

# 2013 National Teaching Institute Evidence-Based Abstracts

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## EB59 Reducing Urinary Catheter Device Days and the Impact on Urinary Tract Infection Rates in the Neuroscience Intensive Care Unit

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**Purpose:** Catheter-associated urinary tract infections (CAUTIs) are the most common hospital-acquired infections. CAUTIs lead to an increased mortality, additional health care costs, and longer lengths of stay. A higher rate of CAUTIs in a neuroscience intensive care unit (NICU) may be due to their patients' neurogenic bladder dysfunction. Our NICU collaborated on an evidence-based project to decrease the number of catheter device days as an intervention to decrease our rate of CAUTIs. **Description:** The NICU nurses reviewed the literature to identify indications for urinary catheter use and evidence-based methods for insertion, maintenance, and postremoval care for indwelling urinary catheters. A focused search of the literature allowed the staff to understand the truths of bladder dysfunction in neurologically impaired patients. A surveillance tool was created to address indications for continuance and incorporated a check-off of maintenance care. After physician review and approval, the team took responsibility for instructing the remainder of the NICU nurses on the purpose and use of the tool. The tool was used during handoff communication between shifts to ensure urinary catheter removal when indicated and adherence to evidence-based urinary catheter care. Indicators for leaving catheters in place were strictly adhered to and postremoval care was implemented to ensure adequate bladder functioning. Indications for leaving catheters in place were collected and used to modify the tool to clarify appropriate indications for maintaining

the urinary catheter. **Evaluation/Outcomes:** Implementation of our surveillance tool that ensured appropriate catheter discontinuation decreased the number of urinary catheter days from 2492 days to 1992 days, reflecting a 31.5% reduction in the previous 12 months. Urinary catheter utilization decreased from 0.73 to 0.63, well below the National Healthcare Safety Network (NHSN) mean rate of 0.74 for NICUs. CAUTI rates also significantly declined from 4.82 to 2.51, also below the NHSN rate of 4.0 for NICUs.

## EB60 "If It's Less Than 2, There's Something to Do! Dare to Eliminate Pressure Ulcers!

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**Purpose:** Various interventions for pressure ulcer prevention (PUP) exist in our hospital's policies. Most interventions are based on total Braden score, which proved to be less specific and sensitive for predicting pressure ulcers than certain subscores. Implementation of specific interventions, such as ordering specialty beds for high-risk patients, was inconsistent. A nurse-driven protocol was designed to focus on Braden subscores as triggers for PUP interventions. **Description:** The trauma neuroscience intensive care unit (TNICU) partnership council developed "if it's less than 2, there's something to do" as a process improvement project. Recognizing pressure ulcers as a significant contributor to morbidity and mortality, and in light of the recent "never event" rules affecting Medicare reimbursement, the partnership council saw a need to take action. "Less than 2" refers to a Braden subscore value of 1 or 2 in the Braden subcategories as assigned by the bedside nurse. Based on Jill Cox's

findings (*AJCC*, September 2011), emphasis was placed on “mobility” and “friction and shear” subscores as the most specific and sensitive indicators of pressure ulcer risk. “Nutrition,” “sensation,” and “moisture” also had specific interventions based on subscores of 2 or less. “Activity” was discounted as it was less specific for pressure ulcer reduction, as patients are often scored low on the basis of activity restrictions in critical care. A checklist was created that directed nurses toward interventions on the basis of subscores of “less than 2.” Nurses were informed of the results of the Cox study, educated as to the alternatives and benefits of various interventions available, and empowered to provide those interventions. **Evaluation/Outcomes:** The project was promoted to staff by the TNICU partnership council through peer to peer communication, meeting minutes, and daily chart audits beginning in February 2012. The project included the TNICU and the surgical nursing unit at Sutter Roseville Medical Center. Pressure ulcer incidence before the project started had been 3.74 ulcers per 1000 patient days. Since the project, incidence is 0.83 ulcers per 1000 patient days, a 78% decrease. We believe our process improvement shows that when you implement a nurse-driven tool that is based on evidence, the results will follow.

### **EB61 3, 2, 1 Blast Off . . . Launching a Unit Coach**

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**Purpose:** The unit collaborated with leadership and *dared* to develop novice nurses in an innovative manner and help form transformational leaders in the process. These nurses were identified as unit coaches. High volumes of novice nurses could potentially affect patient outcomes. The unit coach’s purpose is to facilitate efficient and effective patient care, prevent experienced nurse burnout, and support new nurses in their critical thinking and prioritization skills. **Description:** Recently, 15 (20%) of the nurses on a 33-bed thoracic surgery progressive care unit had less than 1 year of experience. The unit coach role was developed on the basis of Grealish’s work on cognitive coaching and a previous report on the benefits of the role by Nelson et al. A positive first-year experience is important for retention of novice nurses. Unit coaches were chosen from a group of transformational leaders, who were provided a list of activities as well as resources on reflective questioning and critical thinking. The unit coach was chosen for shifts when a significant number of

novice nurses were on a single shift. The unit coach was taken out of the staffing numbers, meaning that the coach did not have a patient care assignment, so the coach’s role was simply to support the novice nurses during the specific shift. The novice nurses were given the unit coach’s support following one-on-one orientation with a preceptor. The goal of the unit coach was not to complete complex tasks for the novice nurses, but to coach them through the complex task by reflective questioning and assisting in evaluating options. **Evaluation/Outcomes:** A pre/post survey was distributed to nursing staff to determine the necessity and effectiveness of the unit coach. The findings validated that the unit coach helped the novice nurses have a positive transition into their new role. The entire health care team, including experienced nurses, recognized the importance of the unit coach because of the positive effects on the future of the unit and patient outcomes. The novice nurses were able to use critical thinking skills to provide the most appropriate interventions for patient outcomes after using the support of the unit coach.

