

**Introduction:** Surgical assistants vary in their level of training and experience. We examined patient outcomes based on the type of assistance during surgery.

**Methods:** Data for our center were obtained from the American College of Surgeons National Surgical Quality Improvement Program (ACS-NSQIP) database from 2007 to 2012. A total of 5335 cases were examined for complications based on the level of assistance received. Thirty-five NSQIP-mandated complications were measured. The assistant groups examined were residents (R) and nonresidents (NR), which included PA, fellow, attending surgeon, and surgeon alone. Fisher's exact test was used to compare the 2 groups. Logistic regression models controlling for age, body mass index, American Society of Anesthesiologists (ASA) class, comorbidities, emergent case, and level of assistance were performed.

**Results:** Cases in which residents assisted were compared to those with nonresident assistants for complications and the difference was found to be statistically significant ( $P < .0001$ ). Intraoperative assistance by residents was more likely to result in complications (odds ratio [OR] 1.21, 95% confidence interval [CI] 1.03-1.43). ASA class (OR 2.53, 95% CI 2.22-2.89) and emergent cases (OR 2.37, 95% CI 1.92-2.91) were noted to contribute as significant independent predictors for complications. The resident group was more likely to assist with patients having higher ASA class, and in emergent cases ( $P < .0001$ ). These findings add confounding factors to complication data.

**Conclusion:** Type and level of assistance may contribute to patient outcomes after surgery. While we cannot conclusively attribute complications to resident assistance due to confounders, further study is required to determine the true effect.

**Discussion:** This study provides an initial look at a large body of data. We are moving toward matched controls for more meaningful conclusions in the future. It has not escaped our attention that level of residence (R1- R6) may contribute to outcomes. This analysis is currently underway.

## Bibliography

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## Abstract 19

### *Utilizing a TeamSTEPPS Daily Rounding Intervention Within a Surgical Intensive Care Unit to Initiate a Culture of Patient Safety*

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**Purpose:** Best practices for creating and sustaining a culture of patient safety aimed at improving quality of care has remained elusive. The Department of Defense and the Agency of Healthcare Research and Quality (AHRQ) developed TeamSTEPPS as a guide for organizations to improve teamwork, communication, and patient safety. Within our surgical intensive care unit (SICU), communication between caregivers was identified as a root cause of several critical incidents and near-misses. We hypothesized that simultaneous TeamSTEPPS training in parallel with a TeamSTEPPS intervention would improve the staff assessment of patient safety, communication, and job satisfaction within our SICU.

**Methods:** Our SICU consists of a 15-bed unit dedicated to the care of critically ill trauma and surgical patients. TeamSTEPPS principles were taught to the entire unit through a required computer module and a 4-hour course given by trained front-line staff members. Simultaneously, we developed a novel rounding process to improve communication between team members utilizing TeamSTEPPS tools (checklists, brief, call-out, check back, 2-challenge rule, and CUS). The rounding process consisted of 4 structured steps: (1) nurse initiation of rounds with a presentation of overall concerns and up-to-date clinical data, (2) physician team assessment and development of the daily care plan, (3) nurse summary of the daily plan, and (4) attending physician ensuring there were no unanswered team questions or concerns. The unit's assessment of patient safety, communication, and job satisfaction were surveyed pre and one year post the TeamSTEPPS intervention using the AHRQ Patient Safety Culture Survey. In addition, trained observers blinded to the unit staff, prospectively followed daily rounds to assess utilization of the new TeamSTEPPS rounding style. Primary outcomes were the unit grades (A, B = good grade; C, D, F = bad grade) on the AHRQ survey for patient safety and communication as well as job satisfaction scores given pre and one year post-intervention.

**Results:** The pre- and post-intervention survey response rates were 81% and 84%, respectively. A good grade for patient safety increased from 73% to 91% ( $P = .07$ ) after

the intervention. A good grade for communication increased from 70% to 81% ( $P = .30$ ) after the intervention. There was no change in the percent of staff members who would recommend their unit to their closest friend to work (84% pre- and post-intervention). A total of 262 prospective rounding observations were obtained. The entire rounding team was present and worked together 81% of the time. The new TeamSTEPPS rounding style was completely utilized 71% of the time. There was no change in rounding time per patient before and after the intervention.

**Conclusion:** Our data show a trend toward improved staff perception of patient safety and communication within an SICU by implementing a 4-part TeamSTEPPS rounding style aimed at encouraging and empowering a teamwork approach to daily care.

## Abstract 20

### *The Use of a Blood Test Incorporating Age, Sex, and Gene Expression Influenced Medical Decision Making in the Evaluation of Women Presenting With Symptoms Suggestive of Obstructive Coronary Artery Disease: Summary Results From Two Ambulatory Care Studies in Primary Care*

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**Purpose:** Even after obtaining a detailed history and performing a physical examination and resting electrocardiogram, primary care physicians are often unable to confidently determine the primary etiology of symptoms suggestive of obstructive coronary artery disease among stable, symptomatic patients presenting to the outpatient setting. The evaluation process may also expose patients to appreciable risk of radiation and contrast-dye-related side effects, especially among women. Thus, better approaches are needed to evaluate women with chest pain and related symptoms presenting to primary care. A previously validated, blood-based test with components of age, sex, and gene expression levels found a 96% negative predictive value in a combined population of men and women in determining a patient's current likelihood of obstructive coronary artery disease (CAD). We hypothesized that the use of the age/sex/gene expression score (ASGES) test would be incorporated into medical

decision making and influence the rate of referrals to cardiology or advanced cardiac testing.

**Methodology:** An aggregated analysis of female cohorts from the IMPACT-PCP (NCT01594411) and REGISTRY I (NCT01557855) studies was conducted. Data on 320 women presenting with stable symptoms suggestive of obstructive CAD from 16 primary care providers (PCPs) in geographically diverse sites and undergoing ASGES testing were pooled. Primary care physicians, nurse practitioners, and physician assistants at these primary care practices were educated and trained on the use and interpretation of the ASGES through a standardized in-service program. This training spanned approximately 5 hours and included all the appropriate personnel in the clinicians' office: clinician, nurse, phlebotomist, office manager, and others, as appropriate. The primary outcome of this analysis was the association between ASGES and referrals for further cardiac evaluation in this female population.

**Results:** For this female cohort analysis, the mean patient age was 57.8 years, and the mean ASGES (pre-defined as low [ASGES  $\leq 15$ ] or elevated [ASGES  $> 15$ ]) was 10.3. The referral rate for further cardiac evaluation was 4.0% (10/248) for patients with low ASGES versus 83.3% (60/72) for patients with elevated ASGES. After adjusting for clinical covariates, women with low ASGES were significantly less likely to be referred for further cardiac evaluation (odds ratio 0.012,  $P < .0001$ ). The MACE rate and revascularization on follow-up, defined as percutaneous coronary intervention or stent placement rate, was 1.3% (4/320).

**Conclusions:** The ASGES was incorporated into medical decision making and helped PCPs rule out obstructive CAD among symptomatic women who were unlikely to benefit from further cardiac testing.

## Abstract 21

### *Implementing a Patient Navigation Program to Improve Compliance With Adjuvant Breast Cancer Therapy in a Public Hospital*

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**Background:** Cancer health disparities affecting low-income and minority patients are well documented. Causes of poor outcomes include treatment delays coupled with social and financial barriers. Navigation interventions have been commonly applied in cancer screening and early diagnosis programs rather than in improving adherence to treatment among those with