The Use of Video Capture Technology to Assess Surgical Skills of General Surgery Residents

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The Use of Video Capture Technology to Assess Surgical Skills of General Surgery Residents

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BACKGROUND / INTRODUCTION

- Initial observation of current feedback tactics in the operating room (OR) appear to lack efficiency in long term learning retention
- Decision making on the competency of surgical residents to perform laparoscopic procedures has been hampered by the lack of reliability with methods used to evaluate operative performance
- Video reviews could offer a way to assess surgical skill and ensure quality
- Assessing specific skills in a practice setting can correlate to overall skill in the operating room
- Video recordings can be evaluated on a larger scale via crowd sourcing for continued research

METHODS

- Video record and assess specific surgical skills in a practice setting using laparoscopic box model
- Video record and assess surgical procedure performed in the operating room
- Evaluate and consider correlations between performance of specific surgical skills and overall performance in the operating room
- Create a plan to improve specific skills therefore improving overall surgical ability
- Use crowd sourcing forum to obtain global rating scale

OUTCOMES/RESULTS

- During the 8 week period over 15 procedures were recorded and reviewed with participation from a variety of residents (7) performing multiple procedures
- After residents were informed of the video recording system they were given a survey to assess initial feedback and interest in the technology

CHALLENGES

- SimCapture System requires a modifier for different outputs
- Lose aspects of system if there is not an operator present during recording session
- Open surgical cases require a type of video recording camera
- For future crowd sourcing evaluations, lengthy video recordings will need to be edited to important segments

CONCLUSIONS

- The SimCapture system was successfully used in both practice and OR settings
- Resident and attending feedback was positive throughout entire project period
- Residents showed interest and enthusiasm regarding this new form of teaching and assessment
- The system proved to be a reliable form of assessment and feedback mechanism for surgical residents