Hazardous Hospital Wastes: What You Need to Know
A White Paper for Hospital Administrators, Legal Staff, and Health, Safety & Environmental (HSE) Managers

By Lori Siegelman
W&M Environmental Group, LLC
lsiegelman@wh-m.com

When it comes to managing the hazardous waste in your hospital, what “you don’t know you don’t know” can hurt you.

If hazardous wastes aren’t managed properly, your hospital could be at risk for fines, legal action, or a public relations nightmare.

Hospitals ranked third – behind printed circuit board manufacturers and copper foundries – on the Environmental Protection Agency’s list of sectors with the most violations relating to hazardous wastes. And the EPA is not the only regulatory agency that can weigh in. Hospitals without good hazardous waste management procedures can also end up in the crosshairs of the Occupational Safety and Health Administration (OSHA), the Department of Transportation (DOT), and one or more state regulatory bodies.

In most cases, violations aren’t due to willful negligence or disregard for the law. Usually, the culprit is a lack of reliable and understandable information about what constitutes “hazardous hospital waste,” what regulations apply to each type of waste, and how to handle each accordingly. The regulations can run into hundreds, even thousands of pages, and they’re often confusing.

But the cause won’t matter if your hospital is found in violation of hazardous waste regulations. The consequences can include fines of hundreds of thousands of dollars, exposure to lawsuits and other legal problems, and negative publicity in the media that could impact your hospital’s public image and profitability.

Bottom line: your hospital could be at risk, financially and legally, if you’re not addressing these issues proactively.
Conversely, your hospital could be throwing money out the window by inefficiently disposing waste. In helping hospitals manage their hazardous wastes, I’ve learned that many are paying too much because they’re paying extra for special handling of wastes that do not actually meet the definition of a hazardous waste – at the same time they’re failing to properly manage wastes that are regulated as hazardous. The good news is that, with some help from experts, and relatively inexpensive changes in the way your staff handles and disposes of unused drugs, laboratory and other wastes, your hospital can often cut costs significantly while ensuring that the hospital is compliant.

What are Hazardous Hospital Wastes?

One of the biggest pitfalls in managing hazardous hospital wastes boils down to definitions. It’s not easy to determine exactly what constitutes “hazardous hospital wastes” or to determine exactly which regulations apply to each.

So let’s start by defining some key terms.

Medical waste includes sharps and other biologically contaminated waste. That’s a separate issue because those materials fall under different regulations and requirements than hazardous hospital wastes.

Hazardous Hospital Waste includes: hazardous pharmacy waste, hazardous drugs, empty containers with residues, unused chemotherapy agents, heavy metals, laboratory waste and even used oils from the vehicles that your hospital may operate.

Keep in mind that “hazardous waste” as defined by the EPA is not the same as “hazardous and toxic substances” as defined by OSHA or “hazardous material” as defined by the DOT. Depending on the material in question, there may be a good deal of overlap, too. A hazardous waste could also be considered a hazardous material when it’s transported, or a hazardous substance in the event that it’s spilled.

Pitfalls: Where You Can Go Wrong

Here are some key challenges that tend to come up with hospitals.
Empties: Likely your staff disposes of empty containers – medication vials, packaging, etc. – on a daily basis in your hospital. Did you know that they may not actually be “empty” according to regulations? And that the residue that’s left in those “empties” may be subject to regulations? Even if you were to rinse out those empty containers, the waste water from the rinsing process might also require special handling.

When I work with hospital clients, we often spend hours discussing exactly what constitutes an “empty” in specific scenarios that take place in the hospital every day. It’s not a simple question with a simple answer, and it’s certainly not a theoretical one. It affects how your hospital is classified by regulators – i.e. as a “large quantity generator” or a “small quantity generator” -- and in turn what regulations apply and dictate how you need to handle these empties.

