

Reflections for the 15th Anniversary of the Revised OSHA Bloodborne Pathogens Standard

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It has been 15 years since OSHA promulgated its 2001 updated Bloodborne Pathogens Standard to include additional requirements from the 2000 Needlestick Safety and Prevention Act. It is important to remind ourselves that this was the first and only Act passed unanimously by Congress into Law. In such heated political times with a new Presidency looming in January, we reflect to a time a decade and a half ago that we all agreed that preventing injuries from contaminated sharps was something that brought us all together in solidarity.

Let's use this opportunity to reflect on the successes we've made preventing occupational exposures to blood and body fluids and the work still ahead.

Since 2001, we have seen an overall reduction of sharps injuries due in part to increased overall awareness of risk, the availability and use of safety engineered devices,

improved annual training and the inclusion of frontline employees in the evaluation and selection of engineering controls. Both the Massachusetts Sharps Injury Surveillance System and the International Safety Center's Exposure Prevention Information Net-work (EPINet®) illustrate reductions in sharps injury rates and ratios from non-safety ("conventional") devices.¹⁻² This has been corroborated by recent data published from University of North Carolina Occupational Health Service.³

We are doing well. The new requirements of the standard have improved overall injury rates and we assume subsequently we have reduced occupational infection and illness from exposures to bloodborne pathogens. Thanks to a better policy in place, improved adherence to occupational infection prevention precautions, compliance with state and federal regulations, and advancements in medical device technology we have achieved what is a real public health success story.

However, there is always more we can do.

What has also been noted by all three surveillance systems is a bit discouraging. Injuries from safety-engineered devices -- such as syringes and blood collection devices with features that retract or sheath the contaminated needle -- have increased year over year. In fact, according to EPINet data from the last reported year (2014), 42.3 percent of employees reporting an incident indicated that they were using a device with a safety feature or safety mechanism when they were injured. Of those indicating that they were using a safety device, 64 percent stated that they did not activate the safety feature. Some of those injuries could be because the patient jumped or the device was jarred, yet most are likely due to users simply not activating or bypassing the safety feature.

Additionally, 20.2 percent of all injuries in that year occurred after the safety feature was activated, meaning despite the device having a safety mechanism that was fully in tact the worker was injured anyway. More than 30 percent of injuries occurred during activation of the safety feature.

What does this mean? Well, it does not mean that we should throw safety-engineered devices out the window and go back to the drawing board or be tempted to return to our old ways. It does mean that we need to maintain and even hone in on our diligence and focus. Here are three ways to rebound if you see your sharps injuries creeping up.

1. Involve as many non-managerial frontline employees in the evaluation and selection of safety devices as possible. We need to make sure this is a top priority and that the evaluation and selection of safety devices are both most appropriate for the procedures they are performing and are the safest options for the users. The 2001 OSHA Bloodborne Pathogens Standard actually requires this anyway, so it's a win-win.

Selecting the right device includes identifying ahead of time if the safety device will be used, for example, for pediatric vaccinations, insulin delivery, adult intramuscular injections or difficult blood draws. Needle sizes and device types will be different and therefore the safety design or engineering may need to be different. One size or one type may not fit all.

EPINet data indicates that injuries are still occurring to non-dominant hands. This is an indication that the dominant hand is injuring the users own non-dominant hand. Or the user is sticking their own other hand/finger during a procedure. This happens when a user pinches a patient's skin during a subcutaneous injection, inserts the needle into the skin and it pokes right out the other side and sticks the healthcare workers other hand.

"Ditch the pinch" campaigns have become widely adopted and promote that the selection of the right size needle (shorter) for a procedure is just as important as using a safety device design. Identifying the appropriate tools a healthcare provider needs (based on the specific patient) prior to performing a procedure with a sharp device is a critical piece of overall sharps injury prevention.

