectious to humans, certain laboratory wastes, disposable suction canisters, or IV bags containing blood.
- **Yellow bag waste** is appropriate for (1) human tissues and body parts removed during surgery or autopsy intended for disposal, and (2) trace chemotherapy waste. Yellow bags signify that the waste is incinerated, as opposed red bag waste, which is autoclaved (steam sterilized). In laboratory settings, such as pathology or histology, or in the morgue, this is required for all large tissues and body parts. In the case of trace chemotherapy, this includes anything that was used in the administration of antineoplastic agents, such as disposable gowns and gloves.

5) Chemical or Biological Spills

If there has been a chemical or biological spill at your facility, please note the following:

- Do not attempt to clean spills beyond your capability. If the spill is rapidly spreading beyond your control or is an unknown substance, it is beyond your capability. Call for help immediately.
- Do not clean spills without hazard knowledge of the spilled material and proper protective equipment; immediately notify your supervisor if there has been a spill.
- Manage spill response materials (spill kit contents or paper towels) as hazardous. If you do not know where your spill kit(s) are located, contact your supervisor.
- For large spills (typically more than five gallons) you should call your facility first responder.
- Five general rules to follow in the event of a spill:
 - a. EVACUATE (leave spill area, alert others)
 - b. CONFINE (close doors, isolate the spill with absorbent material)
 - c. REPORT (to your supervisor or facility manager)
 - d. SECURE (until help arrives)
 - e. ASSIST (provide information about the spilled material)

For more information on hazardous, pharmaceutical, and other regulated wastes in healthcare, visit our website at www.mntap.umn.edu and visit the Healthcare Industry Homepage.