### **EB62 A Collaborative Team Approach: Code Resuscitation Training**

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**Purpose:** The mean survival-to-discharge rate for adults who have a cardiac arrest in the hospital is 17% to 20%. In the past 40 years, the overall survival rates for cardiac arrest have changed little. The goal of this project is to recognize factors affecting the current code resuscitation practices and use quality standardized methods to improve patient survival and quality of life after code resuscitation. **Description:** Clinical observation and analysis during a real-time code by a mock code team has shown 3 different code trainers demonstrating different quality of training to physicians, new employees, and current staff. Actions were taken to regulate, unify, and structuralize the approach for future trainings. Observation and code data analysis showed disorganization caused by failure to identify responder-specific tasks, resulting in delays in performing cardiopulmonary resuscitation (CPR) and defibrillation before the arrival of the code team. Anecdotal feedback from staff revealed inconsistent knowledge regarding the scope of practice and decreased confidence in initiating CPR in a timely manner. A dedicated mock

code team of 4 ICU charge nurses with 14 years of active code team experience trained a total of 460 staff in 18 months to perform specific tasks assigned for the first, second, and third responder. The team developed flowcharts and a mock code handbook and conducted “train the trainer” classes. A pre and post training evaluation of code task competency was based on 7 factors: timely compression, placement of backboard, defibrillator pads and 3-lead electrocardiography pads, use of an automated external defibrillator, connection of manual resuscitation bag to oxygen and presence of charge nurse and primary nurse during code. **Evaluation/Outcomes:** With the initiation of the mock code team, the facility has seen many improved outcomes related to quality in code resuscitation. Implementation of training guidelines has organized and assigned systematic tasks to each responder during actual codes. Evaluation of staff efficiency and cooperation during actual code performance increased from 40% before training to 94% after training. Constant communication between the mock code team, the critical care committee, and staff allows resolution of issues, thus improving patient survival. Nurses’ satisfaction and confidence increased, eliminating delays in initiating CPR and defibrillation through defibrillator management.

#### **EB63 A Multidisciplinary Team Approach in Delivering Perfect Care for Heart Failure Patients**

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**Purpose:** As the guidelines from the Centers for Medicare and Medicaid Services evolved, a focus to prevent readmission of patients with heart failure became a high priority. The heart failure clinical excellence team, formed in 2005, continues to work toward the goals of reducing failure rates in delivering perfect care to patients with heart failure. The goals of the team are to reduce our inpatient 30-day readmission rates for all causes to 10% or less and for same cause to 5% or less, and to reduce our failure rate to 0%. **Description:** The heart failure team was formed to review monthly outcomes and analyze barriers to delivering perfect care. A cardiologist and a telemetry nurse cochair the team with representatives from quality outcomes, coding, nursing managers, case management, home health, the emergency department, a nurse from the heart failure clinic, hospitalists, executive management, nurse practitioners, patient advisors, and intensive care and telemetry nurses. Tools were developed

to streamline the process toward perfect care. These tools consist of a heart failure patient registry, a nursing perfect care checklist, and a charge nurse daily nursing rounds sheet for core measures from the Centers for Medicare and Medicaid Services, a float nurse card with unit guidelines, coaching tools for nurse or physician failures, a heart failure packet, and referrals to the outpatient program for heart failure. Staff was trained to implement these strategies effectively. **Evaluation/Outcomes:** Since the heart failure team started, our failure rate average has decreased significantly. In 2006 our rate was 27%. Once we had implemented the improvements, the failure rate had decreased to 5% by 2011. Our “all cause 30-day readmit rate” is 15%, which is below the national average of 24%, as it has been for 6 years in a row. Nursing unit performance charts are posted with details of each failure and success. Patients in the heart failure outpatient program have a current readmission rate of 0.87%. The heart failure team provides the tools for the progressive care nurses to educate our heart failure patients toward successful self-management by using a collaborative team approach.

#### **EB64 A Unit-Based Intervention to Improve Goals of Care Discussions and Documentation of Code Status**

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**Purpose:** Goals-of-care conversations (GOCCs) help set meaningful care plans for patients. Due to patients’ complexity and acuity, opportunities to have GOCCs in our intensive care unit can be missed. A weekly rotating cadre of Intensivists and multiple surgical attending physicians add to this difficulty. In an effort to address missed opportunities and improve GOCCs, we started a weekly multidisciplinary team meeting to identify patients who may benefit from a GOCC. At our hospital, code status is documented in the medical record. **Description:** A weekly meeting of the multidisciplinary team was implemented in November 2010. An internal screening tool developed to identify patients who would benefit from GOCC was used. Criteria evaluated included length of stay exceeding 7 days, patient’s trajectory, current level-of-care orders, team consensus that the patient could die, need for a palliative care consultation, rehabilitation required after discharge, and ongoing family/ social issues. After the weekly meeting of the multidisciplinary team, the intensivist was then asked to have a GOCC.

Goals-of-care directive orders (GOCDs) entered into the electronic medical record were compared for 3 consistent time intervals: before the intervention from January to July 2010 (phase I), after the intervention from January to July 2011 (phase IIa), and from January to July 2012 (phase IIb). **Evaluation/Outcomes:** GOCDs were entered for 9% (93/1023) of patients in phase I. GOCDs for phase IIa occurred in 11.6% (111/960) of patients, and in phase IIb in 13.5% (149/1100) of patients. The difference between phase I and phase IIb was statistically significant ( $P=.006$ ). The most frequent code status entered for all 3 time periods was no cardiopulmonary resuscitation/do not intubate, accounting for 48% (45/93), 56% (62/111), and 53% (79/149) of patients, respectively. Full code order entry increased from phase I to phase IIb. Use of a weekly meeting of the multidisciplinary team with a standard format to screen all patients in our unit improves the frequency of GOCCs and GOCDs. This process allowed improved discussion/communication, referrals, and continuity of care.

