

Pharmaceutical Waste/Disposal Workshop – Meeting Minutes

September 10, 2008

Boise WaterShed Environmental Education Center
Boise, ID

Welcome

Cathy Buller (Pollution Prevention Resource Center), facilitator and presenter

Cathy opened the workshop by suggesting that participants consider the following issues throughout the day:

- education on pharmaceutical waste issues and the environment
- discussion on the issues that would be presented during the workshop
- statewide pharmaceutical waste program, which the Idaho Department of Environmental Quality (DEQ) will facilitate but is not currently in place
- terminology: *pharmaceutical, drugs, medicines* mean different things
- currently unregulated disposal of household medicines in Idaho
- diverse issues and interests within the room; many facets to the issue of pharmaceutical waste/disposal

Pharmaceuticals in the Environment

Jeffrey Fromm (DEQ Toxicologist), Tressa Nicholas (DEQ Engineering Intern), Robbin Finch (City of Boise, Water Quality Manager)

Jeffrey Fromm's presentation elaborated on pharmaceuticals and personal care products (PPCPs), which include all human and veterinary drugs, diagnostic agents, and nutraceuticals (bioactive food supplements). The U.S. Environmental Protection Agency's Web site on PPCPs, www.epa.gov/ppcp, is a good reference.

Tressa Nicholas, DEQ Engineering Intern, presented her research on pharmaceutical contamination in a rural Idaho community's wastewater lagoons. Her data show that some of the community's lagoons are unlined and leak wastewater, which can contaminate ground water. There are no data, however, to determine how much of the contamination from the leaking lagoons is due to PPCPs. After the wastewater in the lagoons is treated, there is a risk of remaining PPCPs contaminating ground water when the treated wastewater is used for land application.

Robbin Finch's presentation covered the occurrence of PPCPs in the Boise River and the effectiveness of wastewater treatment at removing PPCPs. A 1999 study by the United States Geological Survey tested 139 surface water sites across the nation for pharmaceuticals, hormones, and other organic wastewater contaminants. Ninety-five different compounds were found, though most occurred at low levels (parts per billion). The Boise River was one of the test sites for this study, and up to nine different chemicals were detected in one location.

Discussion from the audience brought up the topic of green chemistry, which is a chemical philosophy that attempts to reduce the use and generation of hazardous substances in chemical

products and processes. More information about green chemistry can be obtained at the University of Massachusetts' Chemicals Policy Initiative Web site at <http://www.chemicalspolicy.org/>.

Green Pharmacy: Helping Communities Safely Dispose of Unused Medicines

Joel Kreisberg (Teleosis Institute)

Dr. Kreisberg began by discussing upstream reduction of pharmaceutical waste through preventive health care. As drug consumption rises in the U.S., pharmaceutical waste increases and enters the environment as contaminants. Surface water, ground water, drinking water, and wastewater are all vulnerable to contamination from pharmaceuticals. Whether people throw drugs in the trash, flush them down the toilet, or excrete them in urine, pharmaceutical compounds can end up in our water.

The U.S. Food and Drug Administration (FDA) and local health departments need to get involved with issues associated with drugs in water. Also needed are more data concerning how many prescriptions get thrown away in the U.S., both by individuals and health care facilities. For instance, when pharmaceutical sales representatives give out drug samples at doctors' offices, how is distribution of those samples monitored? Unused and expired samples are often thrown away, where they can leach out of landfills and contaminate ground water.

Dr. Kreisberg also discussed the Green Pharmacy Pilot Program, which launched 15 pharmaceutical take-back sites in the Bay Area in 2007 and also collected data on returned medicines. The pilot program hopes to develop into an effort that can be duplicated nationwide. Encouraging "cradle-to-cradle" product stewardship among drug manufacturers is another aim of the program.

Teens and Substance Use/Abuse

Wayne Longo (Chief of Police, Kootenai County, Coeur d'Alene, Idaho)

Chief Longo discussed how pharmaceutical drugs are much more prevalent in schools today than in the past. His department sponsored a pharmaceutical take-back event that coincided with Red Ribbon Week. The police department's public relations office advertised the event with a public announcement. The event lasted approximately four to five hours and was very successful. The public brought in unneeded drugs, which were incinerated after the event. According to Idaho Code 37-2744, only police officers can collect controlled substances.

Teens and Substance Use/Abuse (part two)

Ryan Buzzini (Boise City Police Narcotics Division)

The Boise City Police Narcotics Division gets involved in pharmaceutical drugs in the schools when school resource officers call for identification of pills found on school campuses. It is harder to determine if a student illegally possesses pharmaceutical drugs because they are much easier to conceal than other types of drugs. Drug dogs are periodically used in the schools, but detection of pills is harder unless the dogs are trained for specific drugs.

The City of Boise has no procedures to dispose of pharmaceutical drugs. The Narcotics Division advocates that parents keep an eye on their children to help reduce the pharmaceutical drug problem within the schools and communities.

The Washington PH:ARM Program (Pharmaceuticals from Households: A Return Mechanism)

Shirley Reitz (Group Health Cooperative) and Cathy Buller (Pollution Prevention Resource Center)

PH:ARM is a pilot pharmaceutical take-back program in Washington state, undertaken by a diverse team of state and local governments, health care providers, businesses, and nonprofit agencies. Secure containers for individuals to dispose of unwanted or expired medications, vitamins, etc. are in Group Health clinics, some pharmacies, and assisted living homes. Pharmaceuticals are transferred from drop-off sites to collection warehouses, and Clean Harbors, a licensed hazardous waste handler, is responsible for final transport to the incinerator.

