

Talking Trash: A Green Plan for Home Infusion Waste

Beth DeCrosta, RN, CRNI; Liv Carlson, PharmD, RPh. Coram Specialty Infusion Services, Yarmouth, Maine.

Background

Growing social consciousness to protect natural resources — specifically potable water and farmland soil — has driven many states to address initiatives that divert and limit waste contribution to landfills. This common global mission has produced various organizations which strive to collectively reduce our carbon footprint with a total commitment to eco-sustainability. One such organization, founded in 1998, maintains a focus on the healthcare industry seeking to limit both volume and toxicity of the estimated 6,600 tons of waste generated per day by U.S. hospitals¹. The Maine Hospital Association requires member hospitals to be involved in planning for pollution prevention and waste reduction.

From 2008 to 2010, a successful pilot, “Safe Medicine Disposal for ME,” collected 2,400 pounds of household medications using a mail-back system². With funding and support from the federal Environmental Protection Agency, Maine Drug Enforcement Agency, local pharmacies and volunteers, the collection raised public awareness for both ecological and abuse-risk platforms. A bill proposed to hold pharmaceutical manufacturers accountable to plan and finance a medication return program for Maine failed to pass in 2010³.

IV solutions and home infusion supplies, including unused products, do not meet current criteria for “take-back” collections and remain unaddressed by most municipal waste regulations. Medical items such as IV bags, tubing and glass vials can raise public health concerns if discovered in single-stream recycle collections, resulting in attention from local authorities and increased costs. Without clear direction, patients are left with one option: paper, plastic and glass are simply bagged and added to landfill volume.

Disclosures: No Disclosures.

Purpose

Create awareness of home infusion therapy contribution to local landfill waste and suggest approaches to minimize the negative ecological impact for Maine.

Method

A search of state, federal and industry regulations for home infusion related disposal was conducted. Further investigation of current state requirements for recycling and disposal of specific infusion products followed. For comparison, a search of local hospital recycling practices and associated costs was conducted. Home health agencies were surveyed regarding current practices for patient and nurse generated waste disposal. An internal audit of home infusion therapy items identified those with disposal requirements in place.

Results

Disposal of home infusion therapy items is not well regulated. The handling of sharps is the only medical waste clearly defined by some states. Current review shows most home infusion waste is bagged to landfills.

References

1. <http://cms.h2e-online.org/ee/waste-reduction/>
2. Crittenden J, McKinney R. Safe Medicine Disposal for ME: 2010 Update, Review of Current Operations, and Future Plans. Presentation at the 2010 International Symposium on Safe Medicine.
3. Maine LD 821: An Act To Support Collection and Proper Disposal of Unwanted Drugs. 124th Maine State Legislature.
4. <http://www.sharpsinc.com/pella-drx.htm>
5. <http://www.practicegreenhealth.org/>

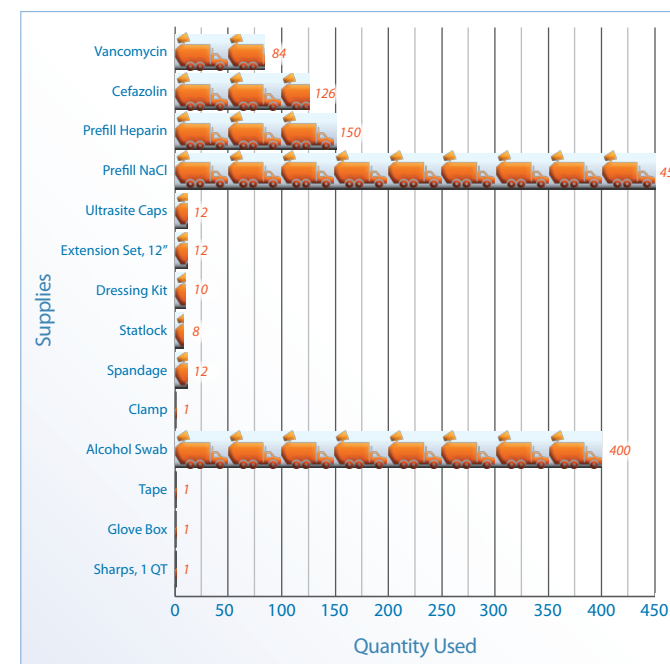
Infusion Trash Generated in the Home



Waste produced from one week of Total Parenteral Nutrition therapy for a single patient (note the 12” ruler on the right for scale).

Supplies Required for Standard Double IV Antibiotic Six Week Therapy

The chart below is based on infusing vancomycin IV every 12 hours via an elastomeric pump and cefazolin IV every eight hours via IV push.



Conclusion

Through the efforts of Hospitals for a Healthy Environment and various environmental protection groups, extensive work has been done to address medical waste disposal in hospitals. Changing healthcare practices resulting in an increase of patients to the home care setting challenges us to address ecologically sensitive solutions for home waste disposal.

Ongoing, collaborative efforts should expand take-back programs that address non-recyclable supplies and IV medications to include donations to organizations that can use these supplies and medications. Synergistic efforts from both home infusion providers and municipal transfer sites could create recycling standards for used medical

supplies — like various plastic items and wrappings — dissolving current fears associated with medical waste. These standards would allow for implementation of a patient education tool to facilitate the segregation of appropriate paper and plastics, such as alcohol wipes, tubing wrappers and medication boxes, into household recyclables. One way to creatively repurpose infusion items is to use clean plastic saline trays for painting or storage.

Finally, a green objective for trash reduction must include the use of recyclable materials for shipping, a plan to limit overstock of home supplies and company policies to encourage purchasing of environmentally preferred products. For example, contracting with a company that converts sharps returns into a reusable raw material actively promotes environmental sustainability⁴. Current waste management models promote taking the burden off of the environment by putting a price on waste disposal, making recycling a natural business incentive. A 250 bed hospital in North Carolina saved \$95,400 in waste disposal costs while diverting approximately five tons of trash from the landfill⁵. A New England acute care facility retained more than \$147,000 by using reusable sharps containers in place of a disposable product. With a commitment to thoughtful management of therapy waste, the home infusion industry will position itself to care for our planet resources as it cares for its patients.



Sample recycling guides and waste reduction strategies for used medical supplies.