

Interview with Dr. Janine Jagger – Engineered Sharps Injury Prevention



Janine C. Jagger, MPH, PhD

The below interview with Janine Jagger, PhD was conducted in April 2010 relative to her recent study titled, “Increase in Sharps Injuries in Surgical Settings Versus Nonsurgical Settings after Passage of National Needlestick Legislation.”¹

The following is an excerpt of an at length interview:

Dr. Jagger, in your opinion, what is the primary factor contributing to the low adoption of safety-engineered devices and the rise of sharps injuries in the surgical setting?

In the U.S. there are at least three factors at work. First, surgeons have a great deal of discretion over the selection of devices and their awareness of the link between their device choices and the safety of the operative team is generally low. But that is not the only reason.

There has been much less promotion of safety-engineered devices for cutting and suturing than for the types of needles used primarily outside the OR, such as injection, blood drawing, and vascular access devices. The companies that make these devices for the OR have not, at least up to now, been so involved in marketing them. Marketing does make a difference and although we may view that as a commercial endeavor, marketing helped with the rapid uptake of many safety devices. It's also important that these companies engage surgeons as part of the creative process so that their complex clinical needs are met.

The third factor is that enforcement and compliance monitoring of the Needlestick Safety and Prevention Act in the OR setting has been relatively low. Both OSHA and Joint Commission have tended to look elsewhere in hospitals for bloodborne pathogens compliance while the OR tends not to be a focus of attention. Therefore, lack of compliance in the OR has had little consequence.

Despite the Needlestick Safety and Prevention Act of 2000 and efforts from other regulatory organizations, sharps injuries in surgical settings rose 6.5%. Why do you think these new laws have been unsuccessful?

The 6.5% increase observed in our study may just indicate the lack of a decrease during the time interval studied. It is possible that the number of surgeries increased, as well, which could account for the small increase in injuries.

The important message is that there is scant evidence of adoption of available and proven safety measures when we can provide solid estimates of significant reductions that can be achieved with the implementation of these measures.

Do you predict this percentage (6.5%) will change in the next 5 - 10 years? How?

I am certain that there will be significant reductions in occupational injuries in the OR in the next few years. The devices and techniques are readily available.

We needed to breach the awareness barrier and I think that is happening now. Also, the OR nurses and OR techs need to be fully engaged in safety decisions. They will provide considerable momentum to follow through with a safety agenda.

Why do you think the United States has fallen behind in the adoption of sharps safety devices compared to other countries?

First let me say this issue is not unique to the U.S. It is quite widespread around the world with a few exceptions. What sets the U.S. apart, however, is that we have made such tangible progress in safety in all other hospital settings so the contrast between the OR and other settings is particularly remarkable.

The U.S. is ahead of all other countries in the adoption of safety-engineered sharps outside the OR. There is only one country that has by far surpassed the U.S. in the adoption of blunt suture needles and that is Japan where their use is widespread and standard. In Japan there was a massive marketing initiative by the company selling the blunt suture needles. This was combined with a willingness on the part of Japanese surgeons to try the new needles. It has been a remarkable win-win situation and should be held up as an example for surgeons everywhere.

Do you think the early education of medical students and residents will impact the adoption of safety engineered devices in coming years?

Everything depends on the surgeons. The surgical residents aren't going to be trained on surgical devices that the surgeons aren't using.

In your research, have you found that certain devices and/or techniques (i.e. hands-free transfer, neutral zone, engineered devices) are more likely to be adopted than others?

The problem has been that none of the devices or techniques have been adopted in significant numbers in the OR. However, one area of particular difficulty has been the design of safety-engineered scalpels. This is one device category for which the involvement of surgeons in redesign is critical. The handling requirements of surgeons are complex and subtle and their needs have to be met. This is likely to be an evolutionary process.

Have you considered conducting a study on the cost of sharps injuries, and how this translates to the risk of exposure per employee?

We have already conducted some cost research but it is not a very fruitful area. Blunt suture needles are the safety device with clear cost benefits but most other safety devices do not benefit from a cost argument. In the U.S. it is not permitted to use cost as a justification to continue using non-safety-engineered devices.

The way I look at it, in the U.S., we have brought this new generation of technology into the world and by our efforts we have made it more available and cheaper everywhere else. It is an invaluable role that we have played and it has been well worth the cost. Because the new, safer technology is now available around the world, competition and expanding markets will bring costs down in the long run.

1. Janine Jagger, MPH, PhD, Ramon Berguer, MD, FACS, Elayne Kornblatt Phillips, RN, MPH, PhD, Ginger Parker, MBA, Ahmed E Gomaa, MD, ScD, MSPH. "Increase in Sharps Injuries in Surgical Settings Versus Nonsurgical Settings after Passage of National Needlestick Legislation." *American College of Surgeons* Vol. 210, No. 4 (April 2010).