Impact of a standardized skills training program on successful completion of Fundamentals of Laparoscopic Surgery (FLS) Course

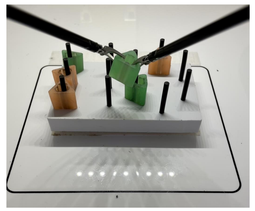
Jennifer Underhill, MD, Savanah K. Renshaw, MPA, MPH, Kelly R. Haisley, MD

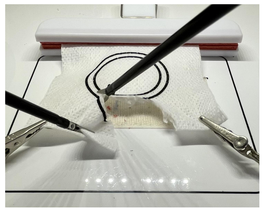
AIM

We sought to determine the appropriate timing for FLS examination during surgery residency by comparing pass rates based on post-graduate level and previous laparoscopic experience with the aim of moving fundamentals examinations to earlier PGY years

INTRODUCTION

- Fundamentals of laparoscopic Surgery (FLS) was developed by SAGES in the early 2000s as a means to demonstrate competence among trainees with laparoscopic technique[1]
- Since 2008, it has become a mandatory part of general surgery training and ABS certification, and exams are frequently completed during the final year of residency
- Previous studies have demonstrated that completion of early FLS training among junior trainees leads to increased operative performance in addition to increased FLS scores when the test is eventually taken[2]



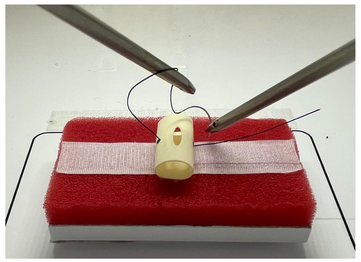


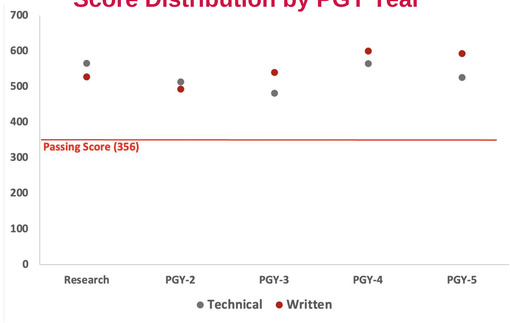
METHODS

- All post-graduate year (PGY) two though five residents without previous formal FLS training at a single institution completed a single faculty-led training session on FLS skills with didactic instruction, demonstration, and individual proctored practice of each of the five skills elements of the FLS exam
- Training times for all five elements of the practical portion of the FLS exam were recorded for each resident
- Any resident not meeting FLS proficiency standards[3] after the single training session were given one on one remediation until standards were accomplished
- Resident training year and total previous laparoscopic case numbers at the time of testing were recorded
- Scores on the written and technical portion of the exam were collected for each resident
- After testing, residents completed an exit survey to gauge their participation in pre-test training and their opinions regarding the training program
- Comparative data analysis was performed to determine if any of the pre-test factors correlated to pass rate or increased test scores

RESULTS

- Of the 30 residents who tested, 28 passed the exam (93%)
- Most residents (66%, n=21) required only one faculty-led training session to meet proficiency metrics prior to testing
- After completing training, 90% of residents felt either “extremely or somewhat confident” that they would pass the exam
- There were no statistically significant differences in exam scores based on PGY level (p=0.34 skills, p=0.08 written)
- Increased laparoscopic case volume did correlate with improved written exam score (p=0.03), but no difference was noted in technical skills score (p=0.8)
- We found no correlation between decreased pre-test proficiency times and eventual technical skills score (p>0.05 for all five tasks)





CONCLUSIONS

Fundamentals of Laparoscopic Surgery (FLS) certification can be successfully completed by junior level residents. Moving this testing to junior years may have a more meaningful impact on resident development and encourage earlier concentration on development of laparoscopic skills.

REFERENCES

1. Vassiliou MC, Dunkin BJ, Marks JM, Fried GM. FLS and FES: Comprehensive Models of Training and Assessment. *Surgical Clinics of North America*. 2010;90(3):535-558. doi:10.1016/j.suc.2010.02.012
2. Sroka G, Feldman LS, Vassiliou MC, Kaneva PA, Fayez R, Fried GM. Fundamentals of Laparoscopic Surgery simulator training to proficiency improves laparoscopic performance in the operating room—a randomized controlled trial. *The American Journal of Surgery*. 2010;199(1):115-120. doi:10.1016/j.amjsurg.2009.07.035
3. Ritter EM, Scott DJ. Design of a Proficiency-Based Skills Training Curriculum for the Fundamentals of Laparoscopic Surgery. *Surg Innov*. 2007;14(2):107-112. doi:10.1177/1553350607302329

THE OHIO STATE UNIVERSITY