Proficiency-Based Open Surgical Skills for Medical Students: Can It Be Done and Do the Skills Decay?

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Over the past two decades, surgical education research has grown immensely. Factors contributing to this include reduced clinical exposure with the 80-hour work week, concern for patient safety and the advent of laparoscopy among other factors. The utility of surgical education programs is predicated on the acquisition, retention and transferability of skills learned in the skills lab. For a number of reasons, much of the research in surgical skills has involved laparoscopy and endoscopy and has focused on surgical trainees. However, open skills training for medical students has far-reaching implications, in that greater than 80% of medical students will pursue careers in non-surgical specialties. Many non-surgeons will still require basic surgical skills at some point in their practice. It is incumbent on educators to shape a curriculum that allows acquisition of basic open surgical skills that are resistant to decay. Previous studies have indicated that proficiency-based education is superior in terms of skills acquisition, as compared to other programs. Medical students will be voluntarily enrolled in a study that randomizes participants into two cohorts; the first will be taught in a traditional time-based curriculum and the second will undergo proficiency-based training with expert derived proficiency marks for basic knot tying and suturing. Each participant will undergo pre-testing and then undergo post-testing when predetermined proficiency benchmarks have been attained. After this, each participant will be re-tested at 3, 6 and 12 months to assess for decay in skills.