RESIDENT PERCEPTION AND OUTCOMES IN THE FUNDAMENTALS OF ENDOSCOPIC SURGERY: A SINGLE INSTITUTE REVIEW

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Background

- Importance of simulation in surgical training
- Fundamentals of Endoscopic Surgery (FES) established and became required by the American Board of Surgeons for graduation criterion in 2018.
- Previous studies demonstrate specific demographics to impact statistically significant pass rate
- Role for simulation and perception lacking

Question

- What resident factors lead to successful FES skills examination?
- Can simulation be a substitute for hands on endoscopic exposure?
- How confident are residents in preparation?

Methods

- 32 General Surgery residents surveyed
- FES examination over 4-day span March 2020.
- Residents ranged from PGY 2 – 5.
- Respondent demographics, simulation and perception were summarized.
- Continuous variables were expressed as median and interquartile range; categorical variables were expressed as counts and percentages.
- Bivariate analysis of respondents' characteristics
- All statistical tests were two-sided, and a p-value < 0.05 was considered statistically significant.

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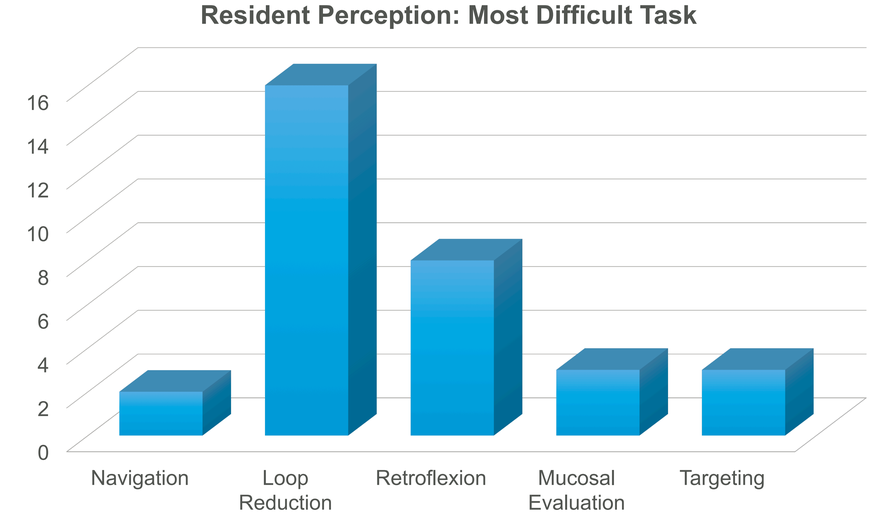
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Results

- When comparing pass/fail groups no significant difference in gender, PGY, campus, glove size, number of upper endoscopy, colonoscopy, or height
- On Pre-Exam Survey, "Do you feel adequately prepared for this exam?", 11 (34.4%) residents responded "No". Similarly, on Post-FES Exam Assessment, 10 (31.2%) residents responded "No" to, "Do you feel you were adequately prepared for this exam?", and 13 (40.6%) felt they didn't pass the exam.
- Central campus residents reported fewer hours of simulator practice: medians of 2 and 4 hours for Central and Northeast campus residents, respectively (U = 65.5, p = 0.019)

Participant characteristics and exam preparation for Central and Northeast campuses.

	Central	Northeast	p-value
Participant demographics			
Sex, n (%)			
Female	4 (25.0)	8 (50.0)	0.273[1]
Male	12 (75.0)	8 (50.0)	
Residency program year, n (%)			
PGY2	0 (0.0)	5 (31.2)	**0.029[2]**
PGY3	3 (18.8)	5 (31.2)	
PGY4	6 (37.5)	4 (25.0)	
PGY5	7 (43.8)	2 (12.5)	
Pre-FES Exam Assessment			
Hours of simulator practice	2 (1.0, 2.6)	4 (2.8, 6.0)	**0.019[3]**
Total number of upper endoscopies			
< 10	0 (0.0)	2 (12.5)	**0.008[4]**
10 – 35	0 (0.0)	2 (12.5)	
35 – 50	1 (6.2)	5 (31.2)	
50 – 100	7 (43.8)	5 (31.2)	
> 100	8 (50.0)	2 (12.5)	
Total number of colonoscopies			
< 10	0 (0.0)	3 (18.8)	**0.001[5]**
10 – 35	0 (0.0)	3 (18.8)	
35 – 50	0 (0.0)	3 (18.8)	
50 – 100	5 (31.2)	7 (43.8)	
> 100	11 (68.8)	0 (0.0)	
Do you feel adequately prepared for this exam?			
Yes	11 (68.8)	10 (62.5)	1[1]
No	5 (31.2)	6 (37.5)	



Key Findings

- Significant difference between campus endoscopic exposure and PGY
- Central campus with greater endoscopic exposure (both upper and colonoscopy), were more likely to pass the FES skills examination
- Northeast campus: younger, more inexperienced, with doubled average simulation time
- Skills pass rate: 100% of Central campus versus 87.5% of Northeast campus
- Pre-examination survey 34.4% residents did not feel adequately prepared
- Post-examination 40.6% felt they did not pass the examination
- 81% of resident's commented requesting further simulation exposure

Conclusion

- **Increased role for simulation with reduced endoscopic exposure during COVID era**
- **Despite 93.75% pass rate of 32 residents across PGY 2-5; nearly 41% felt they did not pass the FES skills examination**
- **Persistent, "I'm not comfortable" paradigm – confronting new mentality in medical training**