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Making Sharps Safety a Priority in the OR: A Surgeon's Perspective

Dr. Mark Davis has worked for over a decade on reducing exposure risks for OR staff; here, he shares his insights on what it takes to improve OR safety

By Jane Perry, M.A., and Janine Jagger, M.P.H., Ph.D.

Mark Davis is a gynecologic surgeon and OR safety consultant, and author of the book ADVANCED PRECAUTIONS FOR TODAY'S OR: THE OPERATING ROOM PROFESSIONAL'S HANDBOOK FOR THE PREVENTION OF SHARPS INJURIES AND BLOODBORNE EXPOSURES.

Since he stopped operating in 2001, his sole focus has been educating operating room professionals worldwide about the advantages and applicability of effective safety devices, such as blunt-tip suture needles and safety scalpels, and safe work practices, such as "no-hands-passing" of sharp instruments.

Mark Davis, M.D.

AEP: *What prompted you to write a safety handbook for surgeons and OR staff?*

MD: I wanted to share the strategies and techniques that were successful in preventing sharps injuries in my own practice. I began by reviewing the literature on the epidemiology of sharps injuries. EPINet data from the International Healthcare Worker Safety Center and studies published by the Centers for Disease Control and Prevention (CDC) indicated that there were an astonishing number of sharps injuries annually. My own experience told me that sharps injuries could easily be prevented. I felt this information needed to be shared.

AEP: *Including your years of training and practice, you spent thirty-six years in the OR. When did you first take an active interest in preventing occupational exposures?*

MD: It started in 1990 when I was cut by a scalpel during a hysterectomy. I was not overly concerned, because I naively perceived my patient to be "low risk," but I did ask her to be tested for HIV. Her response made me acutely anxious: "I recently found out my husband is an I.V. drug user, so yes, I'd like to be tested, for my own peace of mind as well as yours." Although the test was negative, that day was a turning point in my life. Waiting for the test results was extremely stressful, knowing that I might have to take HIV postexposure prophylaxis, with no guarantee that the drugs

A Surgeon's Perspective on OR Safety (cont.)

would prevent seroconversion even if I did take them. I didn't want to go through that again if I could help it. That's when I totally changed my approach to safety in the OR. I had sustained many sharps injuries from suture needles and other devices over the course of my career, but by dumb luck had so far avoided being infected with a bloodborne pathogen. I decided that from then on I would actively seek ways to reduce my exposure risk, including faithfully practicing universal precautions.

I developed a number of simple injury prevention strategies that proved to be very effective. In order to share this knowledge, I published *Advanced Precautions for Today's OR* in 1999, and a revised edition in 2001, which explains OSHA's bloodborne pathogens standard and the Needlestick Safety and Prevention Act as they relate to the OR setting. The book is intended for all surgical team members, and includes chapters focusing on different professional areas, such as surgical assistants and anesthesia personnel.

AEP: *Suture needles and scalpel blades are the most common devices causing injuries in the OR, and a significant percentage of these injuries occur during hand-to-hand passing. How were you able to prevent these types of injuries in your practice?*

MD: I was able to essentially eliminate them by using blunt suture needles and a neutral zone, with no-hands-passing of sharps.

AEP: *When did you begin using these prevention strategies?*

MD: I used blunt sutures and no-hands-passing routinely from 1990 until I stopped operating. These simple changes made surgery significantly safer—and more enjoyable, knowing that everyone on my team was much less likely to be injured. Unfortunately, such strategies are under-utilized in many ORs. But OSHA expects them to be used where applicable, and is issuing citations to facilities that don't.

AEP: *The Needlestick Safety and Prevention Act mandated that healthcare employers keep a log of sharps injuries, evaluate and implement safety devices, and monitor compliance. Are these requirements starting to have an impact on how surgeons practice?*

MD: The regulations are based on common sense and feedback from experts around the country. The changes in the OR that I've been advocating for years don't just ensure regulatory compliance—they also make healthcare more cost-effective. It's a good business decision for hospitals and for their insurers. Surgeons, as well as other clinicians and hospital administrators, are starting to understand that it's not only the right thing to do, but also the smart thing.

AEP: *You consult with individual hospitals and healthcare networks on OR safety issues, and are currently engaged in a large-scale project with PHT Services in South Carolina. Can you tell us about that?*

MD: PHT Services, Ltd., in Columbia, SC, provides risk management services, including workers' compensation and liability self-insurance, for over fifty acute-care hospitals in South Carolina. After a healthcare worker at one of those hospitals was occupationally infected with hepatitis C from a needlestick injury—with treatment costs estimated at $250,000—PHTS realized it needed to find ways to reduce exposure risk for employees. The cornerstone of that initiative was the "Sharp-Object Injury Prevention Program" (SOIPP) and the establishment of the PHTS Health Care Worker Safety Center, which facilitates implementation of the SOIPP strategy at member hospitals. My work with PHTS has been developing and implementing a module on sharps safety in the OR, as one component of the SOIPP program.

