Wasting Narcotics: Just What is Allowed and Recommended by DEA and Washington Ecology?

Pharmaceutical waste management has been an evolving field in Washington over the past nearly 10 years. Most generators of pharmaceutical waste know that Washington’s Department of Ecology (Ecology) has taken enormous interest in the management of this waste stream and promulgated several policies and rules for hospitals as a result.

The management of unwanted controlled substances, however, is still very much the responsibility of the U.S. Drug Enforcement Agency (DEA). When Ecology developed its recent Interim Enforcement Policy: Pharmaceutical Waste in Healthcare, the DEA declined to engage in the policy development process. As a result, what DEA recommends for the disposal and management of controlled substances doesn’t concur with the intent of Ecology’s policy.

Ecology regards nearly all pharmaceutical waste as dangerous waste and would like to see it all incinerated. When pharmaceutical waste is disposed of in the sewer, compounds often are not decomposed during wastewater treatment and end up in our surface waters, including streams, rivers, ponds and Puget Sound. Many pharmaceutical compounds can cause mutagenesis, influence fauna sex ratios and mimic hormones when present in chronic, sub-therapeutic concentrations.

DEA is concerned with the potential for diversion and abuse of unwanted controlled substances by people and does not allow this waste stream to be accumulated and stored onsite unless it is under lock-and-key.

DEA recommends that unwanted controlled substances be wasted down the sanitary sewer or, if security provisions can be implemented, it can be accumulated and hauled away by a reverse distributor for destruction or credit.

How should your facility manage controlled substance waste?

The truth is that the DEA has much more power in this matter than Ecology. Although Ecology is not pleased with the practice of wasting unwanted controlled substances into the sanitary sewer, they accept this as a reasonable policy for now, until the DEA and Ecology can one day agree upon a better policy.
Managing Patient Urine/Chemo Waste

Following bladder cancer surgery an OR team may instill a patient’s bladder with chemotherapy drug for a short period of time (30 minutes). The mix is then voided by the patient or drawn off into a Foley bag. How should the mix of urine and chemotherapy drug be managed? What PPE and other precautions should be taken for staff protection?

Common sense tells us that the mix is definitely toxic because the chemo drug has not been metabolized. The University of Washington Medical Center has determined that the concentration of chemotherapy drug mixed with the patient’s urine is below the toxicity threshold for dangerous waste. A common cocktail is M-VAC, a combination of methotrexate, vinblastine, doxorubicin & cisplatin.

Does the domestic sewage exclusion (DSE) rule apply in this case, causing it to designate as just sewage and not dangerous waste? And what role does the potential exposure of hazardous materials to staff and PPE play in a bladder installation procedure?

Although Washington’s Department of Ecology (Ecology) has not issued a formal rule, technical information memorandum, or policy on this waste stream, a careful reading of the Domestic Sewage Exclusion rule can assist you in designating this waste.

Ecology’s DSE rule1 derives directly from the federal rule. It’s defined as “Any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly owned treatment works (POTW) for treatment … This exclusion does not apply to the generation, treatment, storage, recycling, or other management of dangerous wastes prior to discharge into the sanitary sewage system.”

If the patient is able to excrete the urine/chemotherapy drug mix directly into a toilet or is discharged after surgery and voids the mix at home, the exclusion rule definitely applies—i.e., the mix designates as sewage. The drug has also been used for its intended purpose.

If the patient voids the urine/chemo mix into a bedpan, this uncontainted waste would pose a potential for staff hazmat exposure if an effort is made to capture the waste. It’s best to flush this waste into the sewer and treat the waste as if the patient had voided into a hard-plumbed toilet.

But if the urine/chemotherapy drug mix is drawn off into a Foley bag by a nurse without entering the sewage system, then the DSE does not apply. The urine/chemotherapy drug mix should be captured and managed as dangerous waste or biohazardous/trace chemo waste unless you can verify that (1) the toxicity is below the threshold for designation or (2) the drug is the M-VAC cocktail that the UWMC has determined is below the designation threshold. The Foley bag is a containment system that will largely prevent hazmat exposure to staff and allow the waste to be safely hauled offsite for incineration.

This same issue is becoming more common for procedures infusing chemotherapy drug in pleural and peritoneal cavities following surgery.

The likelihood is perhaps greater that a hospital would be cited for not protecting its staff from hazardous material exposure than improper management of the waste, however.

Labor & Industries is currently developing a rule on hazardous drugs (WAC 296-62-500, Part R Hazardous Drugs) that is expected to be issued January 1, 2012. The new rule, if enacted as currently written, will require the following during a bladder installation:

1. Two pairs of gloves, the outer pair being chemotherapy gloves extending over the cuff of the gown;

2. Gowns of polyethylene-coated polypropylene with a closed front, (Continued on page 3, Managing Urine/Chemo)
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long sleeves, and elastic or knit cuffs; and

3. A full face shield.

Under the proposed rule, gloves must be changed every 30 minutes and gowns every 2 to 3 hours or when damaged.

Staff working with hazardous drugs must also receive training and annual medical monitoring commensurate with their potential exposure to the drugs. The rule will apply to all staff handling hazardous drugs, from receiving to healthcare providers and environmental services staff.

