



Hospital Waste Management

Spring 2014

Special points of interest:

- **Robots Used to Combat C. difficile and MRSA infections**
- **National Hazardous Drug Legislation**
- **Robots and UV Light are Combatting C. Diff and MRSA**

Inside this issue:

King County Drug Take-Back Program Draws Industry Ire **2**

Becton, Dickinson Orchestrating Lobby Effort in Congress to Pass Federal Legislation to Protect Healthcare Workers **2**

UV Light Robots Used to Combat C. Diff and MRSA **3**

Waste Container Labels Still Vexing Hospitals **3**

Hospital Waste

2012 NFPA Life Safety Code May Require Carbon Monoxide Monitoring in Your Hospital

The 2012 NFPA 101 *Life Safety Code* was published in October 2011 and requires that CO (carbon monoxide) detection be installed in existing Group-I occupancies if the building contains a fuel-burning appliance or has an attached garage. Group-I occupancies include hospitals and nursing homes.

A common appliance for hospital lobbies has increasingly been a gas fireplace. The issue of an attached garage is more ambiguous, but the intent is when a door or entryway exists between a garage and a dwelling unit.

For each occupancy CO alarms or detectors shall be installed 1) outside of each separate sleeping area, in the immediate vicinity of sleeping rooms, and 2) on every occupiable level, including basements, but excluding attics and crawl spaces.

Carbon monoxide is a highly poisonous, flammable, odorless, colorless and tasteless gas. It is

responsible for hundreds of deaths every year. The gas has a density of 0.968, which means that it is only very slightly lighter than air ($d_{air} = 1.000$), but can permeate at virtually any height in a room or hallway. It is generated by both properly functioning and malfunctioning appliances that burn natural gas, propane, gasoline, diesel and other petroleum fuels.

These new requirements have been adopted in Sections 908.7 and 1103.9 of the 2012 International Fire Code, which has been adopted as law in most municipalities. Section 908.7 applies to new construction while Section 1103.9 applies to existing facilities.

More information can be found in the 2012 NFPA 101 *Life Safety Code* Existing Healthcare Section 19.5.2.3(2)(f).

Most Hospitals Have Embraced Pharmaceutical Waste Management

Since the Washington Department of Ecology developed its protocols for managing pharmaceutical waste in 2008, most hospitals have developed management programs. The Interim Enforcement Policy applies to federal RCRA pharmaceutical waste management and the conditional exclusion rule is often used to manage Washington State-Only pharmaceutical waste.

Ecology's focus has largely shifted

to ensuring that hospitals are properly managing their pharmaceutical waste according to their written management plans.

A common problem that sinks some hospital programs is the disconnect between the waste codes published on the hospital's Pharmaceutical Waste Profile (PWP) and the codes appearing on their vendors' Uniform Hazardous Waste Manifests.

Periodically cross-reference the waste codes on your facility's PWP and your hazardous waste vendor's manifests. If your vendor lists some waste codes that aren't on your PWP or, worse, are not pharmaceuticals, you should have a conversation with your vendor. The worst that could happen is that your pharmaceutical waste management program could be revoked by an Ecology inspector.



King County Drug Take-Back Program Draws Industry Ire

King County Board of Health has passed a Rule & Regulation to create a pharmaceutical take-back program for King County residents. It calls upon pharmaceutical manufacturers to fund and operate the program.

The resolution was passed on June 20, 2013. It should allow residents to dispose of unwanted drugs at pharmacies and other secure locations for no charge.

The primary impetus for the resolution was a recognition of the preponderance of deaths by prescription drugs overdoses and poisoning. It has been called a drug abuse crisis by Board of Health member Dr. Bud Nicola.

Under the new program:

- Residents will be encour-

aged to drop, free-of-charge, their leftover and expired medicines in secure boxes conveniently located in most retail pharmacies or law enforcement offices throughout King County;

- Collected medicines would then be destroyed by incineration at properly permitted facilities;
- Drug manufacturers selling medicines for residential use in King County would be required to run and pay for the program; and
- Public Health - Seattle & King County would oversee the program to ensure its effectiveness and safety.

Alameda County, CA passed similar legislation in 2012,

citing product stewardship and responsibility by manufacturers. However, the PhRMA (Pharmaceutical Research and Manufacturers of America) has sued Alameda County to block the law from taking effect.

In December 2013 four pharmaceutical manufacturing associations sued the King County Board of Health in U.S. District Court to block the program's implementation in Washington.

Dr. David Fleming, Director and Health Officer for Public Health—Seattle & King County noted that 30% of prescription and over-the-counter drugs go unused.

