

Is Gynecology Ready to Put Quality First in Surgical Education?

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Each year there are nearly 1 million laparoscopic procedures performed in the United States, with about a third performed by gynecologists. Tubal ligations and hysterectomies are two of the most common procedures performed. It is estimated that the rate of complications from laparoscopic procedures approaches 8%, and that the principal source of complications is error. The reasons for the 'errors' and complications are sometimes systems issues (urinary tract infections, nerve injury) and sometimes surgeon error (trochar injury, bladder perforation) but many agree that there is room for improvement [1,2].

In 2009 the American Board of Surgery (ABS) embraced a standard curriculum for basic education for laparoscopy entitled the 'Fundamentals of Laparoscopic Surgery' (FLS), as developed by the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES). There is a requirement that all resident graduates must have FLS certification before sitting for their 'Board exam' in general surgery. The exam consists of a series of 5 technical skills that must be performed under the watch of a proctor, a time limit, and definitions of a passing or failing performance [3]. There is also a cognitive test on safety in surgery. It is a high stakes exam. We must wonder if such a requirement by the ABS can possibly be justified. What is the evidence for this?

The tasks were developed by Gerald Fried at McGill University who saw the advantage of simulation embraced by the airline industry and decided to apply these to surgical education. The five tasks developed were to teach and test, and are: bead transfer, cutting a circle from a 4x4 gauze, applying an endo-loop, a suture with an extracorporeal knot, and a suture with an intra-corporeal knot [4-6].

These tasks were then validated over several years at McGill and collaborating teaching facilities. Experiments around construct validity showed that the tasks discriminated between surgeons with different experience level [4]. The tasks had predictive validity in that tasks scores prospectively approximated actual performance in the operating room by surgical residents. There was external validity meaning that the skills had similar validity at other institutions. Experiments show that the skills learned in the simulation laboratory were for the most part retained over time with repeated testing, a bit like riding a bike, once we learn, we retain and build on the basic skills [5,6].

Educators are trying hard to get residents and surgeons into the simulation laboratory to practice and sharpen their skills [7-10]. Most practicing gynecologists did not learn to suture using laparoscopic instruments. Most skilled laparoscopists (doing hysterectomies) now consider laparoscopic suturing, a basic skill that must be acquired. However, like riding a bike, it must be learned with several hours of practice and with repetition, and the more you ride, the better you get. We cannot allow poorly trained surgeons to operate on our patients. Is robotics the answer? Do we throw equipment and money at our problem?

Laparoscopic suturing and other good operative skills are well within reach of anyone who wants to put in the time to train. Incentives to encourage this training, now seen as 'extra' are lacking. We have a number of choices that will be coming soon. Do we restrict privileges at the hospital level with 'numbers based' credentialing for gynecologic privileges? Should hospitals require FLS before credentialing for

privileges? The ABS has taken the step to encourage simulation training with regulation. Should the American Board of Obstetrics and Gynecology follow suit? Should gynecologists develop and validate their own tasks and tests in pursuit of a standard curriculum with validated results and testing? These and other questions will need to be answered if we are to embrace patient safety in a serious way.

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