#### **EB65 Advanced Practice Nurse Innovation in Surgical Nurses' Progressive Care Orientation**

Kimberly Elgin, Crystal Toll; University of Virginia Health System, Charlottesville, VA

**Purpose:** As patient acuity and census in the surgical acute care environment continues to increase, the ability of nurses to meet the needs of that population is taxed. The purpose of this clinical nurse specialist (CNS)-led initiative was to define and map an evidence-based practice orientation pathway for progressive care unit (PCU) nurses that prepared nursing staff to meet those high-acuity demands. **Description:** The PCU is a relatively novel area of nursing practice, with little evidence in the nursing literature describing CNSs' contribution to development and organization of progressive care programs. We demonstrate how an acute care CNS led the development of a surgical PCU through application of criteria based on AACN Essentials of Progressive Care Nursing and Guidelines on Admission and Discharge for Adult Intermediate Care Units: American College of Critical Care Medicine of the Society of Critical Care Medicine. Our PCU includes a mixed acuity population that is staffed by nurses originally from an acute care unit. The orientation pathway accommodated individual nursing skills, knowledge, and ability. This personalized approach to orientation was seen as a positive commitment to staff

development and patient safety. **Evaluation/Outcomes:** Success of this CNS-led intervention has been measured by patients' length of stay in the surgical intensive care unit (ICU), rates of readmission to a higher level of care, and nurse satisfaction. After implementation of our surgical PCU, length of stay in the surgical/trauma/burn ICU decreased by 1.19 patient days. Readmission rates to the ICU decreased by 13%, and nurse satisfaction with orientation to the surgical PCU continues to increase. Evaluation of outcomes is ongoing with incremental data analysis by the unit CNS.

#### **EB66 Advancing Interdisciplinary Collaboration: Medical Students Partnering With Nurses**

Megan LeClair; University of Wisconsin Hospital and Clinics, Madison, WI

**Purpose:** The goal of this project was to determine how medical students partnering with a registered nurse through a 4-hour shadowing experience influences medical students' attitudes toward nurse-physician collaboration. In a few short years, current medical students will be first-year residents expected to communicate effectively with nurses to save lives. Effective communication seems unlikely if the students feel they have no opportunity to develop a relationship with nurses during their medical education. **Description:** The Iowa Model for Evidence-Based Practice guided this practice project. A comprehensive literature review revealed 3 major themes. First, medical students' preconceived perception of nurses is often one of inferiority compared with physicians. Second, a negative collegial perception leads to both poor communication and poor collaboration, resulting in poor outcomes for patients. Third, providing medical students an opportunity to partner with nurses creates a powerful learning experience that reconstructs their image of nursing, elevating the potential for improved collaboration and outcomes for patients. During this pilot project, 11 medical students shadowed a nurse on a 24-bed medical/surgical intensive care unit at a Magnet-designated, level I trauma and academic medical center. Students completed the Jefferson Survey of Attitudes Toward Physician-Nurse Collaboration before and after the shadowing experience. Participants also answered 4 open-ended questions after the experience that elicited further insight and feedback. For comparison, a separate group of 12 students completed the survey without a shadowing experience. **Evaluation/Outcomes:** Postexperience survey

scores indicate a statistically significant ( $P=.04$ ) change of attitude toward positive nurse-physician collaboration when compared with scores from before the experience. This significance is also seen when comparing the no-experience group with the postexperience group ( $P<.01$ ). Qualitative feedback captures the richness and value the students found in this experience. This pilot project suggests that a medical student's attitude toward nurse-physician collaboration can be positively influenced through partnering in a shadowing experience. More interprofessional educational opportunities should be built into curricula as a means to promote exceptional patient care.

### **EB67 Assessing the Use of a Hypothermia Protocol in Patients With Large Burns**

Debbie Diane Laws, Susan Brown; Arkansas Children's Hospital—Burn Center, Little Rock, AR

**Purpose:** Severely burned patients are predisposed to hypothermia because of the need for large quantities of intravenous resuscitation fluids and the loss of heat through burned skin. Hypothermia can prolong recovery and increase mortality by up to 20% in these patients. The goal of this project was to bridge knowledge gaps by developing an evidence-based hypothermia protocol for patients with burns over more than 30% of their body surface and to determine effectiveness of the strategies.

**Description:** From a review of temperatures in our intensive care unit, it was found that 80% of patients with burns covering a large surface area returned from surgery with a core temperature less than 36.5°C and 25% returned from dressing changes with a core temperature less than 36.5°C. Some of these patients required additional treatment for shivering, and rewarming methods varied among staff. A staff nurse did a comprehensive review of the literature on the adverse effects of hypothermia and types of rewarming methods used for burn patients. A meta-analysis showed that hypothermia contributed to a slower recovery, greater mortality, and an inability to produce energy to overcome sepsis in burn patients. An educational PowerPoint presentation on rewarming methods and an evaluation audit tool were developed from this information and presented to staff. To reinforce the education, a hypothermia module with a posttest was added to nurses' competencies and orientation. "Hypothermia risk" signs were posted on appropriate patients' doors to remind staff to use the methods developed. Patients

scheduled for surgery or procedural dressing changes were reviewed daily in interdisciplinary rounds to ensure that the protocol was implemented. **Evaluation/Outcomes:** To evaluate the impact of this protocol on prevention of hypothermia, an audit tool was developed and completed on patients with large burns. This tool was used to document core temperatures before and after surgery and procedural dressing changes. It also included an area to indicate the types of warming and rewarming methods used. After 6 months of this protocol implementation, 80% of burn patients were returning from surgery with core temperatures greater than 36.5°C, an increase of 60%. Additionally, 98% of patients were returning from procedural dressing changes with a core temperature greater than 36.5°C. Currently, our unit has a 95% compliance rate with this protocol.

### **EB68 Basic Life Support Champions Program Improves Outcomes for Hospitalized Patients**

Deborah Hudson; Portland Veterans Administration Medical Center, Portland, OR

**Purpose:** (1) To increase the confidence and skill level of nursing staff performing Basic Life Support (BLS) skills during emergent situations and (2) to improve discharge to home outcomes for hospitalized patients after cardiac arrest. Quick performance of high-quality chest compressions and faster defibrillation are likely to improve survival rates in cardiac arrest patients, but only if responses from bedside staff are fast and effective.

