

Table. Mean Time for Each Task At Each Level (in seconds)

Task	Intern (n = 24)	Junior (n = 27)	Senior (n = 27)	p Value
Soda can tie	36.3	29.1	31.6	NS
Tie under tension	24.8	25.0	23.2	NS
Laparoscopic pattern cutting	96.7	83.8	80.5	0.09
Laparoscopic intracorporeal suture tie	185.6	153.1	148.6	NS

CONCLUSIONS: Introduction of the Top Gun competition increased resident attendance at the MC-ACS meetings with positive survey feedback and could be considered as a strategy to increase local chapter involvement. In such competitive settings, there were no differences in performance among residents of different training levels, highlighting a potential role for team training and practice that improves junior performance. Laparoscopic tasks were responsible for differentiating the top teams.

Complex Experience of Surgeon Stress in the Operating Room: Need for an Individualized Approach

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INTRODUCTION: The study of acute stress in the operating room (OR) has been limited by oversimplification of the stress experience. A growing body of evidence demonstrates that stress is a complex phenomenon with physiologic, cognitive, emotional, and sociocultural components. Recognizing this complexity, the purpose of this study was to identify and describe the causes, experience, and manifestations of stress, as experienced in the OR.

METHODS: Case-study methodology was applied to extract the richness of the stress experience. Data triangulation of physiologic (heart rate and salivary cortisol), cognitive (cognitive appraisal), emotional (State-Trait-Anxiety-Inventory), and sociocultural (interviews, observer notes) stress data was used to explore the holistic stress experience of 8 surgeons over 2-3 operations each.

RESULTS: There was great inter-surgeon variability in the causes, perceptions, and manifestations of stress. Three different surgical profiles became evident: (1) surgeons who entered the OR stressed and remained stressed throughout, (2) surgeons who demonstrated labile responses to stressors throughout the case, and (3) surgeons who entered the OR non-stressed and seemed to be relatively unaffected by stressors throughout the case. Physiologic measures provided sound indicators of response, but were understood only in the context of the subjective stress experience. Sociocultural aspects (OR team composition, previous surgical complications) proved to be important contributors to the stress experience.

CONCLUSIONS: Studying stress as a complex phenomenon allows for a deeper understanding of the surgeon experience of stress in the OR. An individualized approach will facilitate customized

interventions for managing acute stress in an effort to improve surgeon wellness and ultimately, patient safety.

Golden Opportunity: Multidisciplinary Simulation Training Improves Trauma Team Efficiency

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INTRODUCTION: Every trauma patient has a golden hour and every trauma center has a golden opportunity to improve team efficiency. Our goal was to improve team efficiency in the assessment of trauma patients by using multidisciplinary simulation exercises.

METHODS: A curriculum was developed from endemic quality and performance improvement data. Pre- and post-implementation metrics collected in actual trauma activations included time to completion of primary and secondary surveys and time to CT scan. Five sessions were conducted, with immediate debriefing and post-simulation survey analysis. A unique and valuable addition to the debriefings included former trauma patients from the Trauma Survivors Network (TSN).

RESULTS: Time to CT scan and secondary survey completion were significantly reduced in actual trauma patient activations after implementation of the curriculum. Time to primary survey completion did not change. Post-scenario participant survey analysis demonstrated strong support for training, communication, and TSN involvement. Ninety-seven percent of participants either strongly agreed or agreed that the exercise would improve trauma patient care on a 5-point Likert scale.

CONCLUSIONS: Multidisciplinary simulation training resulted in improved trauma team efficiency in the form of reduced assessment time. Because emergency department length of stay is an independent predictor of hospital mortality after trauma activation, team-based simulation training has the potential to improve patient outcomes. Trauma Survivors Network involvement brought credibility from the patient perspective and had a profound effect on providers during the debriefings. Further research is required to examine the durability of the training, secondary outcomes such as mortality, and the applicability of this methodology to other institutions.

Improvement in Laparoscopic Task Learning Using Whole Body Video Monitoring and Feedback in a Laparoscopic Simulation Laboratory

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INTRODUCTION: Awareness of posture and ergonomics is lacking in many surgeons performing laparoscopy. No randomized study has shown the usefulness of videography feedback. This was a