A healthcare safety expert has estimated the cost under the new L&I rule to provide medical monitoring for those who will have the most severe potential for exposure to hazardous drugs as $600 per staff annually, although it’s not entirely clear what chemicals or effects must be monitored.

1 WAC 173-303-071(3)(a)(ii) Domestic sewage

HospitalWasteMgmt.Com
Has a New Look!

Our website, http://www.hospitalwastemgmt.com, has a brand new look. It’s still a bit rough around the edges and is definitely under construction, but you can search articles on healthcare waste and hazardous material management and download newsletter issues now much more easily than under the old site architecture.

If you need information on managing a healthcare waste stream or hazardous material or a regulation, try looking at our website. There’s a searchable index of 275 articles on our website. You can easily download one or more .pdf copies of newsletters with the articles you need. Most newsletter issues are just a few hundred kilobytes and download quickly.

Of course, if you need to know what services we offer, that’s on the website, also!

Storing Flammable Materials

One of the most common questions I’m asked as a hazmat consultant is either “How do I store flammable materials?” or “How much flammable material can I store?”

The questions do not have simple answers. The nearly universal reference authority for these questions is the International Fire Code (IFC)—although a notable exception is Seattle, which has its own fire code. Other than Seattle, all municipalities in Washington refer to the IFC.

IFC 3404.3.2—Liquid Storage Cabinets, covers the details of suitable storage cabinets for these materials. Generally, flammable liquid storage cabinets can be either metal (18 g. and double-walled) or wood (at least 1” exterior grade plywood), labeled (FLAMMABLE—KEEP FIRE AWAY), doors must be self-closing, the bottom shall be liquid-tight to a height of 2”, and the combined total quantity of liquids shall not exceed 120 gallons. There are additional design constraints noted in the IFC.

The allowable storage volumes of flammable liquids depends upon the flash point of the materials: the lower the flash point, the less material can be stored within a given fire control area. Materials are classified by their flash points (f.p.) and their boiling points (b.p.):

- Class IA—f.p. < 73° and b.p. < 100°
- Class IB—f.p. < 73° and b.p. > 100°
- Class IC—73° < f.p. > 100°
- Class II—100° < f.p. > 140°
- Class IIIA—140° < f.p. > 200°
- Class IIIB—f.p. > 200°

Fire control areas are defined by separation with a 1-hour fire wall.

Hospitals are generally Group I Occupancy facilities (where people are physically unable to leave without assistance) and allowable volumes of flammable liquids are noted in the IFC in Table 2703.1.1(1):

- Class IA—30 gallons
- Class IB & IC—120 gallons
- Class II—120 gallons
- Class III—330 gallons

Additional storage regulations apply to explosives, gases, solids, oxidizers, pyrophorics and water reactive materials.

If you are responsible for the storage of hazardous materials of any kind at your hospital you should have an electronic copy of the IFC and become familiar with it. There are many conditions and possibly applicable regulations for your particular flammable storage situation which cannot be listed here.

The latest version of the IFC is 2009. The IFC is copyrighted and can be purchased either online or on a CD for $70 to $85 depending upon the format. The IFC can be purchased from a number of different vendors on the internet.

Small containers of flammable liquids that are in regular use by staff can be left on countertops and staff desks if they are properly labeled. These include Instant Hand Sanitizer, rubbing alcohol, Tincture of Benzoin, spray drape adhesive, lubricants like Teflon spray, and other aerosol containers.
TO:

"Helping Hospitals Manage Waste"

Most Common Ecology Inspection Citation? Labeling!

A necdotal evidence from the most recent Washington State Healthcare Safety Council seminar suggests that the most common Ecology inspection citation at hospitals is the lack of appropriate labels. Several hospital safety officers commented on their experiences with Ecology inspectors who have visited their facilities recently.

Ecology inspects hospitals for compliance with the Dangerous Waste Regulations (WAC 173-303), amongst other, generally minor, issues. These citations may or may not be accompanied by fines. The overwhelming majority of the citations these hospitals received dealt with improper or missing labels for dangerous waste.

Where are labels required in a hospital according to the Dangerous Waste Regulations?

- Containers of dangerous waste must be labeled with the date, the name of the contents, the hazard (e.g., flammable, toxic) and the words “Chemical Hazardous Waste” when they enter your primary dangerous waste accumulation area;
- The primary dangerous waste accumulation area must be secured from public access and the door labeled (visible from 25 ft.) with: “Danger—Unauthorized Personnel Keep Out” and an NFPA diamond label (a generally acceptable healthcare NFPA dangerous waste storage area label would be Red Diamond=4, Blue Diamond=3, Yellow Diamond=0 and White Diamond=blank);
- Containers of spent fluorescent lamps must be labeled with “Universal Waste—Fluorescent Lamps”;
- Containers of spent dry cell batteries must be labeled with “Universal Waste—Dry Cell Batteries”;
- All containers of dangerous waste in satellite accumulation areas must be labeled with “Chemical Hazardous Waste” and the type of waste in the container (e.g., methanol, xylene). This includes chemotherapy drug waste containers;
- Containers of the Special Waste (solid, corrosive dangerous waste) generated by anesthesiologists during surgery including SodaSorb, Baralyme, and Carbolime; and
- Empty containers that once contained dangerous waste cannot continue to bear a label (i.e., it must be removed or destroyed).

Inspect your facility regularly for proper container and door labels.