

Robotic Surgical Systems on the Ropes

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In the movie “Real Steel” (if you haven’t seen it, don’t bother; entertaining, but disposable), robots have replaced human fighters and they do battle in the ring in front of huge crowds. Today, robotic surgical device manufacturers could use such robots among their devices to help fight the onslaught that’s been hitting them of late. While their fight isn’t in any boxing ring, it is on several fronts. The robotic surgical opponents have included the [FDA](#) [1], [Wall Street](#) [2], and [healthcare professionals and surgeons](#) [3]. And there are more items on similar topics at the MDT website regarding the challenges faced by robotic surgical manufacturers.

Since the company is the “poster child” for robotic surgical systems, Intuitive Surgical seems to be a name that always comes up whenever there is a problem with a system. The company’s da Vinci Surgical System has gotten a lot of press during my time on MDT. In fact, in my first year as editor of MDT, I was fortunate enough to get a live look at the da Vinci system up close at an industry event. It was (and still is) a fantastic piece of technology that was simply amazing to see. I was in awe at the prospect of surgical procedures being performed by a doctor seated at a control panel while a few feet away, a series of arms that looked like they came from the Terminator movies worked in fluid motion at a surgical table. It was certainly impressive.

Unfortunately, that spotlight seems to have faded recently for Intuitive Surgical and

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robotic surgery systems in general. There have been reports of issues and lawsuits from procedures gone wrong when a robotic surgical system was used. I don't have the statistics, but I'd be curious to know if the numbers are truly all that different from the number of problems experienced during the same surgical procedures when a more traditional approach is taken. Not that it excuses the problems, but it certainly speaks to the attention being given to those issues when the robotic surgical system is used versus a more traditional approach. Still, there have been issues and they do need to be addressed. However, abandoning robotic surgical systems is not the answer. In fact, it would be a complete mistake, in my opinion.

In the scheme of medicine, robotic surgical systems are in their infancy in healthcare. Years from now, we may look back at the da Vinci system and chuckle at its size in the same way we do when we think of computers that took up an entire room and took a week to perform functions that happen in seconds today. That's almost the equivalent of the da Vinci system. It's the healthcare equivalent of the computer that takes up a whole room. Again, it's an amazing piece of technology and with sufficient training for the operator, can be a fantastic facilitator of enhanced healthcare.

And therein lies part of the problem—training. Some are pointing at the system and saying that it's not the answer for certain surgical procedures. Yes, there are some issues with regard to cost versus more traditional techniques. However, when a surgeon receives the proper training on a surgical system, it can serve as an excellent extension of that surgeon's hands and only enhance his capabilities.

Personally, I look forward to this wonderfully exciting area of surgery and seeing where it goes next. I'm anxious to see future offerings from Intuitive Surgical and companies like them. I'm curious to see the size of the next surgical system that replaces the da Vinci system as the "top dog" in the space. Being a Science Fiction fan, I'm truly excited to see these systems shrink down until they are implanted into the body and controlled remotely by a surgeon performing a procedure from the inside of a patient's body. Not sure we'll achieve that degree of technology in my lifetime, but perhaps I'll get a glimpse at some point of what the future holds for surgical robotics without having to see it in the next movie.

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