2. It's not a safer device until the safety feature is activated. There is not much good in purchasing and using safety-engineered devices if the safety mechanism is not engaged by the user. There have been decades of discussions about "active" versus "passive" safety devices. In my opinion, if the user must do something to make a device safer for themselves and those around them, it is "active" – meaning an action needs to take place – pushing a button, depressing a plunger, sliding a sheath, flipping a hinge. There are no passive safety injection, infusion, or blood collection devices... yet. It is also my opinion that the only true passive safety devices are ones that have engineered out or eliminated the hazard like blunt suture needles or non-needle skin adhesives or nasal (versus injection) vaccine delivery.

Even if a user, let's say a nurse giving an injection, doesn't feel like they want or have to activate a safety feature because it's easier to just put it straight into the sharps container without fooling around with it – we take the time to remind them that nearly 25 percent of all contaminated sharps injuries occur to those downstream.² These injuries happen to non-users, including laundry workers, environmental services personnel, waste haulers, co-workers standing next to the user, and members of surgical teams. Activating a safety feature helps to ensure that the device is safer throughout its life span to anyone that may come into contact with it later.

If healthcare personnel do not activate a safety feature because they feel that the activation of a safety feature puts them at additional risk for injury, it is important information to share not only with members in their own facility, but with manufacturers as well. What makes devices better, safer, and more intuitive is real users providing real feedback so that research and development of next generation devices are improvements over their predecessors.

3. Use the sharps Injury Log to your advantage. Keeping a sharps injury log is not only a requirement of the 2001 standard, but it is also your most valuable tool. It tells you what professional groups are getting injured, what devices are causing injuries, and where they are happening. It also tells you what brand of device may need to be re-evaluated or what training or in-servicing for which types of devices needs to be beefed up. The "brief description" section of the log can tell you if there were circumstances surrounding the incident that can be avoided in the future.

If you are lucky enough to work in Massachusetts, or are a public or state employee in New York, New Jersey, or Texas, your state departments of health, public health, or labor, or are an EPINet user, you have access to years and years of excellent sharps injury data that you can use to your advantage to compare what is going on in not only your facility over time, but others like you in your region.

I'm not a fan of the word "benchmark" because it seems like an excuse to simply compare a single number or rate or ratio or two year after year just to say that you are above or below an acceptable, imaginary line. I am a fan, however, of using data to inform action.

Let the data tell you a story. If you are noticing that your highest numbers of injuries are occurring from blood draws using disposable syringes (and they are according to EPINet data, more than half!), then know to ask if your staff are using that needle on the syringe to also pierce the blood tube holder and fill

the tube. Have them stop this practice now! If you are noticing that injuries have resurfaced from needle recap-ping. Well, you know what to do. If scalpel blades in the OR are sticking non-user members of surgical teams, it looks like you need to revamp your no-hands passing neutral zone activities.

A single benchmark number, rate, or ratio can't help you with those targeted interventions -- the kind that save lives.

Starting in 2017, OSHA will be requiring for the first time ever, that employers electronically submit their injury and illness logs (OSHA Form 300A) to the agency.⁴ This means that what you have on your sharps injury log will also be on your 300As that are submitted annually to OSHA. If you are responsible for maintaining employee injury and illness records and the Sharps Log already, it's no big deal. You've got this! If you are on a safety or infection prevention committee that reviews injury and illness data on a regular basis, it's a great opportunity to make sure you have your logs work for you and the safety of your employees. Maybe one day there will be no sharps injuries because you've used your data to eliminate exposures so well that you can use the extra time you have to conquer another task.

Ultimately, we have had 15 years of great success and even better prevention, but we still have work to do. Sharps injuries are not a thing of the past. As long as drugs, vaccines, therapeutics, treatments, nutrients, or surgeries have to get into the circulating vessels, tissue, or organs under our skin, sharp devices will be necessary. And as such, preventing sharps injuries must always remain a top priority to protect not only those caring for patients, but anyone that may come in contact with a sharp medical device downstream or at some other point in its lifespan.

Don't despair. Keep at it. Every single prevented sharps injury, needlestick or blood and body fluid exposure makes someone's or someone's family's life better, richer and safer.

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