**Description:** To achieve improved outcomes, bedside nursing staff need systematic training in updated BLS skills and the opportunity to sharpen their skill sets. The American Heart Association released new BLS guidelines in October 2010 with increased emphasis on chest compressions. A multidisciplinary team was formed and developed a BLS Champions program that incorporated the guidelines. Research indicates that cardiopulmonary resuscitation skills erode rapidly after the standard biannual education. To prevent knowledge erosion; practice time for bedside staff in the form of BLS mock codes is the cornerstone of the program. A teaching plan was developed to improve staff members' BLS skills, reduce anxiety, and increase confidence levels while providing care during code situations. It was hypothesized that this could improve patients' outcomes. Each inpatient nursing unit identified bedside nurses to act as champions who were provided the needed training, teaching tools, and

equipment to hold mock code sessions on their nursing units. A 6-item nursing skills needs assessment was conducted before the start and at the 1-year mark. The needs assessment was voluntary and anonymous to encourage participation. **Evaluation/Outcomes:** Survival rates for this medical center's hospitalized patients before this improvement process were 68% after the code and 39% after discharge to home. From July 2011 to June 2012, those survival rates increased to 80% and 54%, respectively. Results from the assessment after the training show that confidence levels among the nursing staff improved an average of 18% in all required skills. Nursing staff who participated have expressed high levels of satisfaction with this training method. The combination of providing timely education regarding a practice change and training plan to prevent knowledge erosion for low volume, high-stake nursing skills can improve staff members' confidence and patients' outcomes.

#### **EB69 Bedside Report and the Safety Checklist: Improving the Quality of Patient Care**

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Seattle, WA

**Purpose:** To develop a safe, standardized approach to nursing handoffs as well as a short safety checklist that can be completed at every shift change. Additional aims consisted of changing the current culture of giving report at the desk, bringing report to the bedside, and including the patient and the patient's family as appropriate. Finally, with a heightened awareness of safety issues, it is hoped that errors on the unit will decrease.

**Description:** There are many barriers to effective nursing handoffs such as interruptions, distractions, multitasking during report, chaotic environment where report is given, too much noise, lack of standardization, staff resistance to changes in the handoff system, and a lack of leadership support. This project was developed to improve this situation. The topic of safer handoffs was brought up in our unit's best-practice committee, where agreement was reached on a safety checklist and initiation of a bedside report. Many one-to-one discussions were held with members of the staff to garner interest and solicit ideas. A presurvey of 6 questions plus comments was sent to all staff with a response rate exceeding 50%. An educational PowerPoint poster was developed and placed around the unit 2 weeks before implementation, during which time all staff were rounded on to educate regarding the new

handoff process. As a way of marketing this change, pens with the logo "Patient Safety First" on them were handed out to all staff. A family letter was written and was given to patients' family members to explain our handoff process and to encourage their participation. Two months after implementation, a postsurvey was done with a 60% response rate. **Evaluation/Outcomes:** As a result of this project, the NICU has implemented a safer, more patient- and family-friendly method to our change-of-shift report. Although moving the handoff report from the desk to the room may sound easy, it proved to be difficult and challenging for many involved. Primary results consisted of increased family and staff satisfaction as well as safer and more standardized handoff process. Secondary results included a slight decrease in errors, although more work continues to be needed in this area. In the initial survey, 10% of staff thought that our handoff process was safe all of the time, whereas in the postsurvey 60% thought that the new process was safe all of the time.

#### **EB70 Big Results Do Come in Small Packages: Our Key to a >50% Reduction in Catheter-Associated Infection Rate**

Anne-Marie Van Rensburg, Anne Marie Bennett;  
Memorial University Medical Center, Savannah, GA

**Purpose:** Central catheter-associated bloodstream infections (CL-BSI) are considered a "never" event by the Centers for Medicare and Medicaid Services. In 2009, the Joint Commission directed accredited hospitals to reduce the incidence as part of its National Patient Safety Goals. In 2010, our CL-BSI rate, while meeting national benchmarks, was not 0. By the second quarter of 2011, our rate was increasing. Staff had been educated on best practices for central venous catheters, but audits had shown that both size and lack of easy accessibility of chlorhexidine frepps (sponges) and scrub sticks were issues. **Description:** Though exceeding national benchmarks for CL-BSI rates, in 2010, our medical-surgical/neurovascular intensive care unit had a CL-BSI rate of 1.3%/1000 catheter-days (n = 3122). Our goal was to reduce CL-BSI rates via investigation of, education about, and implementation of published evidence-based methods. Despite education and implementation of a central venous catheter best-practice bundle (from the Institute for Healthcare Improvement), our rate had actually increased by July 2010 to 1.85% (first quarter 1.2%, second quarter 2.5%). At that time, chlorhexidine was

available to staff only as frepps or scrub sticks for use when accessing the central venous catheter to obtain a blood sample. A staff knowledge survey confirmed awareness of all aspects of the best practices bundle for prevention of CL-BSIs; however, bedside audits showed noncompliance because of 2 issues and only with obtaining blood samples: (1) chlorhexidine frepps were inadequate to clean the port hubs, and scrub sticks were too small to be effective. (2) Storing the large frepps and scrub sticks only at the Pyxis supply station made them not quickly or easily accessible, and staff often used alcohol pads instead. Evidence (eg, from the Centers for Disease Control and Prevention) supported use of chlorhexidine, but our solution was small: Individual chlorhexidine pads accessible in all areas, even in pockets. **Evaluation/Outcomes:** The addition of chlorhexidine pads for accessing catheters when obtaining blood samples was pilot tested on our unit with immediate positive results. Our CL-BSI rate plummeted to 0% during the third quarter of 2011 and again for the fourth quarter of 2011, giving 2011 a 0.9% CL-BSI rate (n=3186), already a 40% decrease from our 2010 rate. Because the success of this change was so immediate and significant, the pilot study was stopped. The use of chlorhexidine pads for catheter access was added as a best-practice procedure and added to our central venous catheter policy for the entire hospital. Since this seemingly small change, our CL-BSI rate continues to decrease as the infection rates for the first 2 quarters of 2012 (all data available at time of abstract) show a 55% decrease to a CL-BSI rate of 0.6% (n=1628).

