

NEJM Study Reveals High Rates of Needlestick Injuries Changing Systems and Culture



“The stick I got as a med student was during an intense cardiac case. The attending was not sweet. There were multiple sutures that had to be done very quickly. He tossed the needle driver and it landed on my hand. I was unable to report it until 9 hours later. No one said I couldn’t go, but all hands were needed doing the case. It’s understood in that type of situation that the patient comes first. I was also trying to get a residency in surgery and a good rotation grade, so I stayed.”

Susana Wishnia, MD
PGY 3 Surgical Resident, Boston Medical Center

“I’m really glad that the NEJM article came out. It [a needlestick] certainly happened to me before, and I didn’t report it.... After reading the NEJM article, I went through the whole process of reporting, and two other colleagues who were working on the same shift with me did, too. I insisted that they report right away. Before the article, I had a reluctance to do so.”

Vaughn Whittaker, MD
Surgical Chief Resident,
Harlem Hospital



The study of needlestick injuries among surgery residents was comprehensive: 17 medical centers, 699 respondents and a 95% overall response rate. And the results, published in *The New England Journal of Medicine* on June 28, 2007 were eye-popping:

- 83% of surgery residents had had a needlestick injury during training;
- For 53%, the injury had involved a high-risk patient;
- By their final year of training, 99% of surgery residents had had a needlestick; and
- Of the most recent injuries, 51% were not reported to an employee health service.

Eye-popping, that is, for just about everyone except surgery residents. “The article pretty much mirrored my experience so far,” commented Dr. Susana Wishnia, a general surgery resident at Boston Medical Center. “I’m a PGY 3 and I’ve been stuck three times, once in med school on the west coast and twice since I’ve been a resident here.”

“The study is true,” concurred Dr. Vaughn Whittaker, a PGY 5 in Surgery at Harlem Hospital in New York. “It reflects our experience very closely.”

“Once a week, or once every two weeks someone is stuck,” said PGY 2 Orthopedics resident Dr. Matthew Harris from Westchester Medical Center in New York. “We don’t talk

about it. I’ve seen attendings and residents stick themselves. It’s just very common. We keep it among ourselves – there was no surprise in that *NEJM* study to us.”

When asked the perceived cause of their injury, surgery residents declared the lion’s share (57%) were attributed to being “rushed.”

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“In a recent study of a general surgical service in an urban academic hospital, 20 to 38% of all procedures involved exposure to HIV, HBV, or HCV.”

“Needlestick Injuries among Surgeons in Training”
The New England Journal of Medicine,
 June 28, 2007

“There are two main reasons you may have to rush,” explains Dr. Wishnia. “If it’s an emergency and you’re suturing quickly so that the patient won’t lose so much blood or if you’re going too slow, the attending might take the case away. You don’t want that to happen. You want to impress them so that they won’t take the case away.”

A lack of time was also the leading reason given in the *NEJM* study for

“No Utility in Reporting a Needlestick?” Don’t Believe It!

Twenty-eight percent of surgery residents surveyed in the *NEJM* study said they didn’t report a needlestick because “there was no utility in reporting.” Dr. Carol Sulis, hospital epidemiologist at Boston Medical Center couldn’t disagree more, pointing to the fact that anti-retroviral therapy taken within one hour after exposure can significantly reduce HIV infection. “And Hep C is far more prevalent than HIV,” says Dr. Sulis. “If you get exposed today, you may not develop symptoms for many years. At BMC, we do more frequent follow-up testing of all of our Hep C exposures and refer anyone who develops abnormal liver tests or Hep C symptoms to the liver guys for evaluation and aggressive management.”

Dr. Vaughn Whittaker, a surgical chief resident at Harlem Hospital also pointed out another reason why there certainly is “utility” in reporting sticks. “Because,” explains Dr. Whittaker, “if a disease is contracted occupationally, you can’t make a legitimate claim [for workers compensation or HIV insurance, which many hospitals provide to residents] unless you have reported it.”



of Surgery Resident Needlesticks are Seen as Keys to Prevention

the failure to report injuries.

“The reason people don’t report is that it occurs during a case,” said Dr. Whittaker, “and to stop the rhythm of the case, in your mind, you figure you’ll be out for the whole day, it will interrupt you, so you think, ‘This too will pass, nothing will happen.’”

Dr. Carol Sulis, hospital epidemiologist at Boston Medical Center, has studied needlestick exposure and prevention on a hospital, state and national level for more than 20 years. She had déjà vu all over again when she saw the *NEJM* data. “We studied needlesticks at BMC ten years ago and found similar rates of exposure for surgical residents. Other residents get stuck too, but it’s worse in surgery. We also found gross under-reporting. We observed 874 surgeries in a row and found clear breaches – and only 5% were reported!”

