Analysis of Existing Drug Disposal Plans at Health Care Facilities in Suffolk County, NY

Background Information

Locally and nationally our waters are becoming contaminated with trace amounts of pharmaceutical contaminants. It is estimated that 41 million Americans are drinking water from a source containing trace amounts of drugs. In the morning we expect our coffee to have coffee, milk and sugar—not Viagra, Lipitor, and codeine. The United States Geological Survey (USGS) has found trace amounts of antibiotics, hormones, contraceptives and steroids in 80% of the water they tested. There are multiple pathways that pharmaceuticals enter waterways—although direct flushing of unwanted or unused pharmaceuticals is a highly prevalent and preventable pathway. For decades, flushing was the recommended disposal option by the U.S. Environmental Protection Agency (EPA) and NYS Department of Environmental Conservation (DEC). Yet, our sewage treatment plants, septic tanks, and drinking water infrastructure was never equipped to filter pharmaceutical waste and pharmaceutically active compounds (PhAC’s). These compounds are now found in local drinking water supplies, including Long Island’s groundwater.

The USGS published “Occurrence of Pharmaceuticals in Shallow Ground Water of Suffolk County, New York, 2002-2005.” The study collected 70 samples from 61 wells in the Upper Glacial and Magothy aquifers and tested for 24 different pharmaceuticals. There were 126 positive detections of trace pharmaceuticals throughout the 70 samples, although only 28 had levels high enough to be included in the study. The study concluded that low but measurable concentrations of PhACs were present in the wells, confirming that groundwater is susceptible to PhACs and other compounds present in treated wastewater.

The DEC and the EPA no longer recommend flushing and this has resulted in some municipalities advancing safe disposal options including the implementation of drug take-back programs through collection days. Suffolk County installed permanent 24 hour lock-boxes at police stations for drug disposal. However, there are still many residence that continue to flush and perhaps even more alarmingly, large scale facilities that still dispose of unused and expired medications by flushing.
Suffolk County Law 2011-1042

In 2011 the Suffolk County Legislature passed a law, (County Law 2011-1042) requiring all hospitals, hospice facilities, nursing homes, and long-term care facilities located in the County of Suffolk to file a written plan for the safe disposal of unused and or expired medications with the Department of Health Services. The plan must establish the means by which the facility will dispose of medications in an environmentally safe manner to prevent medications from entering our drinking water supply and our rivers, estuaries, bays and ocean.

Safe Disposal for Health Related Facilities in Suffolk County

CCE was instrumental in passing County Law 2011-1042. The purpose and intent of this law is to gain a better understanding of pharmaceutical disposal practices by health care facilities and to ensure these facilities are actively planning and engaging in safe disposal.

This report is the culmination of CCE’s extensive research and analysis of Suffolk County facilities. CCE filed a freedom of information request to Suffolk County requesting all of the submitted safe disposal plans. Once CCE received the reports they were then analyzed to better understand the practices of health care facilities. CCE also conducted extensive background research on local, state, and federal policies; and provides key policy recommendations.

Summary of Findings

- **59 facilities submitted disposal reports** to the Suffolk County Department of Health Services. These facilities reported huge differences in how they handled disposal of controlled (ie/narcotics) vs. non-controlled (ie/antibiotics) drugs.
- **51% of the facilities responding indicated that they flush** expired and unused controlled substances as their disposal method.
- **25% of the facilities use a reverse** distributor to properly dispose of their expired/unused controlled pharmaceuticals.
- Only **12% of facilities** take advantage of the National Take Back Program.
- **2% of the facilities** indicated that they flush expired and unused non-controlled substances.
- **83% of the facilities returned the unused non-controlled drugs** to the manufacturer, a reverse distributor, or a pharmacy.
Troubling News

There were a significant number of facilities that are flushing their controlled substances. In several cases language was used that stated, “Controlled substances are disposed of in the manner approved by the NYS Department of Health Bureau of Narcotic Enforcement.” This description means flushing. In other cases, some facilities clearly stated policies of flushing. In one bizarre example, a plan was presented where nurses were responsible for driving the controlled substances to a Covanta facility for incineration. Although CCE appreciates the efforts of the facility to properly dispose of the drugs, we strongly believe that there should be safer, easier disposal options.

“Medication prescribed under Medicare Part D Pharmacy Program cannot be returned. These pills are diluted in water and flushed into the toilet – under the presence of two nurses.” - Medford Center

“has a standard practice of returning all unused/expired medications to our Pharmacy Vendor, with the exception of narcotics”
- The Shores at Peconic Landing

“Single doses of controlled drugs are flushed on the nursing units.” - Broadlawn Manor

“Expired and unused narcotics are flushed into the facility waste system” Riverhead Care Center.

“Discontinued/Expired narcotics are destroyed by 2 licensed registered professional nurses and flushed in the toilet.”
- Cedar Lodge Nursing Home at Center Moriches.

“All narcotics will continue to be flushed down the drain” - Petite Fleur Nursing Home
19% of facilities stated they “flushed” controlled substances (11/59)
32% of facilities indicated they follow guidelines of the “Bureau of Narcotic Enforcement” (19/59)
25% of facilities returned controlled substances to a reverse distributor or manufacturer (15/59)
3% of facilities returned controlled substances to a pharmacy (2/59)
2% of facilities transported drugs via nurses to the incinerator (1/59)
5% of facilities don’t possess or dispose of controlled substances (3/59)
12% of facilities participate in the National Take Back Program (7/59)
2% of facilities did not indicate what they did with controlled substances (1/59)
Medford Center submitted a policy that included a section on “community education and advocacy” for proper disposal methods. “Medford will continue to educate residents, families, and staff of the proper procedure to dispose of unused/expired drugs within the community and will promote current & new public initiatives to address this concern and protect the environment. Medford Center will continue to advocate for regulatory changes that would reduce the excessive waste currently created by both federal & state regulations.”

