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12

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22

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34

An Rx for Pharmaceutical Waste

The Role of Waste Management in a Healing Environment

BY JANET BROWN AND AURA ROSE



This is the second article of a two-part series on waste management. The first part appeared in the May | June '08 issue of *EverGreen*.

In the first article in this series we highlighted key areas for the management of bio-hazardous and regulated medical waste, including reusable sharps containers. This article will discuss hazardous, pharmaceutical and non-regulated waste as well as e-Waste.

Remember, when embarking on a waste management program, gather some baseline data before you start. You want to determine what your total waste stream is right now. How many tons do you create in a week or month? What percentage is bio-hazardous? What percentage is general waste? Look at your invoices and talk with your vendors. Identify goals and develop ways to measure your success. An excellent data management tool is available on Practice Greenhealth's Web site at www.PracticeGreenhealth.org.

Hazardous Waste

Hazardous waste requires a set of procedures in place for all facilities for receiving, handling, storage and disposal. Some typical hazardous products:

- X-ray film containing silver, X-ray putty and X-ray fixer

- Ethanol/formaldehyde
- Chemo drugs
- Pharmaceuticals
- Fluorescent bulbs
- Compressed gases
- Batteries
- Lead aprons
- Pesticides and fungicides
- Cleaning chemicals
- Cold sterilants and high level disinfectants
- Mercury – found in products as diverse as blood pressure sphygmometer's, nursing incubators, room temperature controls, batteries and fluorescent bulbs

If less than 1 percent of your waste is hazardous waste consider this a red flag. It's not being segregated properly and it's going into your regular waste stream or down the drain. Both OSHA and the EPA require a process for safe handling of hazardous materials. The best management approach includes reducing and eliminating these products through environmentally preferable purchasing, reuse, onsite distillation, and a change of work practices. Facilities have saved thousands of dollars through onsite distil-

lation of xylene and alcohol. Research sites, like Albany Medical Center for example, have saved over \$1,000,000 through onsite distillation.

Recycle all fluorescent lamps, due to mercury and other materials including glass and aluminum, even if your region permits landfill. There are close to 40 lamp-recycling companies in the U.S. For a list visit www.nema.org/lamprecycle/recyclers.html.

Pharmaceutical Waste

Pharmaceutical waste includes everything from empty syringes to inhalers, IV liquids, cough syrups, capsules, ointments and vitamins. These need to be managed as hazardous waste because of potential risks. Flammability, corrosiveness and the toxic properties of pharmaceuticals are just some considerations.

As in any waste initiative, the first step is prevention:

- Choose drugs that are preservative-free, and have an expiration date at least one year in advance. Store, rotate and use according to expiration date.
- Cut down on both cost and waste by buying in bulk. Bulk liquid pharmaceuticals are easily filled and dispensed in single doses, eliminating the need for individually packaged doses.
- Product size may also be an issue. For example, if a name brand drug is frequently used, but supplied only in 100 mg tablets when 50 mg is most commonly administered, try sourcing a generic version in the 50 mg size.
- Ask your manufacturers if they offer a buy back on expired drugs.
- Investigate vendors for a reverse distribution of expired items.

After conducting a formulary review, implement an EPA and regionally compliant method of segregation of hazardous pharmaceuticals. A best management approach would include certain drugs that are not regulated under the EPA. More information can be found in Practice Greenhealth's *10 Step Blueprint for Managing Pharmaceutical Waste*.

E-Waste

Today, the fastest growing waste stream is electronic waste. Work with your vendors to extend the life of your electronics for as long as possible and when considering what electronics to purchase, use the Electronic Product Environmental Assessment Tool (EPEAT) at www.epeat.net. This is an EPA funded, easy-to-use tool that identifies environmentally preferable desktop and laptop computers and monitors. You can learn how and where to purchase the greenest computers in the world, as well as find out about the benefits of EPEAT computers to you and your organization. The web site also has a variety of tools to present the case for using EPEAT to your purchasing department.

EPEAT evaluates electronic products in against 51 total environmental criteria – 23 required and 28 optional. Required criteria include the amount of mercury used in light sources, the elimination of SCCP flame-retardants, minimum 65 percent reusable or recyclable content, the reduction of intentionally added toxics in the packaging, and Energy Star compliance.

With the introduction of the Health Insurance Portability and Accountability Act, the process for getting rid of electronically stored data has become more complicated. Facilities are required to ensure individual privacy is protected during data destruction.

Make sure your e-Waste is really being recycled and not dumped overseas. Check with group purchasing organizations for responsible e-waste and universal waste vendors. Ask for a paper trail. It's not enough to have a recycler pick up your stuff; you need to know where it's going. Many recyclers are really international waste distributors, taking your old equipment and loading in onto a ship bound for China, India or Nigeria. How?

Because the United States government refuses to ratify international accords prohibiting trade in hazardous waste, U.S. "recyclers" are able to claim they abide by all environmental laws and are even EPA approved, although they are breaking international law with each shipment. The Basal Action



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Network maintains a list of responsible recyclers on their web site at www.ban.org.

The EPA estimates as many as 150 million cell phones are taken out of service each year and most are not recycled. These phones contain plastics, glass, metals and chemicals that may be hazardous if they leach into the ground. Ensure you recycle your cell phones. The EPA web site has a searchable list of cell phone drop-off centers. For a list of other resources visit www.sustainablehospitals.org.

Non-regulated Medical Waste

Most of the hospital waste stream is regular trash or non-regulated medical waste. That's the waste that often ends up in landfills or incinerators. This waste stream can benefit from prevention, reuse, donation, composting or recycling. Just taking the simple step of recycling cardboard can reduce your non-regulated waste by up to 15 percent!

Through communication with group purchasing organizations and purchasing departments, you can request reusable, energy efficient, recycled and recyclable products with minimal packaging. The easiest and most effective way to reduce waste is to stop the flow of unfriendly products right at your front door.

Construction and demolition debris make up the largest volume of landfill space. Recycling of this debris is a huge opportunity for waste reduction and cost savings. Check out the

Green Guide for Health Care (www.gghc.org) for helpful resources in adding construction and demolition recycling to construction specifications.

Action Steps

Hospitals embarking on environmental sustainability initiatives often aren't sure where to start. The important thing is to do something – large or small, it all helps. Through setting one or two environmental goals per year, facilities can fold continuous environmental improvement strategies into the culture of their organization. Corrugated box and paper recycling are good first steps for reducing the overall volume of waste. Aluminum cans, electronic equipment, fluorescent lamps, blue wrap and batteries are also easy recycling ideas. And remember, communication and staff education is important.

For more information on waste management and to download your copy of the minimization guide, log onto www.practicegreenhealth.org. Practice Greenhealth also offers numerous excellent Webinars on waste reduction. See their Web site for details. 🌿