She noted that the hazard of injury to surgical residents is made more serious because of the frequency at which they are exposed. “We need to tackle the ‘I’m too busy, it takes too much time’ reason head-on,” said Dr. Sulis. “Procedures should be in place everywhere to deliver meds to the OR if a physician can’t leave. And rapid HIV tests are now widely available, so residents shouldn’t have to wait days to find out the infection status of the patient whose blood they were exposed to.”

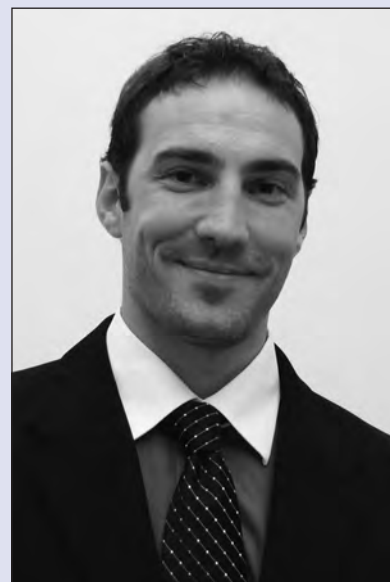
Dr. Whittaker agreed. “It seems

it’s too much of a hassle to report. The mechanism – how to report, who to report to – isn’t clear. Hospitals can do a lot more with workers and surgeons especially. It should be something as easy as picking up your paycheck. Everyone should know how and there should be no reluctance. We need to foster an atmosphere where reporting is so much easier.”

According to the study, a key factor in determining that an injury was formally reported was the fact that another person knew of it. Most frequently, this other person was an attending physician, though it was also often a nurse or another resident.

The *NEJM* authors pointed to the need for both systemic and cultural change in surgery: “coverage systems to facilitate prompt reporting, curricula that include specific instruction and credentialing on safe techniques [and] other system level changes,” e.g. needlestick hotlines and routine prompts on post-op check lists, as well as “peer education to create a culture that encourages speaking up.”

Bottom line, says Bill Borwegen, Director of SEIU’s Health and Safety Department, “People are in this profession because they care about their patients, but you need to also care about yourselves. Patient safety and provider safety go hand-in-hand.”



“Time, fear, and familiarity play the biggest part in somebody shrugging off a needlestick and saying, ‘this is probably just a poke and not a true stick.’ You’d be amazed how much rationalization drives this decision.”

Mathew Harris, MD
PGY 2, Orthopedic Surgery,
Westchester Medical Center



“We need to tackle the ‘I’m too busy, it takes too much time’ reason head-on.”

Carol Sulis, MD
Hospital Epidemiologist, Boston Medical Center

Know Your Rights: Safe Needles are the Law

CIR’s national affiliate, the Service Employees International Union (SEIU) is almost two million members strong, and its Health and Safety Department is one of the most active among unions in the U.S. Director Bill Borwegen points out that SEIU, including CIR resident physicians, were “instrumental in helping to achieve passage of the federal Needlestick Safety and Prevention Act of 2000.

“Needlesticks dropped in half since the law was passed and hospitals were required to use needles with integrated safety features such as retractable syringes,” says Borwegen. “And cases of Hep B went from 17,000 a year to less than 300, according to CDC [Centers for Disease Control and Prevention] data.”

“And yet, we have to be eternally vigilant,” warned Borwegen. “Is my employer using the best safer needles available in the marketplace? If not, that’s what CIR and SEIU are there for – to help work with members to press employers to make sure that the best technology is used. There are disposable scalpels with retractable covers, blunt suture needles, and many other advances on the market today. But the law is only as effective as its enforcement. We have more fish and wildlife inspectors than OSHA inspectors today. That is why residents need to know their rights to demand protection.”

WHAT SURGERY RESIDENTS SAID ABOUT THEIR INJURIES

Perceived Cause of Injury*:

Rushed = 57%
Fatigued = 15%
Lack of Skills = 12%
Lack of Assistance = 9%
Not Preventable = 20%

* Respondents could select more than one response.

Reason For Not Reporting Injury*:

Takes Too Much Time = 42%
No Utility in Reporting = 28%
Do Not Want To Know Results = 6%
Afraid of Stigmatization = 5%
Other or No Response = 23%

* Respondents could give more than one response.

— *NEJM*, June 28, 2007