#### **EB71 Can an Interdisciplinary Heart Failure Education Class Enhance Individualized Education?**

Theresa Cary; Cleveland Clinic, Cleveland, OH

**Purpose:** Despite multifaceted efforts to improve readmission rates in our 1200-bed hospital, 30-day all-cause readmission rates based on data reported to the Centers for Medicare and Medicaid Services, are above the median, at 28.2%. Nonadherence to medication therapy and dietary sodium restriction treatment guidelines are frequently cited as precipitants of rehospitalization. Our goal was to decrease 30-day readmission rates for patients with heart failure. **Description:** Using a quality improvement approach and qualitative design, we studied results of a new group education class held on a 73-bed medical cardiology step-down unit. In addition to 1-on-1 nurse-to-patient education about heart failure, a 1-hour

interdisciplinary class on heart failure survival skills was added and taught by a pharmacist, dietician, and clinical nurse specialist. The class is designed to engage patients and families living with heart failure. Topics include heart failure medications, dietary sodium restriction, daily weights, symptom recognition and management, and follow-up appointments. Time is devoted to practice in reading food labels, grocery shopping, dining out, and holiday meals. After discharge, patients responded to 4 scripted questions to determine the benefits of the group education class, preferred education formats, and what is missing. **Evaluation/Outcomes:** Thirty-day readmission rates for class participants was 5.7% and readmissions attributed to decompensated heart failure resulting from dietary indiscretion, medication nonadherence, or delay in reporting worsening symptoms was 0.8%. Ninety percent of patients described group discussion as most effective for learning, while 8% preferred 1-on-1 instruction. "Practice" time was perceived as most beneficial, reinforcing the need for time for group skill-building rather than just providing didactic content. Future research is needed to learn if rehospitalization rates are reduced when patients and families participate in group classes.

#### **EB72 Code Stroke: To tPA or not to tPA . . . and . . . Ensuring tPA Patients Are Appropriately Monitored**

Bonnie Dickerson; Durham Regional Hospital, Durham, NC

**Purpose:** To develop a code stroke-notification process to decrease door-to-needle time for tissue plasminogen activator (tPA) candidates through a team-oriented protocol. This drug (tPA) is a low-volume, high-risk drug that requires concise administration followed by monitoring of the patient. Protocols have offered a more consistent and streamlined approach in providing patient care. Key issues in the intensive care unit (ICU) were inconsistent documentation of the monitoring of patients after administration of tPA to aid in early identification of neurologic deterioration. **Description:** The Brain Attack Coalition recommends a goal of door-to-tPA in 60 minutes for patients with ischemic stroke to reduce stroke mortality and morbidity rates. Using Six Sigma DMAIC (Define, Measure, Analyze, Improve and Control) methods, the hospital's stroke task force made a flowchart of the process to identify areas of delays. Areas of ICU concern were tPA administration, standardization of documenting neurologic checks to track changes; importance

of swallowing screenings before allowing anything by mouth, and handouts on tPA and strokes to ensure that patients and their families are fully educated. The code stroke process was developed and with 1 call alerted computed tomography technicians, laboratory technicians, the pharmacy, and the neurologist on call to facilitate fast diagnostic testing and early administration of tPA. Emergency department and ICU nurses collaborated to develop a plan for educating nurses on the importance of frequent monitoring of patients to detect signs of deterioration as early as possible. A “stroke packet” was implemented and included *all* the documents needed to adhere to policy as well as a worksheet to remind the nurse of *all* the data to be documented. A debriefing is held after each code stroke, and the stroke task force reviews the data monthly. This process helped us obtain stroke certification from the Joint Commission. **Evaluation/Outcomes:** The baseline door-to-needle time for fiscal year 2010 had a mean of 105 minutes. In fiscal year 2011, the time decreased to a mean of 74 minutes. Before implementation of the stroke packets, a high percentage of charts had deficiencies in documentation. Audits after implementation showed that most charts were complete within 24 hours of tPA administration. These results suggest that a protocol can decrease door-to-needle time, decrease turnaround for laboratory and radiology results, and improve assessment of patients so that changes in status are recognized early. A consistent process has improved patient safety and outcomes.

### **EB73 Collaborative Practice and Implementation of a Therapeutic Hypothermia Protocol in a Tertiary Care Referral Center**

Richard Arbour; Einstein Medical Center, Philadelphia, PA

**Purpose:** To initiate consistent multidisciplinary clinical guidelines for induction and maintenance of mild to moderate therapeutic hypothermia (TH). The target demographic included patients after cardiopulmonary arrest who met specific inclusion criteria such as stable cardiac rhythm and score <8 on the Glasgow Coma Scale after resuscitation. Before this protocol, TH was managed differently or opportunities for use of TH were missed because of the patient’s location and/or the primary service managing care. **Description:** The initiative was developed/implemented as a multiphase project. Phase 1 entailed review of available evidence. Two landmark studies in 2002 showcased markedly improved neurologic

outcome after cardiac arrest in patients treated with TH. Phase 2 involved forming a task force with critical care nursing/physician leaders and representatives from cardiology, neurology, and emergency medicine and placing TH as a standing item on the ICU committee’s agenda. Phase 3 was development of a draft TH protocol, circulating it to task force members, making appropriate changes, and recording quality markers such as patient identification and time to TH activation/target temperature. Phase 4 was TH education, including formal in-service training, critical care/cardiology “skills days,” and completion of competency-based education for team members, including electroencephalogram-derived monitoring throughout TH continuum of care. Phase 5 included implementation with the clinical nurse specialist at the bedside for real-time education and expediting care/specialty consultation. Rapid response team members received education as resource personnel available 24/7. Quality markers were tracked, clinical review of all cases was undertaken, and appropriate follow-up was initiated. **Evaluation/Outcomes:** Between March 24, 2009 and February 6, 2012, 32 patients received TH. Quality markers include TH eligibility/time to order entry/TH initiation and time to target temperature as well as temperature control during maintenance/rewarming. Improved time to target temperature, steady-state during maintenance, and controlled rewarming were noted over 36 months of data collection/case reviews. The 2-7 hours needed to reach target temperature in 2009 had improved to 1.5 to 3 hours by 2012. Glasgow Outcome scores  $\geq 4$  (5 of 32 patients:  $\sim 1/6$ ) were outcomes consistent with national results for number needed to treat with TH for neurologic benefit. Neurologic recovery occurs in approximately 1 in 10 patients not receiving TH.

