Best Management Practices for Unused Pharmaceuticals

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Statistics and Information

- In 2005, approximately 3.6 billion prescriptions were purchased.

- Estimated 1 billion dollars worth of medications are unused and disposed off annually in the United States.

- 45% of Americans take at least one prescription drug.

- Over 80% of elderly individuals take more than one drug daily. 50% of the elderly take three or more drugs daily.

- Illicit use of legitimately prescribed medications continues to increase. The practice of “Pharming” among teens and young adults continues to grow.

- Add another several million pounds from veterinary medicine.
In some cases, medicines are not entirely consumed due to:

- Change in prescription
- Patient’s health improves before finishing medicine
- Patient death
- Patient non-compliance
- Bulk “economy size” containers of over-the-counter medicines contain more than is needed before expiration date
Expired Medication Disposal Survey

Survey of 100 pharmacies and 500 patients

Pharmacy Policy:
- 97% had established policies regarding the disposal of expired UNDISPENSED medication

Pharmacy Advice:
- Only 5% had consistent recommendations for patients on PRESCRIBED drug disposal
- 25% indicated that the issue of drug disposal was addressed only at the customer’s request

*Boehringer, S “What’s the Best Way to Dispose of Medications?” 2004. Pharmacist’s Letter/Prescriber’s Letter 20 (200415)
Expired Medication Disposal Habits

500 patients surveyed:

- 54% disposed of medications in the trash
- 35.4% flushed drugs down the toilet or sink
- 7.2% did not dispose of medications
- 2% used all medication prior to expiration
- 1.4% returned medications to the pharmacy

Major water sources positive for pharmaceuticals

At least one pharmaceutical was detected in tests of finished drinking water supplies for 24 metropolitan areas, according to an Associated Press survey of 62 major water providers. Only 28 tested finished drinking water. Test results vary widely. Some water systems said tests had been negative, but the AP found independent research showing otherwise.

Pharmaceuticals in drinking water
- Water tested positive for pharmaceuticals
- Water not tested for pharmaceuticals
- Water tested negative for pharmaceuticals
- Test results pending

* In Virginia Beach, pharmaceuticals were found in source water but not in treated drinking water.
** Drinking water in Austin, Texas, was tested for only one prescription drug, a synthetic birth control chemical.

NOTE: All places include some surrounding areas except: Albuquerque, N.M.; Arlington, Texas; Fresno, Calif.; Long Beach, Calif.; Los Angeles; Memphis, Tenn.; New Orleans; New York City; and Orlando, Fla.

SOURCES: Drinking water providers’ responses to Associated Press questions; AP review of scientific literature.
5-month inquiry discovered that drugs were detected in the drinking water supplies of 24 major metropolitan areas.

- Found that most of the Nation’s Watersheds were also contaminated.

- Reported that there are no sewage treatment systems engineered to remove pharmaceuticals.

- Indicated Drugs pose a unique danger, unlike pollutants, because they were crafted to act on the human body.

- Acknowledged continuous low-level exposure to chemo drugs, hormones, anti-depressants, antibiotics, and seizure meds found in our water could be impacting human health.
Drug Portal to the World

adapted by Daughton from Ternes (April 2000)
What is EPA Doing?

[Image of a fish holding a bucket labeled 'Medicine Collection Program']

DISCARD MEDICINES HERE
Best Management Practices for Unused Pharmaceuticals at Health Care Facilities

- DRAFT Document – August 26, 2010
- Federal Register Notice – September 8, 2010
- Comments due – November 8, 2010

www.epa.gov/ost/guide
What is the Guidance for Unused Pharmaceuticals?

- EPA initiated a study of the Health Care Industry to evaluate disposal practices for unused pharmaceuticals
  - to identify alternative practices for disposal to avoid flushing unused pharmaceuticals
  - Through outreach and data collection EPA identified best practices for disposal that minimize the need to flush pharmaceuticals
Outreach and Data Collection for Guidance

- Met with over 30 organizations

- Visited fifteen health care facilities and observed their management of unused pharmaceuticals

- Worked with other federal agencies (FDA, CMS, DEA) in the development of the Guidance

- Received over 90 public comments on the draft and are working on revising the Guidance to incorporate these comments

Expect Guidance to be finalized this Fall
Best Management Practices (BMPs)

- Conduct an inventory

- Reduce by reviewing purchasing practices, using limited dose or unit dose dispensing, and performing ongoing inventory control and stock rotation

- Properly manage by identifying types of pharmaceuticals (e.g., controlled substances or hazardous waste) and any federal and state requirements and using EPA recommended practices to dispose of pharmaceutical waste

- Segregate waste for disposal to ensure compliance with Federal and State laws and train staff
Federal Guidelines:

- Do not flush prescription drugs down the toilet or drain unless the label or accompanying patient information specifically instructs you to do so. For information on drugs that should be flushed visit the FDA’s website.

- To dispose of prescription drugs not labeled to be flushed, you may be able to take advantage of community drug take-back programs or other programs, such as household hazardous waste collection events, that collect drugs at a central location for proper disposal. Call your city or county government’s household trash and recycling service and ask if a drug take-back program is available in your community.

- If a drug take-back or collection program is not available:
  1. Take your prescription drugs out of their original containers.
  2. Mix drugs with an undesirable substance, such as cat litter or used coffee grounds.
  3. Put this mixture into a disposable container with a lid, such as an empty margarine tub, or into a sealable bag.
  4. Conceal or remove any personal information, including Rx number, on the empty containers by covering it with black permanent marker or duct tape, or by scratching it off.
  5. Place the sealed container with the mixture, and the empty drug containers, in the trash.
For More Information on Guidance Document

Health Care Industry Study Contact:

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For more information, please visit the webpage:
http://water.epa.gov/scitech/wastetech/guide/unusedpharm_s_index.cfm
National Drug Take-Back Day

- 1st Event held September 25, 2010
- This one-day effort was intended to bring national focus to the issue of increasing pharmaceutical controlled substance abuse.

The program is anonymous.

Prescription and over the counter solid dosage medications, i.e. tablets and capsules accepted.

Intra-venous solutions, injectables, and needles will not be accepted.

Illicit substances such as marijuana or methamphetamine are not a part of this initiative.
Got Drugs? Turn in your unused or expired medication for safe disposal Saturday, April 30th
National Take Back Initiative

- April 30, 2011 10 AM – 2 PM
- www.dea.gov
- 15 Locations with 14 miles of Portland, Maine
Where to bring unused meds?

Collection sites in every local community can be found at:

www.dea.gov