

ROBOTIC SURGERY LEARNING REQUIREMENTS:
SIMULATION BASED & SCHOOLHOUSE TRAINING TO IMPROVE SAFETY

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Abstract:

Historically, surgeons learn new surgical procedures through observation, practicing skills, techniques, and then performing the procedure on patients under the supervision of an experienced surgeon. Successful implementation of robotic programs requires development of a dedicated team and training using a structured approach. Today, training continues to be a serious safety issue for surgeons, hospitals, credentialing departments, surgical Associations and perhaps most importantly, the patients. If a surgeon expresses interest in robotic surgery, training is often conducted by a one-day basic training course involving simple tasks but no emphasis on technique or in-depth knowledge of the individual steps required. Although this is sufficient to gain familiarity with the controls of the robotic system, it is inadequate to perform a complex and technically demanding techniques in operations such as radical prostatectomy with any degree of precision and expertise. In order for a fighter pilot to fly a jet, he or she must complete technique and task oriented flight simulation to gain sufficient skills captured through metrics. Simulators for open surgery have never really been practical and surgical residencies are a graded and structured environment for surgeons to develop their skills under constant supervision and guidance. The advent of laparoscopic and robotic surgery, which depends on imaging using videoscopes inserted into the body, allow for the very real possibility of simulation. Inadequate or suboptimal training is a serious safety concern and has yet to be adequately addressed via current day simulators. In addition, current robotic training lacks any objective metrics with which to gauge a surgeon's skills. Development of task and technique driven simulation training programs will address serious safety concerns in the Operating Theater.