New system proposed for logging physician experience in robotic surgeries

September 26 2017

Loyola Medicine physicians have proposed a simple new system to improve the reporting of robotic surgeries performed by surgeons in training.

The system, called RoboLog, was successfully piloted on 310 urologic robotic surgeries, according to a study published in the *Journal of Surgical Education* by first author Kristin Baldea, MD, senior author Gopal Gupta, MD, and colleagues.

Robotic-assisted surgery is gaining popularity among urologists and now is the most common technique performed for prostate cancer surgery. The surgeon sits at a console with a 3-D monitor and two joysticks. Movements by the surgeon's hand or wrist are translated into precise movements of the surgical instruments.

Following medical school, surgeons undergo training while serving as residents, and some surgeons undergo additional training as fellows. However, there is no standardized training in robotic surgery for residents and fellows and few guidelines for determining competency.

The Accreditation Council for Graduate Medical Education's logging system for robotic surgeries is the same as that used for other types of surgery: A resident either performed the surgery or acted as an assistant. But this system does not accurately reflect a trainee's actual robotic experience because there is considerable variation in how much a resident participates on the console. For example, a resident who

performs only one part of a robotic prostate cancer surgery - removing the lymph nodes - will get the same credit as a resident who performs the surgery from start to finish.

RoboLog is a web-based program that provides much more detailed information about a resident's involvement in robotic surgeries. The system includes 11 common urologic robotic procedures. For each surgery recorded, there's a drop-down menu listing the steps of the surgery. The resident checks each step that he or she performed, and how many minutes it took to perform each of the key steps. No patient identifying information is included. Residents who have little experience in certain surgical steps can be identified early and this deficit can be addressed.

The median time for a resident to log a case was 59 seconds and the median time for a supervising surgeon to review it was 53.5 seconds.

Two other centers have begun using RoboLog and Loyola plans to make the system available to any program that wishes to use it.

"Widespread usage of a logging system with more insight into step-specific involvement is needed," researchers concluded. "RoboLog fills this need and can be used to track robotic training progress and aid in development of a standardized curriculum."

The study is titled, "Design and implementation of a robotic surgery training experience logging system."

Provided by Loyola University Health System