

## E121

### **Abstract Title:**

Core team members' impact on outcomes and process improvement in the initial resuscitation of trauma patients

### **Authors:**

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### **Background & Purpose:**

Although all emergency Department (ED) registered nurses (RNs) specialize in rapid assessment and treatment, some RNs are leaders for critical cardiac, pediatric or trauma patients. Many staffing models don't account for these individual strengths. When surveyed, our ED RNs identified that some ED RN's desire to acquire such strengths as trauma nursing care. Core team members were identified as a possible solution and the decision was made to pilot a trauma nurse leader (TNL) program. The aim of implementing TNLs was to focus education, concentrate repetition of participation, and improve protocol compliance.

### **Study/Project Design:**

This project was a cohort study with retrospective analysis of 1016 patients over a two year period.

### **Setting:**

An American College of Surgeons- Committee on Trauma (ACS-COT) verified Level III trauma center.

### **Sample:**

An application process with selection bias for interest in trauma was open to all full/part-time RNs, excluding RNs with active disciplinary action.

### **Procedures:**

After selecting the pilot group, monthly TNL meetings were established and guided by trauma leadership with involvement from surgeons, nursing staff, and management. Trauma PIPS provided educational topics for the TNL meetings. Meetings also empowered TNLs to lead PIPS projects with administrative support. Data was collected from first and second quarters 2014 (excluding January and February) and then compared to the same time period in 2013. Specific data points were measured and analyzed from PIPS chart reviews and the trauma registry. Data included nursing documentation of primary/secondary surveys, documentation of focused assessment with sonography in trauma (FAST) exam completion, documentation of time to initial computed tomography (CT) scan, and ED length of stay (LOS).

### **Findings/Results:**

Omissions in documentation such as pupil size, respiratory rate, activation details or breath sounds create problems in PIPS data and process improvement. Documentation audits showed a 40% improvement in compliance post-implementation of the TNL program. However, there was a decrease in documentation of surgeon arrival time. ED LOS for category 1 activations showed a 10 minute improvement. Time to initial CT scans (32 minutes) and time to FAST exam completion (18 minutes) remained constant pre and post implementation, demonstrating maintenance of established processes during implementation.

### **Discussion/Conclusions/Implications:**

Focusing on a high risk, low frequency event (trauma activations per RN), we aimed to decrease risk by increasing repetition per RN in the pilot group. Any process change can lead to increased task completion time, so to evaluate this, documented time of FAST exam completion and CT scan were reviewed. Establishing these consistencies, data was then analyzed for improved documentation compliance, showing a 40% improvement. Finally, data was reviewed for additional outcomes. ED LOS improved 10 minutes in category 1 activations, decreasing ED throughput in the highest acuity of patients. The pilot program for TNLs shows initial promise for documentation compliance, but data is limited to a short time frame and small cohort. The next steps include expansion of the pilot group to provide 24/7 TNL coverage with ongoing monitoring, documentation audits and continued focus on PIPS projects. Improvement in documentation of surgeon arrival time is needed to return to baseline or better.

## **E132**

### **Abstract Title:**

Impact of a Level Two Trauma Center on Organ Donation Rates in a Community Hospital

### **Authors:**

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### **Background & Purpose:**

Organ donation and transplantation has been well known to extend lives and improve quality of life. Unfortunately the benefits of this practice are limited by the lack of availability of transplantable organs nationwide. We identified several barriers in our organ donation process limiting our program success. Specifically, untimely referrals, lack of knowledge of the organ donation process among pre-hospital and Emergency Department providers, and inadequate strategies for patient management centered on organ preservation in appropriate patients.

### **Study/Project Design:**

Comared total donors, total lives saved and timely referral rate for a period of two years.

### **Setting:**

Level II Trauma Center in a non-academic community hospital.

### **Sample:**

All potentially medically suitable organ donors form 2011 to 2013.

### **Procedures:**

An extensive education plan was formulated centered on the belief that identification of potential donors must occur early in the process long before brain death has ensued. Therefore, education was targeted to all groups resulting in a culture that supports donation across the entire continuum of care; from EMS providers, ED physicians, ED nurses, critical care intensivists, neurosurgeons, trauma surgeons and critical care nursing staff. An important aspect of the clinical education was modifying current clinical triggers, making the presence of paralytics and sedation no longer a barrier to notifying the Organ Procurement Organization (OPO). The second strategy was to establish a clear path for preservation of organ function. This was achieved by the creation of a catastrophic brain injury protocol.

