The Sticking Point: Diabetic Sharps Disposal Practices in the Community

Jennifer Costello, PharmD, BCPS¹ and Ashish Parikh, MD, FACP^{1,2}

¹The Internal Medicine Faculty Practice, Saint Barnabas Medical Center, Livingston, NJ, USA; ²University of Medicine and Dentistry of New Jersey (UMDNJ), Saint Barnabas Medical Center, Newark, NJ, USA.

J Gen Intern Med 28(7):868–9

DOI: 10.1007/s11606-013-2350-3

© Society of General Internal Medicine 2013

“Students stuck with diabetic needles at school”¹

“After two workers have been accidentally stuck with used needles carelessly left in trash, the city wants residents to understand both the costs and the penalties for putting bare needles in bags.”²

It is not uncommon to find stories such as these in the news. A great deal of attention is given to proper sharps disposal in the clinical setting, but patient education to ensure proper sharps disposal in the home environment is often overlooked. In the occupational setting, employers are required to identify, evaluate, and implement safer medical devices, and mandates include additional requirements for maintaining a sharps injury log.³ But in the home, no such guidance exists.

Current literature indicates that used sharps are frequently disposed of inappropriately in the home setting. A 2005 review of diabetic limb surgeries at a Veterans Affairs (VA) hospital in Ohio revealed that nearly 3.5 % of amputations could be traced back to accidental needle sticks caused by people with diabetes “snipping” the end of their insulin needles to make them safer, only to have those needle tips fall to the floor and later lodge themselves in the foot, setting the stage for a later amputation.⁴ In addition, there have also been case reports of accidental needle sticks transmitting communicable diseases such as hepatitis B and C in the community.^{5,6} The Coalition for Safe Community Needle Disposal was established as a collaboration of businesses, community groups, non-profit organizations and government that promotes public awareness and solutions for safe disposal of needles, syringes, and other sharps in the community. This coalition has identified ways to promote safe sharps disposal. However, each state has its own disposal guidelines. Many states identify community areas for a “drop box” or “supervised collection sites” where patients can drop off used sharps free of charge.

Published online February 2, 2013

There are also mail-back programs, but these may be expensive or associated with various restrictions.

In our practice, we first realized something was wrong when the clinical pharmacist asked patients: “How do you dispose of your insulin pen needles?” The responses given were astonishing and led to the creation and implementation of a quality improvement program specifically designed to address home and community diabetic sharps disposal.

First, we evaluated the level of education diabetic patients received on the proper disposal of sharps (pen needles, syringes and lancets) from their prescribing providers and/or dispensing pharmacists. In a survey of 44 diabetic patients receiving care at our practice, 86 % reported improper disposal. Shockingly, 7 % of patients reported disposing of their used sharps by flushing them through the toilet. Of the patients who reported proper disposal practices, 16 % reported being educated on proper diabetic disposal by a health professional. The majority of patients did not know that “insulin pen needles” were actually needles that required proper disposal. This is of particular concern because only one side of the insulin pen needle is capped; the other side is open and can potentially cause an accidental stick. In addition, many patients failed to identify diabetic lancets as sharps that require proper disposal.

Following this survey, we implemented a free disposal service. Patients are now able to bring in their used sharps to be discarded properly when they return for their follow-up medical appointments. We also created an educational handout providing information on proper sharps disposal and mailed the flyer to all patients of the practice. Our physicians and diabetic educator now routinely educate their patients on sharps disposal during office visits. Finally, to broaden the reach of our intervention, we conducted an email survey of local endocrinologists and internal medicine physicians, and distributed educational materials that included locations of state-identified free disposal centers.

Our “Safe Disposal” program has been in place since 2010, with good success. After educating our patients, we

have seen a sustained improvement in proper sharps disposal. In addition, a log is kept in which all sharps-related waste returns are documented. We continually have between eight and ten patients bringing in their used sharps each month.

We observed that diabetic patients are undereducated regarding safe disposal practices of their used diabetic supplies such as lancets and needles. We believe sharps disposal is a broader public health issue that is under-recognized by clinicians as well as patients. We have shown that educating patients can positively impact and improve safe needle disposal practices in the community setting. Providers should be encouraged to discuss proper sharps disposal with all of their patients who use injectable medications or lancet devices.

State-specific information on safe sharps disposal is available on the Coalition for Safe Community Needle Disposal's Safe Needle Disposal website (<http://www.safeneedledisposal.org>). This website provides information on: (1) types of sharps containers that can be used, (2) disposal programs by area, (3) how to label sharps disposal containers, (4) how to secure the lid of sharps disposal containers, and (5) whether sharps disposal containers can be thrown away in the common trash using specified criteria.

Acknowledgements:

Funding: This study was funded by a grant from the Community Advocates Association at Saint Barnabas Medical Center.

Conflict of Interest: The authors do have any financial or other conflicts of interest to report.

Authorship: Both authors have had access to the data and both have taken significant roles in writing the manuscript.

Corresponding Author: Jennifer Costello, PharmD, BCPS; The Internal Medicine Faculty Practice, Saint Barnabas Medical Center, 94 Old Short Hills Road, Livingston, NJ 07039, USA (e-mail: jcostello@barnabashealth.org).

REFERENCES

1. Students stuck with diabetic needles at school. [WESH.com website]. April 24, 2012. Available at <http://www.wesh.com/Students-Stuck-With-Diabetic-Needles-At-School/-/11788876/13117396/-/bmg0x/-/index.html>. Accessed December 15, 2012.
2. Needles in your garbage concern for city workers. [Norwalk Reflector website]. October 25, 2010. Available at from <http://www.norwalkreflector.com/article/26172>. Accessed December 20, 2012.
3. Needlestick Safety and Prevention Act, Pub. L. No. Public Law 106-430 (2000).
4. Safe Needle Destruction: Put Your Best Foot Forward on World Diabetes Day Posted on: Monday, 7 November 2005, 09:01 CST BERLIN CENTER, Ohio, Nov. 7 /PRNewswire
5. **García-Algar O, Vall O.** Hepatitis B virus infection from a needlestick. *Pediatr Infect Dis J.* 1997;16:1099.
6. **Libois A, Fumero E, Castro P, et al.** Transmission of hepatitis C virus by discarded-needle injury. *Clin Infect Dis.* 2005;41:129-30.