For example, take an “empty” container that held a p-listed (i.e. acutely hazardous) waste. If you’re counting both the container and residue as waste, likely your hospital would be mis-classified as a “large quantity generator” of hazardous waste. Your facility needs to generate only 2.2 pounds per month of acute hazardous waste to move into this more highly-regulated category.

Here’s an example. One retail pharmacy found that an “empty” 100 count bottle of 10 mg. Coumadin, with the cap, weighed 10 grams. If that’s counted as hazardous waste, the pharmacy would need to toss only 100 bottles to be classified as a “large quantity generator.” However, an empty bottle contains only 1 mg of residue, in which case, the pharmacy would need to dispose of 1 million bottles to be classified as a large quantity generator.

In other words, your hospital could end up classified as “large quantity generator” even though most of what’s being tallied as “acute hazardous waste” is actually the weight of the empty containers. That’s costly, because your hospital then becomes subject to many more strict rules needlessly. Bottom line: to make an accurate determination about how to handle “empties,” and to avoid becoming subject to regulations that legally might not apply to your hospital, you need guidance from someone with a deep understanding of these regulations.

Cradle-to-grave responsibility: In many cases, hazardous waste doesn’t become someone else’s responsibility just because it leaves the premises of your hospital. The entity that generated the material is responsible “cradle-to-grave.”
Paperwork and labeling represent huge issues for hospitals. Generators of hazardous wastes are required by regulation to properly classify their wastes and determine what “status” generator they are. Paperwork should be filed documenting this. If hazardous waste is shipped, the hazardous waste manifest (shipping papers) must be completed correctly, because this serves as the shipping document for the “dangerous good” – as regulated by the DOT. All DOT rules (including training requirements for the person(s) putting the waste in the containers, labeling the containers prior to transport off site, and filling out/ signing the manifest) must be followed. EPA rules also apply to the manifest. If the “top copy” of the manifest is not received back from the final destination within a certain period of time, then EPA (or the applicable state agency) must be notified. Quantities of hazardous waste generated on a monthly basis, as well as the total quantity maintained on site at any given time, must be also tracked. That’s more documentation. This is most important for those generators that are conditionally exempt or for those “small quantity generators,” since there are less stringent rules to follow for these generator types as opposed to a “large quantity generator.” The DOT labeling for containers that are in transit is NOT the same as what is required when the waste is being stored on site prior to shipment (although, one label may be created to serve both purposes).

Inefficient sorting: Keep in mind that handling hazardous wastes safely is not just a matter of protecting the environment. It’s a cost issue, and in my experience, many hospitals tend to pay more than is necessary to dispose of waste. For example, if your staff is disposing waste that’s not hazardous (such as rags, gloves or aprons) into receptacles designated for hazardous waste, you may be paying extra to process tons of non-hazardous waste that could safely and legally go straight to a landfill. The solution may be as simple as adding separate collection containers and training staff on what goes where.

Failure to perform, or improper, hazardous waste determinations. Hospitals often make errors in determining exactly what qualifies as hazardous waste. It’s not uncommon for hospital personnel to assume one material is "hazardous" when it's not, or to assume something is not hazardous, when it is. If your hospital has made an inaccurate determination, then mostly likely you’re not clear on which regulations apply to each type of waste, and you are almost certainly not following the right regulations and procedures. That puts you at risk for violations, fines and legal action.
Why is this such a common problem? Making correct waste determinations is a complex and difficult process. Often, the hospital is relying upon third parties (vendors, suppliers, disposers) for information. There’s a lack of training of staff (or high staff turnover); there’s little industry specific guidance; a lack of consistency of the regulations and how to interpret them at the federal, state, and county levels; the generally confusing and difficult to follow regulations (i.e., narrative interpretations, references to previous sections); the need for more guidance and definitive answers from EPA; and difficulty understanding the hazardous waste recycling regulations. Often, hospitals simply aren’t aware that they are generating hazardous waste at all, or that they’re subject to the regulations of the Resource Conservation and Recovery Act (RCRA). Finally, there are often cost constraints in making hazardous waste determinations, such as the high cost of testing waste samples.