More information is available at <http://www.kingcounty.gov/healthservices/health/news/2013/13062001.aspx>

Becton, Dickinson Orchestrating Effort in Congress to Pass Federal Legislation to Protect Healthcare Workers from Exposure to Hazardous Drugs

There is a lobbying effort underway in Congress to pass federal legislation similar to Washington's Hazardous Drug Rule to protect healthcare workers from exposure to hazardous drugs. The list of potentially hazardous drugs contains about 250 pharmaceuticals, most of which are chemotherapy agents.

Several Washington legislators including Denny Heck (D-WA), Patty Murray (D-WA), Derek Kilmer (D-WA) and Cathy McMorris Rodgers (R-WA) have joined the effort, which is sup-

ported by NIOSH. NIOSH first raised the issue of exposure to hazardous drugs in an Alert published in September 2004. In Washington the effort gained steam after a July 2010 article in *The Seattle Times* about a retired Swedish Medical Center pharmacist who had contracted cancer. The Washington legislature responded by instructing Washington Labor & Industries to write a rule to better protect healthcare workers from exposure to hazardous drugs.

The California Healthcare Insti-

tute (CHI) and the Oncology Nursing Society (ONS) will sponsor a luncheon in March 2014 for members of Congress to acquaint them with the issues of hazardous drug exposure. Becton, Dickinson has developed a National Effort to Advance Safe Handling of Hazardous Drugs.

North Carolina, California and Washington have all passed legislation to better protect healthcare workers from exposure to hazardous drugs.



UV Light Robots Used to Combat C. Diff & MRSA

Robots built by the Xenex Company of Boston are being used in hospitals to combat the spread of C. difficile (bacterial spores) and MRSA (Methicillin-resistant Staphylococcus aureus, a bacterium), among other hospital-acquired infections. The robots can be wheeled into empty patient rooms where they extend powerful xenon-based UV lights which bathe the room. The light is said to effectively eradi-

cate C. difficile and MRSA on available surfaces within five minutes.

Studies show that the robots have halved hospital-acquired infection rates in some installations. The robots are not a substitute for the work of environmental service workers in physically cleaning high-contact surfaces such as grab bars, faucets or telephone dial faces, but they augment the

effectiveness of workers' efforts in cleansing hard-to-reach and large surface areas.

The robots cost \$80,000 each and produce intense light bursts for up to 15 minutes. They will stop functioning if their sensors detect a person in the room. The UV light is not highly dangerous to people, but prolonged exposure could harm eyes.



Waste Container Labels Still Vexing Hospitals

By far the most common citation by Ecology hazardous waste inspectors is improper or missing labels on dangerous waste containers. This citation often leads, in turn, to containers which have been held onsite for too long or for an unknown length of time.

Ecology has a web page devoted to free downloadable waste labels that you can print—http://www.ecy.wa.gov/programs/hwtr/hw_labels/

For most hazardous waste containers you simply need four things on the label:

- 1) The name of the waste material (e.g., formalin)
- 2) The hazard (corrosive, toxic, flammable, etc.)
- 3) The date when the container is placed into the primary accumulation area before vendor pickup
- 4) The words "Hazardous Waste"

The label does not have to be in color, although color makes

it much easier to see.

Pharmaceutical waste containers differ only in that the date on the container should be the date it is first placed into service, not the date when it is full and placed into holding for pickup. This is because pharmaceutical waste containers can only be used onsite for 180 days maximum.

Hazardous waste containers

should have a label on them when they go into service at a satellite accumulation area. But don't put a date on such a container until it is sealed and transported to your facility's primary accumulation area (unless the container is a pharmaceutical waste container).

No hazardous waste container should ever be without a label. Inspect your accumulation areas weekly and log your inspections to insure compliance.



Sample of Ecology's free, downloadable label

Hazardous Waste	
FEDERAL LAW PROHIBITS IMPROPER DISPOSAL	
If found, contact the nearest police or public safety authority, and the Washington State Department of Ecology or the Environmental Protection Agency	
Accumulation Start Date:	Generator Name:
Reportable Quantities (RQ): lbs <small>40 CFR Subchapter J, Part 302, Table 302.4</small>	Address:
Manifest Document #:	City:
Emergency Response Guide #:	State:
EPA Waste Code(s) and/or Characteristic(s)	Zip:
	EPA ID #:
EPA/DOT Shipping Name:	
Hazard Class:	
UN/NA #:	
Packing Group (PG):	
In the event of a spill or release of this hazardous waste, contact the US Coast Guard National Response Center at 1-800-424-8802 for information and assistance.	



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To:

Hospital Waste is published quarterly for hospital, clinical and medical laboratory waste and hazardous material managers.

Hospital Waste Management is committed to serving the healthcare industry by assisting healthcare facilities in managing their waste and hazardous materials. Hospital Waste aims to provide information about waste regulations and waste management initiatives and to provide helpful hints and general waste information to healthcare waste managers.

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