

Biotech & Tech

Robot-teacher in the operating room

For 1st time, Sinai surgeon teaches procedure entirely remotely

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Dr. Alex Gandsas has never met the two surgeons from Argentina whom he trained to perform a new procedure.

Gandsas, a bariatric surgeon at Sinai Hospital of Baltimore, even observed in the Argentinean operating room several weeks ago when the doctors performed the surgery, called a gastric sleeve procedure, for the first time.

The doctors' relationship has been based entirely on a telemedicine technology called the RP-7 Remote Presence Robot, which allowed the Argentineans to use a Web-based program on their own computers to interact with Gandsas, who was able to see their faces and hear their voices on a 5-foot-5-inch robot in his own operating room in Baltimore.



InTouch Health, the California company that makes the robot, said Gandsas' training of Dr. Sergio Cantarelli and Dr. Gabriel Egidi was the first time a surgical procedure was taught entirely remotely.

"I wanted to find out if ... I could teach someone who I've never really shaken hands with to do a new procedure he has never done before, and still be successful," said Gandsas, head of Sinai's division of bariatric and minimally invasive surgery.

The RP-7 was created to help doctors conduct their rounds from remote locations, not for training, said InTouch spokeswoman Jennifer Neisse.

But based on Gandsas' work, InTouch hopes "to expand the program and market this as a different type of application," Neisse said.

It might sound odd for surgeons to learn new procedures without actually touching a scalpel, but the medical college community has accepted remote training as the wave of the future for continuing education, said Dr. Rika Maeshiro of the Association of American Medical Colleges.

An AAMC survey in 2000 found that 36 percent of graduating medical students said they were

confident in using various forms of telemedicine. The same survey in 2006 found that 63 percent of graduates were confident with their telemedicine abilities, she noted.

“Clearly, telemedicine is becoming a part of standard medical education,” said Maeshiro, assistant vice president for the association’s public health and prevention division.

Sinai began leasing its robot from InTouch last year. Sinai, Bon Secours Baltimore Health System, Kernan Hospital and Johns Hopkins Hospital — where Gandsas is an associate professor of surgery in the medical school — are the only Maryland hospitals that use the device, according to InTouch.

When Cantarelli contacted him from Argentina — Gandsas’ native country — the surgeon began to consider using the robot for training.

Cantarelli was interested in learning the gastric sleeve procedure from the Sinai surgeon, but did not want to travel, Gandsas said. He thought immediately of the robot, and contacted InTouch.

The company’s office in Argentina outfitted Cantarelli and Egidi with the remote station necessary to interact with Gandsas.

The Argentine doctors could use the robot’s two-way cameras, microphones and wireless capabilities to move around the operating rooms at Sinai and Hopkins, observing procedures for three months.

Eventually, InTouch provided the Cantarelli and Egidi with their own robot on a temporary basis, so Gandsas could sit in on their first gastric sleeve surgery, an alternative to gastric bypass to correct severe obesity.

A few weeks later, the 39-year-old female patient is recovering nicely, said Gandsas.

The Baltimore surgeon said he plans to sit in on two more surgeries in Argentina using the robot, and both Gandsas and InTouch’s Neisse said they anticipate more partnerships with doctors in other nations.

The usual method of keeping doctors up-to-date with new procedures or techniques is physically transporting either the experts or the trainees — a costly proposition, Gandsas said.

That’s not to say the RP-7 comes cheap. InTouch offers two-year leases for \$5,000 per month, plus \$5,000 to purchase each remote viewing station. Most hospitals — more than 100 in the U.S. and 20 internationally use the devices — lease their robot, as buying one costs about \$150,000.

But many physicians do not have the funds or time to travel abroad, Maeshiro said.

“And let’s say you have an urgent procedure,” she added.

Gandsas said he is excited about the possibilities.

“It opens a new paradigm in surgical education,” he said.

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