The Cut Runs Deep

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Nothing more accurately and succinctly defines the issue of sharps safety than the fact which states that there has been no decrease in the injury rate in surgical settings since the passage of the Needlestick Prevention Act of 2000.

While reliable and true statistics on the topic are hard to come by because of unreported and unrecorded injuries, Dr. Ramon Berguer, M.D., General Surgeon, at Martinez, Calif.-based Contra Costa Regional Medical Center cites this statistic to indicate how solving the problem of sharps injuries in the operating room is very much a work in progress.

“The prevalence in the OR seems to be – at best – not changing, and it may be increasing somewhat,” he says.

A 2011 article entitled “AORN Guidance Statement: Sharps Injury Prevention in the Perioperative Setting” states that somewhere between seven and 15 percent of all surgical procedures result in injury from sharp devices or instruments.

“The typical busy, practicing surgeon would probably sustain one or two needlesticks or cuts per year,” says Berguer, who notes that this figure is based on his own personal experience.

Causes Of Injury
According to Berguer, the most common cause of sharps injury in the OR comes from use of a suture needle. That accounts for roughly 50 to 60 percent of the injuries. Following that, about 15 to 20 percent of the injuries come from scalpel blades. The remaining are mostly from hypodermic needles, which are now more commonly used because of the use of local anesthesia before and after the incision.

Furthermore, the aforementioned article says anywhere from six to 16 percent of these injuries occur during hand-to-hand passing of instruments, sharps and hollow bore needles.

According to information from the University of Virginia's Exposure Prevention Information Network, the mechanism for injury for all devices varies significantly based on role. Out of a total of 7,272 injuries that occurred at 87 U.S. hospitals between 1993 and 2004, about 70 percent of injuries to surgeons occurred during the device's use. Just less than 70 percent of those sustained by residents occurred during use. For nurses and OR technicians, the highest risk of injury came while passing the device or between steps. However, that risk was only slightly higher than during use.

"But any sharp that is present is a risk the entire time," says Berguer, adding that injuries can happen at any point along the chain of use, even during and after disposal.

Consequences
The statistics indicate sharps injuries are happening as often now as they did at the turn of the century. Unfortunately, this also suggests OR surgeons, OR technicians, residents, and nurses continue to put themselves in harm's way – despite the potential for some serious ramifications.

"The consequences are costly for both the healthcare worker and the facility once a sharps injury is reported," says Matthew Walker, President and COO, Post Medical, a provider of sharps containers for sharps disposal and medical waste. "A series of costly lab tests will need to be performed to determine whether the injured worker is infected with hepatitis B virus (HBV), hepatitis C virus (HCV), or HIV. While these are the three most common, there are up to 20 other pathogens that can be transmitted."

According to Berguer, hepatitis C is the most prevalent blood borne illness that can be acquired by healthcare workers through sharps injuries, followed by HIV.

"The other thing to keep in mind is, while of a much smaller magnitude, there have been reported cases of transmissions from the healthcare provider to the patient, most notably in cardiac surgery," he continues. "So the risk goes both ways."

Common Misconceptions
There are some common misconceptions about sharps safety that may prevent the injury rate at many facilities from improving. One is that surgeons and OR staff aren't aware of injury rates, even those in their own institutions, due to factors such

as privacy and lack of publication.

Another common, yet flawed, thought that is quite prevalent among surgeons, nurses, and OR staff is that these types of injuries are just an unfortunate by-product of the job. Even worse, many think there is not much to be done to alleviate the problem.

There is also a common belief that suggests those devices or work practices that are used to mitigate the problem of sharps safety prevent a surgery from being done effectively – or even at all.

“These all lead to the idea that you can’t really do much about it, and so you just have to accept it,” says Berguer.

What To Do

According to Walker, glove barrier failure is the most common occurrence in the perioperative setting. However, he notes that evidence suggests that double gloving can reduce the occurrence of glove barrier breach by as much as 87 percent. Other measures, he states, include not placing sharps in overfilled sharps containers, cutting or suturing away instead of toward the surgeon’s hands or assistant’s hands, as well as passing sharps instruments in a tray.

Berguer cites a few additional measures, such as avoiding the use of sharps instruments unless necessary. He also adds that all fascial closures should be performed with blunt tip or safety needles, and that safety-engineered devices like retractable needles are also effective tools for avoiding sharps injuries in the OR.

However, these viable methods for improving safety and limiting injury risk are not being adopted by workers in many operating rooms across the country.

Walker points to two specific factors that hold some healthcare workers back from embracing these safety tools and behaviors.

“One is of course cost, as sharps safety devices, extra gloves, and instrument trays add additional dollars to each procedure,” he says. “The second, in my opinion, is habit. Surgeons are creatures of habit and can be steadfast in their procedure and technique. Nurses and other staff are also not immune to this.”

Berguer states that he believes lack of awareness regarding the problem and its magnitude are also contributing factors. However, he adds that many surgeons recognize the problem of sharps injuries in the operating room and are working diligently to address it.

“One thing I recommend is that this becomes essentially an OSHA employee health issue,” he continues. “It needs to become a hospital policy. The data is there to support having such a policy. Once it is a policy, then it becomes a question of education and enforcement from the policy—not individual preference.”

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