A TWO-WEEK DEDICATED ROBOTIC SIMULATION ROTATION FOR GENERAL SURGERY RESIDENTS WAS ASSOCIATED WITH IMPROVED SELF-RATED CONFIDENCE AND PERFORMANCE OF TECHNICAL SKILLS

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Background

Utilization of robotic surgery has become increasingly widespread. However, concerns about training and comfort level have prevented resident console involvement. Formal training is essential for skill acquisition, but hard to incorporate.

Hypothesis

We hypothesized that instituting a proficiency-based training curriculum with protected time can improve resident confidence and comfort level performing on the training console.

Methods

University-based general surgery residents in their clinical 3rd post graduate year (PGY3) were assigned the curriculum that consisted of the following: instrument mastery, simulation exercises, robotic suturing, inanimate drills, laparoscopic/open technique comparisons, mentor sessions, and real-time operative exposure. Curriculum evaluation surveys were given to participants on completion with Likert scales 1 (low) to 5 (high).

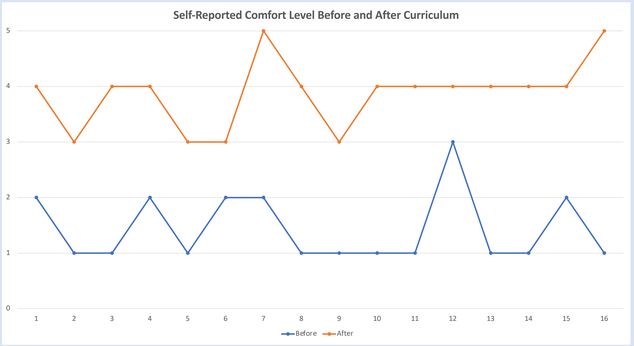
Results

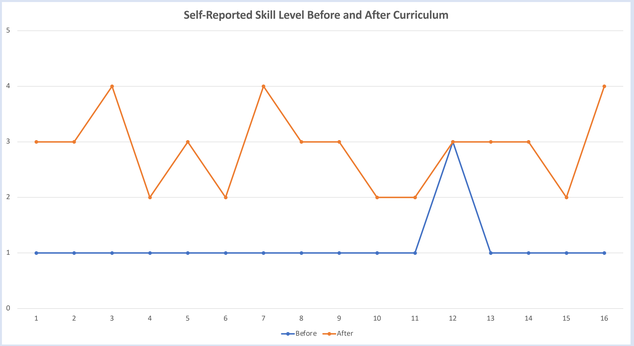
In total, 16 residents were assigned the curriculum: 7 (42.8%) males and 9 (56.3%) females with a median age of 31years (range:29-36). All 16 (100%) completed every component of the curriculum. Before starting, 12 (75%) residents reported console surgeon experience (average of 3.6 robotic operations). When asked about conducting drills outside of the rotation, 16 (100%) expressed interest in setting up their own drills for continued practice on their own time; however, only 7 (43.75%) residents expressed interest in doing drills at night and/or on weekends.

Most Helpful Aspects	Results*
Biotissue Exercise	56.3%
Mentor Sessions	25%
Repetition/Time Spent	25%

Least Helpful Aspects	Results*
Laparoscopy	43.8%
Virtual Simulation	18.75%
Hernia Drills	6.25%
“None”	31.3%

*Some residents stated more than one most/least helpful aspect





Conclusion

Proficiency-based training demonstrated improvement in self-reported comfort and skill level on the robotic platform. Resident attitudes also indicated a promising future for protected mastery-based training. Studies translating into increased console time for residents are ongoing.