St. James Healthcare Center has participated in the Drug Enforcement Administration National Pill Take Back Day since 2011. “Our primary plan for disposing all expired/unused medication is to continue to participate in the US Department of Justice DEA National Take-Back Program.”

**NON-CONTROLLED SUBSTANCES DISPOSAL ANALYSIS**

2% of facilities stated they “flushed” non-controlled substances (1/59)
54% of facilities returned non-controlled substances to a pharmacy (32/59)
29% of facilities returned non-controlled substances to reverse distributor (17/59)
7% of facilities did not indicate where they disposed of non-controlled substances (4/59)
5% of facilities don’t possess or dispose of non-controlled substances (3/59)
3% of facilities utilize a national take back day (2/59)
Recommendations

1. CCE Recommends that unused, expired pharmaceutical waste is incinerated.
In 2012 EPA released a memo which outlined their recommendation that household pharmaceutical waste be incinerated. The memo states that, “the EPA believes that the combustion conditions present in these regulated units will destroy the organic compounds in collected pharmaceuticals.” The memo stops short of offering disposal guidance for health care facilities. Based on the information CCE collected and the emerging science of pharmaceuticals in ground and surface waters, CCE strongly recommends that health care facilities dispose of unwanted medications through incineration. *Incineration addresses both environmental and diversion concerns.* Because studies have shown PhAC’s in landfill leachate, as well as in groundwater and drinking water which are likely due to flushing, incineration will reduce the amount of pharmaceuticals that are disposed of by flushing and landfilling. While incineration is currently the preferred method to destroy pharmaceutical waste, CCE supports research and development into potential technological advancements that address diversion and environmental concerns. *The days of having nurses flush pharmaceutical waste should end.*

2. CCE recommends that The NYS Bureau of Narcotics Update Policies for Healthcare Facilities. Many facilities used statements such as “Narcotics are disposed of in the manner approved by the NYS Department of Health Bureau of Narcotic Enforcement” or “Single doses of controlled drugs are flushed on the nursing units as required by the NYS Department of Health Bureau of Narcotic Enforcement.” Most of the facilities return non-controlled substances to pharmacies, yet they believe their only legal option for disposal of controlled substances is to flush the medication. Surely, in the new millennium we can offer facilities better guidance and practices that will not pollute surface and ground waters. NYS Bureau of Narcotics should clarify incineration can be used as a safe disposal option.

3. CCE recommends that Suffolk County develops a plan that prohibits facilities from flushing and ensures that all drugs are safely sent to an entity that incinerates. Allowing facilities to continue flushing threatens Long Island’s sole-source aquifer and our many rivers, streams, lakes, and estuaries.

4. CCE recommends that Suffolk County encourages health facilities to establish an educational plan to educate residents, families, and staff of the proper procedure to dispose of unused/expired drugs within the facilities and communities.
New Proposed Federal Regulations

On December 21, 2012 the Drug Enforcement Administration (DEA) of the Department of Justice (DOJ) issued a notice of proposed rulemaking that would implement the Secure and Responsible Drug Disposal Act of 2010. The proposed regulations seek to legally expand the options available to collect unused, unwanted, or expired controlled substances from ultimate users for disposal. Options in the proposed regulations include take-back events, mail-back programs, and collection receptacle locations. The increased access to safe pharmaceutical disposal options proposed in the regulations should make it easier for long term care facilities and the public to safely and responsibility dispose of unwanted and expired medications. Some highlights of the proposed regulations are summarized below.

Entities authorized to collect controlled substances. The proposed regulations allow specific entities to voluntarily administer any of the authorized collection methods in accordance with these proposed regulations. The regulations would allow:

- Law enforcement agencies to voluntarily conduct take-back events, administer mail-back programs, and maintain collection boxes;
- Authorized manufacturers, distributors, reverse distributors, and retail pharmacies to voluntarily administer mail-back programs and maintain collection boxes; and
- Authorized retail pharmacies to voluntarily maintain collection boxes at long term care facilities.

The proposed regulations do not allow long term care facilities to participate in mail-back or take-back programs on behalf of the ultimate users. However, ultimate users (ie/ residents at a nursing home) at long term care facilities may participate in mail-back or take-back programs as individuals.

Hospitals. Retail pharmacies co-located in a hospital may maintain collection receptacles. However, hospitals without a retail pharmacy would not be permitted to maintain a collection receptacle, due to concerns about theft and loss prevention at hospitals.

Methods of Destruction. The regulations would also set a standard for how controlled substances are destroyed. DEA is proposing a standard of destruction, known as “non-retrievable.” Examples of non-retrievable standards would include (but not limited to) incineration and chemical digestion, thus permanently altering the physical and/or chemical state, making it unusable for all practical purposes. Under the proposed regulations, flushing or mixing controlled substances with coffee grounds would not qualify as non-retrievable.

If enacted, these regulations will increase access to safe disposal options for unused and expired medications. However, providing increased access to safe disposal options will be voluntary. Therefore facilities and municipalities should be pro-active in ensuring safe disposal and to STOP FLUSHING our drugs down the drain.
CCE would like to thank the Rauch Foundation for their generous support for this project.