Strictly Clinical

# Preventing needlestick and sharps injuries

By Amber Hogan Mitchell, DrPH, MPH, CPH, and Ginger B. Parker, MBA

*Editor's note:* This article is the first in a three-part series brought to you in partnership with the International Safety Center. Watch for the next two articles on blood and body fluid splashes and use of personal protective equipment, respectively.

**SINCE 1992,** hospitals and healthcare facilities throughout the United States and the world have used the Exposure Prevention Information Network (EPINet®) as a tool to survey and measure occupational exposures to blood and body fluids. This network is designed to help you and your facility identify safer devices, safer practices, and innovative approaches to reducing occupational exposures to blood and body fluids. EPINet helps identify where infectious exposures are occurring in U.S. hospitals and allows you to compare them to what's happening in your facility. The International Safety Center distributes EPINet free to hospitals to measure occupational exposures to blood and body fluid that cause illness and infection in the working population.

High-risk injuries from contaminated sharps and exposures, such as mucocutaneous splashes and splatters, pose an unparalleled risk to nurses. Infectious threats, such as Ebola virus, measles reemergence, hepatitis C, and human immunodeficiency virus (HIV), require us to keep an ever-steady focus on surveying and measuring risk so we can mitigate and prevent it. EPINet allows us to do that.

#### Nurse injuries from sharp objects and needlesticks

For all sharps injuries occurring across all hospitals, 40.1% happen to nurses. The following statistics are from the most recent EPINet data (the 5-year period from 2009 to 2013).

#### Where did the injury occur?

- Patient room/bedside
- Operating room/surgery
- Emergency department
- ICU/CCU
- Outpatient/clinic
- Other



### Lessons learned from EPINet

**5%** 

4.6%

10.7%

10.6%

18.5%

3.7%

5.5%

#### What was the device used for?

- Injection into skin
- Blood collection
- Start I.V. line
- Suturing
- Cutting
- Injection into I.V. line
- Other

#### When did the injury occur?

- During use of the device
- After use, before disposal
- Between steps of multistep procedure
- While putting device in sharps container
- While disassembling device
- Device left on surface
- While recapping used needle

Other\*

\*Includes items left near or piercing through sharps container and injury from device in use by nearby colleague.

#### Which device caused the injury?

- Disposable syringe: 53%
- Prefilled syringe: 6.5%
- I.V. stylet: 5.9%
- Suture: 5.2%
- Winged steel needle (butterfly): 3.9%
- Scalpel: 2.0%
- Other\*: 23.5%

\*Includes such devices as pins, drill bits, glass, razor, trocar, and scissors



No

Unknown Note: 62.1% of safety features were not activated.



22.9%



See the next page to learn how you can avoid becoming a statistic.

#### **Protecting nurses**

Now that you know the facts, you can take steps to help eliminate needlestick injuries and encourage your employer to take action.

## Select safer devices

Consider: Since development of safety-engineered syringes, bloodcollection devices, and lancets, needlestick injuries and subsequent occupational illnesses, such as hepatitis B virus and HIV, have decreased markedly. Extremely high-risk needlesticks from blood collection now account for only about 10% of sharps injuries. A high incidence of sharps injuries from safety-engineered devices can mean that safety features aren't intuitive or that instead of decreasing risk, the design increases risk. Practice more safely

*Consider:* Needlesticks are still occurring when nurses access I.V. lines already in place.

*Consider:* More than 60% of sharps injuries occur when safety features aren't activated.

#### *Take action:* • Participate in evalua-

tion of safety devices. (Frontline employee evaluation of devices may improve activation because employees will use a device they like and are more familiar with.)

• Activate safety features of devices.

#### Take action:

Prevent needlestick injuries associated with I.V. lines in place by using needleless systems—nonneedle access devices—and eliminating delivery of drugs or other therapeutics by needle into an I.V. line.

Consider:

Injuries are occurring from recapping used needles. The Occupational Safety and Health Administration *explicitly probibits* this practice.

> Take action: Stop recapping now.

#### Take action:

• Participate in evaluating devices used on your units and select devices that are easy to use and safe. (The Occupational Safety and Health Administration requires nurses' involvement in safety device evaluation. If activation of the safety feature isn't intuitive, nurses won't activate it or may suffer injury during activation.)

Select devices that are easy to use and safe.
Be sure your employer provides medical device vendors, manufacturers, distributors, and suppliers with the information they need to make better, safer devices available.

#### Innovation

Nurses are creative, resourceful innovators. You can directly and positively affect your own life and the lives of your patients and colleagues. If you don't consider yourself an innovator, look to those you think are. Use such resources as "Nurses leading through innovation" at www.theamericannurse.org/index.php/2012/06/06/nurses-leading-through-innovation/.

The authors work at the International Safety Center (InternationalSafetyCenter.org). Amber Hogan Mitchell is president and executive director. Ginger B. Parker is vice president and chief information officer.