

Computer-Assisted Technologies: Industry Viewpoints and Activity

ORTHOPRENEUR: What feedback have you received from surgeons?

Prentice: It depends on what type of surgeon you're speaking to. From deformity surgeons, some of the feedback has been: they've been surprised during the planning on some of the anatomy; they wouldn't have assumed that's what it looked like. They thought the pedicle would be a certain size and it wasn't. Now they're able to identify the pedicle before. They're surprised at the efficiency. Most people think that you add equipment and you're adding time and steps. For larger deformity surgeons, they're cutting time down, not adding it. In the history of robotic surgery, some of the early robotic systems out there added time. We're also getting good feedback on our software. Our software is an analogy; we're in iOS 6, compared to the original software. Every iteration of software includes surgeon feedback.

ORTHOPRENEUR: Have you received any pushback from hospitals?

Prentice: You can't just add technology for the sake of technology. There's definitely prudence, and there should be. They want to make sure that whatever they're adding from an equipment standpoint adds value. That's what we have to display to them. We've shown that not only can we improve operational efficiencies in the room, not only can we reduce the hazard to their teams with lower fluoroscopy, but it's also translating to patients through fewer complications, fewer revisions, less opioid use, faster return to activity, shorter length of stay – and we have actual data to show that. When you have that conversation, then they become more open. The immediate knee-jerk reaction is, 'Is this needed?' which is fine, and we can speak to that.

ORTHOPRENEUR: Do you predict more technologies like this will emerge?

Prentice: When you're talking about skeletal structures, robotics can easily be integrated. In 20 years, you will not have an orthopaedic procedure without some kind of robotic element. It's where your lens is on the situation. If you look at just what's currently there and fixate on the constraints currently there, you might say no, that will never happen. You could argue about who is going to do it, which modality or which brand, but it's going to happen. We're starting to see more openness to it, especially in spine, and more of the opinion that it will happen.



Medtech

Product: ROSA™, spine robot for minimally-invasive spine surgery

Teresa Prego, Senior Director of Marketing

ORTHOPRENEUR: What is the intended use of ROSA?

Prego: The initial clearance [\(510\(k\) received in January 2016\)](#) is for pedicle screw placement in the lumbar region. It has an optical tracking capability with a camera, because one of the issues in spine is that the patient moves, or you move the patient. When the patient moves, that changes the robot to adjust because what you're doing is based on the imaging. You're planning the angle at which you'll place your screw. If the patient shifts, then [the robot] shifts to make sure that screw is still going in at the same trajectory. Often, surgeons will create a large incision so they can see the anatomy and make sure they're going where they think they are. [With Rosa,] you can do this without a large incision. The patient is scanned intraoperatively, so that the planning can be done in the OR, during the surgery.

It has been in France, Germany and Spain for almost a year; we had the CE Mark first. There have been 80 to 100 cases in Europe. The surgeons are very excited. For them, it makes sense.

ORTHOPRENEUR: What's your approach for hospital adoption?

Prego: When we look at a hospital, we look at the economics as well. From the hospital's economic perspective, if there's a revision or a readmission, they pay. In around 40 percent of spinal fusion cases, the patient still has issues and some of that may be related to where the screw was placed or related to infection. A larger incision has a higher potential for infection. There are some positive features with a minimally invasive approach. It's not just looking at a cool technology and saying you've got to have this technology just for technology's sake. We understand that they have to do what makes sense for them. You really have to bring value.

Robotics has seen tremendous growth. The understanding of robotic assisted surgery has increased enormously. Now we're trying to expand beyond the surgeon community to referring physicians, like primary care physicians or neurologists, and even patients.

We will probably, as a piece of capital equipment, receive more scrutiny from the hospital because you have to have a great story in addition to a compelling technology. With some of these products, as part of a purchasing organization, you know that you're going to buy them over and over—perhaps there is less scrutiny in that situation. But there's always some skepticism about robotics. Solid clinical value will be needed for robotics to really have use long-term.

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