One area of particular difficulty for hospitals is making waste determinations for listed wastes, i.e. those that appear on the EPA’s lists of regulated waste materials. (For hospitals, these are typically p-listed or u-listed wastes.) These can involve confusing rules that change as the material is used and then disposed. However, the rules are applicable ONLY if the listed waste, the sole active ingredient in the product in question. Formaldehyde is a u-listed waste, but if it’s an inactive ingredient, or one of several active ingredients in the product in question, the rules do not apply.

Say you’ve got a medication that’s a p-listed (acutely hazardous) chemical that’s stored in an IV bag and then administered to the patient by way of tubing and a syringe. Because it’s a container, the IV bag is considered hazardous waste, but the tubing and syringe (the delivery system) are not. Even after it’s empty, the IV bag is considered hazardous waste and must be disposed of accordingly -- unless it’s triple rinsed. But if you rinse the bag, then the rinse water becomes hazardous waste, and that’s likely to generate even more waste than the bag itself.

Some hospitals use acetone wipes to remove patients’ nail polish before surgery. Acetone is an “f-listed” chemical and acetone is the sole active ingredient in the product. That means that hospitals must dispose of the acetone wipes per EPA
regulations as a hazardous waste. However, say a patient brings an acetone wipe – purchased at her neighborhood Walgreens – from home to the hospital and removes her nail polish herself. Then the wipes probably fall under household wastes, which have different rules, and no special handling is required.

Other Common Violations

Here are some of the other, most common hazardous waste violations and issues at hospitals, according to the EPA:

- Improper or lack of hazardous waste labeling.
- Storing waste improperly or failing to make regular inspections of hazardous waste storage areas.
- No or inadequate hazardous waste manifests and/or failure to ship waste to an authorized facility.
- Throwing hazardous waste down the drain.
- Improper management of expired pharmaceuticals, unused drugs, empty containers/packaging, laboratory solvents and other lab chemicals, maintenance chemicals, waste paints, lithium and NiCd batteries, etc.
- Lack of (or inadequate) training of employees in hazardous waste management.

The Bottom Line

Hazardous hospital waste is a complicated issue. Chances are your hospital will need to enlist expert help to develop the policies and procedures that will ensure compliance for all of the related regulations.
An expert can help your hospital by identifying waste streams, determining your “generator status” (the level of your hospital’s hazardous waste output, which determines which regulations will apply), and then developing processes for managing hazardous wastes onsite as well as transporting and disposing of them. Each step may involve more than one regulatory body (and in some cases, overlapping regulations) and hundreds or even thousands of pages of regulations.

Start by making sure your staff members are trained with the most up-to-date and accurate information. That’s where W&M Environmental Group can help. W&M offers training courses required by the Resource Conservation and Recovery Act (RCRA) in hazardous waste management throughout the year. To see a list of our upcoming training course you can click here. We also can create specific RCRA training for your staff tailored to your organizational needs.

Finally, I’ve been working with hospital clients for more than five years, helping them identify hazardous wastes and developing procedures that can help avoid fines, legal exposure, and other consequences. In many cases, hospitals save money by enlisting our help. Please email me at lsiegelman@wh-m.com or call me at 972-516-0300 if you would like more information about our services.

About Lori Siegelman

About Lori Siegelman, CIH, CSP, CHMM, is a senior consultant based in W&M Environmental Group’s Dallas office. She is a Certified Industrial Hygienist (CIH) and Certified Safety Professional (CSP) with technical proficiency in comprehensive EHS management programs and systems, Industrial Hygiene Assessments, Health Physics. She also has project experience in a broad range of regulatory compliance issues. She is also a Certified Hazardous Materials Manager (CHMM) with proficiency in environmental compliance.