Funding for the program comes from various sources such as local and state agencies, foundations, organizations, the state attorney general's office, and the Washington Department of Ecology. The pilot phase of PH:ARM ends December 2008, but the PH:ARM team is working to secure funding from drug manufacturers for the interim phase of the project.

It is important that consumers are aware of what is and is not a controlled substance. The Controlled Substances Act, enforced by the U.S. Drug Enforcement Agency (DEA), does not allow the return of controlled substances to pharmacies or other collection points. Controlled substances can only be given to law enforcement officers. There are products on the market that can neutralize controlled substances; however, DEA doesn't consider their use in pharmacies or other collection points to be in a controlled environment.

Next Steps

Workshop participants

- Let the public know this is an environmental and public health issue.
 - Health care providers would benefit from education on dispensing and disposing of drugs.
 - Educating the public on household pharmaceuticals may spur interest in other pharmaceutical waste issues, such as veterinary medicines used in confined animal feeding operations.
- Utilize the Idaho State University College of Pharmacy.
 - For example, Washington State University's College of Pharmacy students volunteer at PH:ARM.
 - In St. Louis, Missouri, students from the St. Louis College of Pharmacy collect data on the medications received from the Regional Excess Medication Disposal Service (RxMEDS), a community take-back program. Pharmacy students record the types of medications collected, how long people have had them, the number of medications they have, why they're disposing of the medications, and how they were disposing of them before using the program.
- Collaborate with law enforcement during the state legislative sessions. State agencies could also pool funding and collaborate with each other.

- Look at pharmaceutical take-back programs in other states. For instance, look into the “No Drugs Down the Drain” program in California, which is sponsored by a variety of local, regional, state and federal agencies. See the program’s Web site at <http://www.nodrugsdownthedrain.org/> for more information.
- Change the current rule in Idaho (IDAPA 27.01.01.156, Rules of the Idaho State Board of Pharmacy) that doesn’t allow the public to take drugs back to pharmacists and pharmacies. (This rule will be clarified in future meetings.)
- Identify counties that don’t even have recycling programs yet and help them develop programs. It’s difficult to consider establishing pharmaceutical take-back programs when many Idaho communities don’t even offer basic curbside recycling.
- Work within regulatory frameworks to establish permanent take-back locations or events.
- Start with what is already available, such as the Boise City Hazardous Waste mobile drop-off sites. Make pharmaceutical take-back more convenient for the community.
- Provide knowledge at the grassroots level. Public service announcements and community interest may drive legislation.
- The role of DEQ, and particularly of Lisa Kramer, will be to facilitate a pilot pharmaceutical take-back program in Idaho by assessing potential participants and determining their level of involvement. A number of stakeholders will need to be involved to get the program going.
- Keep the issues of business waste and household waste separate. From a regulatory viewpoint, they are different issues.
- Involve local health district representatives, environmental directors, the Idaho Department of Health and Welfare, state representatives, and DEA for a successful program.
- Consider establishing drop-off points for the public at local health districts throughout Idaho to bring in their unwanted drugs.
- Hold future meetings by teleconference, so all interested parties can participate.

Attendees expressed a willingness to participate in further conversations and a pilot program in Idaho.

Workshop Attendees and Presenters

A.J. Maupin (DEQ)	Doris Powell (Heart ‘n Home Hospice)
Angela Deckers (City of Boise)	Ernie Bader (Idaho State Lab)
Cal Gillis (Boise State University)	Gail Baker (City of Boise)
Cathy Buller (Pollution Prevention Resource Center)	Gary Bahr (Idaho State Department of Agriculture)
Cindy Grafe (U.S. Environmental Protection Agency)	Jean Francis (DEQ)
Dan Johnson (City of Lewiston, Idaho)	Jeff Fromm (DEQ)
David Lehman and Robin Maupin (Northwest Nazarene University)	Jerri Henry (DEQ)
	Jim Vannoy (Idaho Department of Health and Welfare)

Joel Kreisberg (Teleosis Institute)
John Brueck (DEQ)
John Overton (Meridian Police)
Jonathan Krutz (Idaho State Hospice and Palliative Care Organization)
Josh Gerkhe (intern, Idaho State University School of Pharmacy)
Kai Elgethun (Idaho Department of Health and Welfare)
Kara Stevens (Idaho Department of Health and Welfare)
Kenneth Wall (Ada County Solid Waste Management)
Lane Jolliffe (Office of Congressman Bill Sali)
Lis Houchen (National Association of Chain Drug Stores)
Lisa Kramer (DEQ)
Loni Hanka (DEQ)
Maggie Black (Office of Drug Policy)
Maria Lopez (U.S. Environmental Protection Agency)
Marianne King (Drug Free Idaho)
Mark Johnston (Board of Pharmacy)
Mathew Beeter (DEQ – Attorney General’s Office)
Michael Dickens (St. Luke’s Hospital)
Michael McCurdy (DEQ – Boise Regional Office)
Robbin Finch (City of Boise)
Ryan Buzzini (Boise City Police)
Shirley Reitz (Group Health Cooperative)
Stan Gibson (Fred Meyer)
Steve Maneck (City of Meridian, Idaho)
Tressa Nicholas (DEQ)
Wally Baker (State Lab)

Wayne Longo (Kootenai County, Idaho Police Chief)
Wendy Campbell (Boise State University)