### **EB74 Creating a Healthier Work Environment Through Group Report**

Laura Bax, Laura Sheahan, Pamela Brown; Oregon Health & Science University, Doernbecher Children’s Hospital, Portland, OR

**Purpose:** To evaluate and redesign group report in the pediatric intensive care unit (PICU) to create a healthier work environment. Healthy work environments are important to job satisfaction and high-quality patient care. The 2011 Index of Job Satisfaction from the National Database of Nursing Quality Indicators revealed that the PICU nurses scored lower than the mean for nurse-



to-nurse interactions. Group report, the process of assigning nurses to patients, was identified as an area of conflict. **Description:** A multiphase study was designed to evaluate the current process for group report, build a new system based on the results of the evaluation, and implement the new system. Nurses (n=53; 74%) were surveyed to identify key aspects of group report and potential modifications. Content analyses revealed that staff wanted more structure to report, including a brief overview of the unit and for charge nurses to make assignments (as opposed to staff selecting their assignment). Group report was revised to include these elements. Published reports suggest that huddle statements are an effective, timely way to deliver an overview of a unit and build teamwork. Published reports also support that making patient assignments is part of the charge nurse's role. Through workshops, charge nurses were taught how to give huddle statements and how to consider staff development and unit needs when making assignments. Nurses (n=41; 57%) completed the Nursing Teamwork Survey immediately before implementing revised group report and again 6 months after group report was changed (n=27; 38%). **Evaluation/Outcomes:** The implementation of the new group report system went well. Charge nurses gave effective huddle statements and made thoughtful assignments that furthered the development of nurses. The Nursing Teamwork Survey showed that strong personalities dominated the team less after the change in report than before (mean=3.8, SD=2.96) and feedback from team members was less judgmental after the change than before (mean=2.61, SD=1.92). Incremental overtime was reduced by nearly 50% after the implementation (from 40 hours to 20 hours per pay period). These results indicate that the new process for group report reduced conflict, increased efficiency of handoffs, and promoted a healthier work environment.

### **EB75 Dare to Change: Remove Those Foley Catheters! An Evidence-Based Approach to Eliminating Catheter-Associated Urinary Tract Infections**

Tamera Crosser, Maria Therese De Guzman, Rosemary Herrera; St Jude Medical Center, Fullerton, CA

**Purpose:** Catheter-associated urinary tract infections (CAUTIs) account for 40% of all hospital-acquired infections. In July 2011, staff in the cardiac telemetry unit at a Southern California hospital noticed a high CAUTI rate and noted that use of indwelling urinary catheters in the

unit was higher than the national benchmark. A team was formed to create an evidence-based plan to reduce the use of indwelling urinary catheters and thus eliminate CAUTIs. **Description:** A literature review was conducted to search for evidence-based solutions to eliminate CAUTIs. Leadership and frontline staff collaborated in creating a plan to reduce the use of indwelling urinary or Foley catheters. The process included revision of the hospital's policies and procedures, implementation of the "No Foley" campaign and the CAUTI care bundle, staff education, and the creation of metrics to measure outcomes. Physician "buy-in" was obtained before the start of the No Foley campaign. Evidence-based inclusion/exclusion criteria for Foley catheter use were written. Selected nurses and certified nursing assistants were designated as unit champions and charged with implementation of the No Foley campaign. Staff education included the No Foley campaign, CAUTI care bundle, statistics on CAUTIs, biofilm development, and accurate intake and output for patients with incontinence problems. To obtain accurate intake and output, a process was created that was based on the neonatal intensive care unit's practice of weighing infants' wet diapers and calculating urine output on the basis of the weight difference between the wet and dry diapers. Compliance with the Foley insertion criteria was monitored every shift during rounds, and education reinforcement was done as needed. **Evaluation/Outcomes:** The metrics used to evaluate the outcomes of the indwelling urinary reduction plan included utilization rates for Foley catheters and number of CAUTIs. Use of Foley catheters decreased 63% after implementation of the No Foley campaign. An 84% reduction in total number of CAUTIs was noted 1 year after project implementation, and the pilot unit has had no CAUTIs in 13 months. Based on the success of the pilot study, the No Foley campaign was subsequently implemented on other hospital nursing units with equally significant outcomes in eliminating CAUTIs.

### **EB76 Dare to Improve Skilled Communication for Patients With Limited English Proficiency**

Janis Smith-Love, Belinda Faustin, Brenda Piantini; Broward Health Medical Center, Fort Lauderdale, FL

**Purpose:** As our international tourist and immigrant population grows in South Florida, the need for face-to-face interpretation resources increases. Broward Health "dares to" provide medical interpreter training to mitigate

the risk of preventable adverse events for non-English-speaking patients. The purpose of the training is to improve communication and cultural competence regardless of the patient's language needs through the certification of licensed professionals as medical interpreters. **Description:** A diversity of languages and cultures is prevalent in our health care organization, which heightens the need for improved communication to ensure safety for our Creole, Spanish, French, and Portuguese speaking patients. Language line services have been available for some time, but many situations require an interpreter to be physically present. Use of a bilingual family member or visitor as a medical translator can lead to misinterpreted, omitted, or added information; does not ensure translators' accuracy or non-bias; and may lead to conflicts of interest. All people who speak another language are not necessarily good medical interpreters, especially if they are nonclinical staff. To enhance communication between patients and providers, licensed clinical employees attended a 2-day medical interpreter training program that included an additional 4 weeks of study and practice hours. Training concluded with both written and oral examinations in the targeted language (Creole, Spanish, French, or Portuguese). The examination results are sent to a language center for scoring. Successful participants are deemed "certified medical interpreters" and are used throughout the 4 medical centers to translate in their targeted language(s). **Evaluation/Outcomes:** Thirty-one licensed professionals are now certified medical interpreters for Creole, Spanish, French, or Portuguese. Working with the health care team, interpreters spend from 5 minutes to 1 hour as they obtain a medical history and physical examination; provide discharge instructions; explain the plan of care, tests, and procedures; answer general questions, and obtain consents. Employees report increased job satisfaction, improved self-esteem, and fostering of patient/family relationships. Interpreter challenges include the amount of time spent away from their home department and primary job function. Thanks to the program's success, additional medical interpreter training courses begin in September 2012.

