Video Assessment as an Integral Part of Resident Robotic Training Curriculum

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COMPETENCY ASSESSMENT ELEMENTS

Technical Domains

- Depth perception
- Bimanual dexterity
- Efficiency
- Tissue handling
- Economy of motion

Global Domains

- Perceived case difficulty
- Perceived autonomy
- Time to complete
- Flow of surgery
- Ability to complete procedure independently

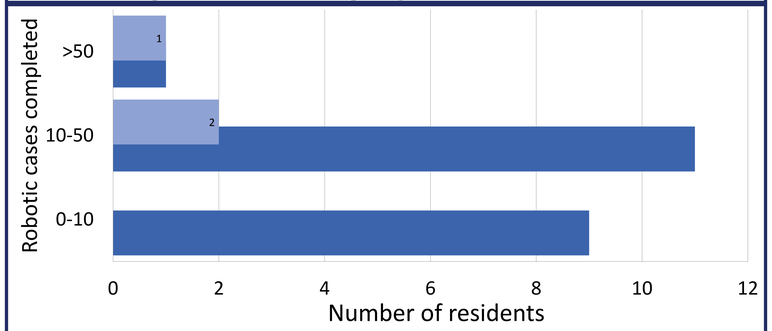
CURRICULUM DESIGN

- Junior residents required to record video of surgical skills selected from pre-existing list 3 times per month
- Senior residents record full case videos
- Residents complete serial assessments of performance before and after reviewing video
- Assessment based on modified GEARS and Zwisch scales targets different surgical learning domains

BACKGROUND

- Perceived resident autonomy in the operating room has decreased over the past several decades
- We propose focusing on one subset of surgical training, robotic surgery, and examining the impact of mandatory video review on resident perception of autonomy
- Despite robust access to robotic cases, use of video review by residents remains limited

Survey of Residents PGY 2-5 on Experience Using Robotic Surgery and Video Review



Dark Blue – 21 residents PGY 2-5 have completed robotic cases operating on the console

Light Blue – Only 3 of the 21 residents have reviewed case videos, demonstrating an opportunity for improvement

SPECIFIC TECHNICAL SKILL EXAMPLES

Inguinal Hernia Repair	• Sac reduction • Mesh placement • Suturing of peritoneal flap
Cholecystectomy	• Clip application • Dissection of gallbladder off liver
Hiatal Hernia Repair	• Suture fixation of wrap • Knot tying
Gastric Bypass	• Jejunojejunal anastomosis • Closure of mesenteric defect • Suturing of gastrojejunal anastomosis

ANTICIPATED BENEFITS

- Shift the focus from case number requirements to competency based progression of operative autonomy
- Create a video library of technical skills and procedures
- Increased perception of resident autonomy
- Faster progression of operative improvement

Selected References

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