AEP: *How is the SOIPP for the OR structured?*

MD: The major components include:

- communicating top management's commitment to safety;
- finding a safety champion in the OR who can help lead the effort;
- appointing a safety committee, chaired by a medical director, to facilitate implementation of the program;
- conducting surveillance and risk assessment on a continuous basis;
- analyzing adverse events and near-misses through accident investigations;
- developing a protocol for evaluating safety devices;
- and educating hospital and attending OR staff on safer devices and work practices.

Before I conduct education sessions at individual facilities, PHTS distributes my book to surgeons and OR staff—they are tested on it later— and show them a video on OR safety techniques. Then I give a presentation to the hospital and attending staff, and safety posters are placed in the OR to reinforce what they've learned. The program is evaluated periodically, and reports are submitted to management on its effectiveness.

AEP: *What successes have you been able to measure with the program so far?*

MD: We've seen significant reductions in sharps injuries in hospitals, including ORs, that have fully implemented the SOIPP. It will always be a work-in-progress. As new and better products evolve, they will need to become integrated into surgical practices, to further reduce injury rates.

***AEP**: Why has the OR been one of the hardest clinical settings in which to implement safer devices and practices?*

MD: Two main reasons. First, older surgeons, myself included, were not educated about sharps injuries and blood exposure risk during their training, because HIV and hepatitis C were not issues until the mid- to late-1980s. Second, it is hard to get surgeons' attention, because their schedules are always packed. That's why I wrote my book, in order to have a common ground for communication and to emphasize that effective strategies for preventing sharps injuries are already available.

***AEP:** What is the role of infection control professionals (ICPs) in educating surgeons about safe surgical practice?*

MD: Typically, they are the ones assigned the task of creating change in hospital ORs—and it's difficult. Sometimes they are successful, but sometimes they don't get the respect they deserve, especially from surgeons. I've had the opportunity to speak and consult at hospitals around the country and in Japan, and what I've seen is that surgeons are more receptive to hearing about safety devices and work practices from another surgeon than from someone outside their specialty. Some surgeons still have the attitude that injuries are part of the job and people just need to be more careful; fortunately, however, they are in the minority. Most surgeons are adaptable and open to change; with effective education, OR professionals—including surgeons—will embrace safer surgical devices and work practices.

***AEP:** The landmark 1999 report from the Institute of Medicine—"To Err is Human: Building a Safer Health System"—brought the issue of medical errors to the forefront of healthcare. Do you see a connection between medical errors and occupational sharps injuries, between patient safety and worker safety?*

***MD*:** Absolutely. Surgery is the leading source of both medical errors and sharps injuries in hospitals. If we examine our near-misses and analyze the root causes of adverse events, as has been done in the aviation industry, we'll better understand how to build safety into existing systems in order to protect patients from medical errors and workers from sharps injuries.

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>
> *-Mark Davis*

***AEP:** Can the problems of patient safety and worker safety be dealt with using the same approach?*

MD: Certainly—and they should be. Separating the two is artificial. Infection of either a healthcare worker or a patient with a bloodborne pathogen is as much a medical error as incorrect administration of a medication that injures or kills a patient. By following the money trail—the cost of adverse events—administrators can easily see the need for education in the OR to protect the worker as well as the patient. A culture of safety does not discriminate between worker safety and patient safety.

AEP: Are you optimistic about improvements in safety in the OR for healthcare workers and patients?

MD: I view the large number of adverse events as a great opportunity for improvement. Sharps injuries are costly—but the good news is that the majority of them are preventable. Healthcare institutions need to be dedicated to creating a culture of safety facility-wide, from the top down. Some people believe, and I'm one of them, that if the CEO or top-level hospital administrator isn't dedicated to improving safety, for patients and staff alike, it will be a long and frustrating process. But in my travels, I've met more than one hospital CEO who has said, "I want our hospital to be the safest in the country." All CEOs should think that way, but they also need to articulate their vision to employees and actively seek ways to make it a reality. Certainly we already have the tools and knowledge to prevent most occupational sharps injuries.

Fortunately, focus and vigilance are hallmarks of OR professionals. Given safer technology and the necessary education, they will find and follow the safest path to protecting themselves and their patients. I think the future is bright. ❐

Dr. Davis can be contacted at msdavismd@aol.com. For more information on his book and other OR safety resources, visit his website at www.orprecautions.com.