### **Findings/Results:**

The facility received Level II Trauma Designation status in December 2009; therefore 2010 data was selected for review to reflect the first year as a Level II facility, tracking the results for the following two years. As a result of the strategies implemented, total donors increased from nine in 2011 to 26 in 2013 (188.9% increase). Total lives saved increased from 32 lives in 2011 to 78 lives in 2013 (143.8% increase). In addition, the timely referral rate increased each year to 98.0% which further contributed to program success.

### **Discussion/Conclusions/Implications:**

A strong relationship with your Organ Procurement Organization (OPO) is a must. Creating champions among the unit staff both in the ED and ICU is also a must for program success as they provide peer to peer guidance when leadership is not on site. Finally, collaboration with ED physicians and critical care medicine further supports a strong culture of donation. Future direction includes placement of the OPO coordinator in-house at the Level II trauma center to further enhance communication and identify opportunities for early intervention. The addition of a T4 protocol to the catastrophic brain injury order set is planned to combat failure of the thyroid gland and provide circulatory stability.

## E136

### **Abstract Title:**

Creating a Geriatric Focused Model of Care in Trauma with Geriatric Education

### **Authors:**

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### **Background & Purpose:**

Forty percent of trauma patients will exceed age 65 by 2050. That number has already been surpassed in the presenting organization's Level I designated trauma center. Forty-six percent of the 2781 patients treated in 2013 were age 65 or older; seventeen percent were over age 85. These statistics prompted geriatric specific education for trauma nurses through Nurses Improving Care for Healthsystem Elders (NICHE) in an effort to improve outcomes, reduce hospital complications, and reduce healthcare costs for this high risk population. Despite the growing geriatric trauma population, only 8.8% of trauma centers currently incorporate a Geriatric Resource Program (GRP) into trauma care.

### **Study/Project Design:**

Length of stay (LOS) data and hospital deaths were compiled monthly from the trauma registry.

### **Setting:**

Two designated trauma units in an academic, community, Magnet™ hospital.

### **Sample:**

A random sample of 759 older adults between January and July, 2014. Of those, 65% were age 65-84; 35% were age 85 or older.

### **Procedures:**

NICHE education was provided to pilot unit registered nurses (RNs) that demonstrated a commitment to quality improvement. Three months later, nine medical-surgical and five ICU trauma RNs completed the required education to become certified Geriatric Resource Nurses (GRNs). Additionally, two nursing assistants completed NICHE education earning the title Geriatric Patient Care Associates (GPCAs). These sixteen clinical staff members became the leaders in geriatric trauma for their respective units. Their role includes performing comprehensive geriatric assessments, consulting with peers on geriatric issues, role modeling, educating, and developing ways to improve the care of geriatric patients.

### **Findings/Results:**

LOS and mortality data from 2011, 2012, and 2013 was compared to data post implementation of NICHE education for the same subset of geriatric trauma patients. Patients age 65 and older had an overall hospital LOS of 5.39 in 2011, 5.04 in 2012, 4.49 in 2013, and current monthly average LOS of 4.43 from Jan-Sept 2014. Patients age 85 and older had an overall LOS of 5.51 in 2011, 5.08 in 2012, 4.21 in 2013, and current monthly average LOS of 4.17 from Jan-Sept 2014. LOS continues to decrease for this population following geriatric specific education, closing the gap between LOS for patients less than 65 compared to those patients 65 and older. Mortality decreased from 4.38% in 2013 to 3.54% from Jan-September 2014 in patients age 65 and older with similar Injury Severity Score (ISS) and age. Increased awareness of this high risk patient population is now considered in daily care by the trauma team. Additionally, process improvement projects have been implemented by the GRN's to reduce complications post trauma.

### **Discussion/Conclusions/Implications:**

The incorporation of geriatric education for trauma nurses can significantly improve outcomes for geriatric trauma patients by decreasing complications associated with trauma and hospitalization. Patient and caregiver transition post trauma is enhanced through geriatric specific education. Additionally, GRN's partner with the multidisciplinary team during daily collaborative rounds to focus on outcomes of early mobilization, pain control, nutrition, delirium, and disposition. Regularly scheduled NICHE meetings are held for GRN's. NICHE education continues to expand, heightening awareness of this high risk population to improve geriatric trauma care in this Level I trauma center.