**EB77 Dare to Zap Catheter-Associated Bloodstream Infections: No Exceptions, No Excuses**

Robin Fichuk, Kimberly Bagley, Maricon Gallano-Massey; Duke Raleigh Hospital, Raleigh, NC

**Purpose:** The intensive care unit (ICU) at Duke Raleigh Hospital implemented significant practice change to

decrease the rate of central catheter-associated bloodstream infections (CLABSIs). In 2008 the rate was 6.9/1000 days, highlighting a lack of focus on infection prevention practices by staff. The overall goal was to eliminate the high cost of treatment, decrease morbidity and mortality of patients associated with central catheters, and change practice to consistently improve evidence-based care of critically ill patients in the Duke Raleigh ICU. **Description:** ICU nurses attended the North Carolina Quality Center Collaborative and discovered that their practice was far behind nursing peers. Nurses implemented practice changes driven from the original "The 100 000 Lives Campaign." A plan involving all key persons with a stake in the process was developed for a 2-day summit addressing current practice, needed education, evidence from a variety of resources, and the creation of an insertion and maintenance CLABSI bundle. After the event, interventions included staff reminder e-mails, daily huddles, and daily and monthly audits to follow the CLABSI bundles for insertion and maintenance. The insertion kits were reorganized to prevent contamination. The ICU coordinated with the operating room, emergency department, and postanesthesia care unit to align practice hospital-wide to prevent CLABSI. Huddles during change of shift included a quote of the day and the standard of the week. Administering chlorhexidine baths to all patients in the ICU became the standard. ICU staff adopted the safety motto "No Exceptions, No Excuses." In their 2012 review of the current literature, Miller and Maragakis reported that a comprehensive approach to CLABSI prevention results in decreased CLABSI rates. **Evaluation/Outcomes:** All persons with a stake in the process came together to support implemented practice changes and staff. Nurses served as the front-runners in enforcing compliance with the CLABSI bundles. Teamwork increased along with work satisfaction as nurses became the driving force for change to improve patient safety. Peer accountability increased as unit pride in the decreasing infection rate grew. Monthly unit scorecards update staff on the current status of practice change. Currently, the Duke Raleigh ICU is greater than 900 days (>2 years) CLABSI free. Administration and management celebrated successes with nursing.

**EB78 Dare To . . . Defy *Clostridium difficile***

Lourdes Fernandez, Roslyn Harris; Lehigh Valley Health Network, Bethlehem, PA

**Purpose:** In the past decade, the incidence of *Clostridium difficile* infection (CDI) has increased substantially, with critical care patients at especially high risk. This poster details a compendium of evidence-based practice (EBP) measures implemented to prevent CDI within a 20-bed medical-surgical intensive care unit (ICU) in an academic, community Magnet hospital. The diligent efforts have been associated with a CDI rate that has progressively declined. **Description:** Standards based on empirical research from the Centers for Disease Control and Prevention, the Association for Professionals in Infection Control, and the Society for Healthcare Epidemiology of America informed procedures to prevent CDI in the 988-bed hospital. These include ultraviolet-C irradiation for terminal cleaning, bleach wipes, contact signage, isolation supply caddies, and stool culture protocol. Recognizing that expert knowledge, in conjunction with research, supports EBP, the ICU nurses enhanced standard guidelines with additional measures, such as use of disposable electrocardiography leads, monitoring for diligent terminal room cleaning—including changing privacy curtains, use of fecal containment systems, posting additional signage, emphasis on staff and visitor education, limiting supplies in the room and disposing of all supplies upon discharge, and peer accountability. These efforts were initiated by staff through a strong shared governance model, thus prompting their engagement. The ongoing momentum was supported through a weekly newsletter that included gentle reminders of the standards and real-time data, and incentivized annual goals tied to staff members' performance appraisals. **Evaluation/Outcomes:** Because there is no national benchmark data available for CDI rates in designated acute care inpatient settings, it is recommended that an internal historical comparison be used to track rates. Since fiscal year (FY) 2008, the CDI rate in the ICU has progressively declined, from a rate of 3.3 per 1000 patient days (10 cases), to a rate of 0.9 per 1000 patient days (5 cases) in FY2012. Preventive measures for CDI can be perceived as daunting by critical care nurses, who recognize the alarming mortality rates associated with CDI in their compromised patients. The efforts in this ICU can serve as a pragmatic model that can be replicated by critical nurses in a variety of settings to prevent CDI.

#### **EB79 Daring to Lead a New Path: Developing a Critical Care Fellowship for Retention and Recruitment of Critical Care Nurses**

Kathryn Schaefer; Sparrow Hospital, Lansing, MI

**Purpose:** The pay for performance initiative necessitates quality caregivers at the bedside. How to retain skilled critical care nurses with expert training was identified as a priority at Sparrow Hospital. An 8-week critical care nurse fellowship (CCF) was developed to improve the transition of nurses transferring from medical-surgical units to a critical care environment. The goal was to address the issue of retention in the critical care units in a cost-effective manner. **Description:** A review of the literature did not yield an effective method of transitioning experienced nurses into critical care. Current literature focuses on orienting new graduate nurses to the critical care environment. Registered nurse recruitment and retention is a cost-containment goal for hospitals, with turnover of experienced nurses costing institutions nationwide more than \$1.4 to \$2.6 billion annually. The CCF consists of 8 weeks of classroom education combined with rotations through 3 adult critical care units. In each critical care unit, preceptors were used who were viewed as experts by their peers and leadership. The fellows rotated through the intensive care unit (surgical/open heart patients), coronary care unit (cardiac/medical patients) and neurological care unit (neurological/trauma patients). Evidence-based research articles were reviewed during informal journal club meetings. Comparison was made between the CCF and nurses who oriented to the critical care units in a traditional manner regarding duration of orientation. The CCF received 16 additional hours of experience versus traditional orientation. **Evaluation/Outcomes:** Between 2011 and 2012, 18 fellows participated in the CCF in 3 sessions. Anonymous evaluations (Likert) and the Plan-Do-Check-Act method were used to assess the course. After 2 sessions, data implied that the fellows were overwhelmed by complex care concepts in the first week. The CCF was redesigned for the third session by using The Transformational Model of Professional Practice. Using that model, concepts from basic (proficient) to advanced (expert) were taught. Data comparison revealed greater satisfaction after revision. After 2 years, 95% of fellows remain in their original position, demonstrating retention. A current waiting list shows recruitment appeal.

#### **EB80 Decreasing Ventilator Days by Using a Progressive Upright Mobility Program**

Joanne McGovern; Hahnemann University Hospital, Philadelphia, PA

**Purpose:** Mechanical ventilation costs an average of \$1522 per day. Numerous studies have demonstrated the need for mobilization of patients to prevent complications associated with bed rest in patients in intensive care units (ICUs). One such complication is ventilator-associated pneumonia (VAP), which can increase a patient's hospital cost by \$40 000. The goal of this study was to decrease duration of mechanical ventilation in a 22-bed university hospital medical ICU (MICU) by using a progressive upright mobility (PUM) program. **Description:** Nursing staff in a 22-bed MICU in a metropolitan university hospital designed and implemented the study. The mean number of ventilator days on the unit is 20. All ventilator patients were included in the study. Therapeutic bed surfaces already in place on the MICU were used for the PUM program. A champion nursing team developed a clinical guideline that uses continuous lateral rotation therapy (CLRT) for patients with adult respiratory distress syndrome and acute lung injury. These patients would advance to the PUM program when stability criteria were met. A guideline was designed for all other ventilator-dependent patients to participate in a 6-step PUM program, beginning with a 45° tilt to an end goal of standing and stepping into a chair. Implementation began with education of the entire MICU staff on use of the specialty beds for CLRT and PUM as well as the guidelines and data collection tools. Nurses ensured that a step was implemented at least every 8 hours and more frequently as tolerated by the patient. The patient advanced to the next step once hemodynamic and physical tolerance was demonstrated. A data collection tool was designed and used to evaluate patients' progress on a daily basis by the nurse. Data on ventilator days and VAP rates were calculated monthly per the institution's standard. **Evaluation/Outcomes:** VAP rates remained zero in our MICU throughout the study. Ventilator days decreased 8% from March through June 2011 compared with the same time period in 2010. The next 4 months showed an 8.5% decline in ventilator days compared with the previous year. This comparative analysis yields a decrease of 254 ventilator days year over year. A cost savings of \$386 588 was calculated by using the hospital's ventilator day cost of \$1522. This reduction in ventilator days could lead to an annual cost savings of \$1 159 764 by potentially reducing ventilator days by 762 days.

### **EB81 Delirium: Can You Recognize It?**

Sharon O'Donoghue; Beth Israel Deaconess Medical Center, Boston, MA

**Purpose:** Delirium occurs in 60% to 80% of patients receiving mechanical ventilation in the intensive care unit (ICU) and is a predictor of increased morbidity and mortality, cognitive impairment, and cost. ICU staff can improve outcomes for delirious patients when the staff are knowledgeable about delirium and can accurately assess for it. The goal of this project was to educate staff, identify a reliable assessment tool, train staff on its use, and institute a twice daily assessment of delirium for our ICU patients. **Description:** A lecture was presented to improve ICU nurses' knowledge in addition to the key features of delirium. The literature was reviewed to find reliable tools for assessing for delirium. The Confusion Assessment Method (CAM-ICU) and the Intensive Care Delirium Screening Checklist were tried out in an attempt to unfreeze the staff in preparation for this change and to determine the most appropriate tool. The CAM-ICU was chosen, and our next step was to develop a multidisciplinary delirium protocol that stressed nonpharmacological interventions. An assessment form was developed for our medical record. We identified unit champions who would assist in educating staff, and our aggressive educational campaign began. Delirium badges were developed for staff as a quick reference guide. Staff presented their patient's delirium assessment during huddles for educational purposes. We continue to audit every patient in our ICUs 2 times per week so that we can follow up with staff in real time. **Evaluation/Outcomes:** Instituting any change takes time and dedication. The ICU nursing staff have done a tremendous job of implementing the CAM-ICU tool and documenting twice daily. We measured success by evaluating staff members' knowledge of delirium, the delirium protocol, and documentation. Staff have commented on how much they have learned about delirium and the nursing interventions they can institute to prevent it. We have observed a significant increase in their ability to assess for delirium, and most patients are assessed twice a day. Evidence suggests that reducing delirium can minimize harm to our ICU patients. This is an ongoing process as we continue to educate our staff and evaluate outcomes.

### **EB82 Developing Professionalism in New Nurses**

Karen Jeffries; St David's HealthCare, Austin, TX

**Purpose:** New nurses are often overwhelmed with learning how to be a nurse and focus on nursing as a job, not as a career or a profession. In order to promote professionalism and improve the training of our new nurses, we incorporated several professional aspects of nursing into our hospital's fellowship. By thinking outside of the box, we were able to create ways to encourage nurses to step outside of their comfort zone and push themselves to excel at an early stage in their development. **Description:** Key evidence-based elements of residency programs include professional socialization and opportunities for development. Professional development is an integral part of our fellowship. The nurses are given a 1-year membership to AACN and they attend local chapter meetings. Opportunities for nurses' development include presenting patients' case studies to colleagues. The nurses later post their case study on their unit. These nurses participate in clinical rotations to other areas of the hospital and to other hospitals. This promotes interprofessional collaboration and increased engagement. Examples of rotations are the emergency department, lab, pharmacy, rounds with physicians, wound care nurse, clinical nurse specialist or nurse practitioner, and ride outs with emergency medical service crews. During classes, presenters include PCCN/CCRN certification-type questions so that the new nurses start thinking early about becoming certified. They also present an evidence-based best practice project that they implemented on their unit, which is then posted on the hospital's website. At the end of the fellowship, they participate in a succession planning session (presented by a nursing director) with a career advancement program. They are also mentored to come back and teach the next group of new nurses. **Evaluation/Outcomes:** We expected the nurses to consider themselves not just as nurses, but as professionals. They are developed early as our future leaders within our hospitals. These nurses report higher levels of engagement, confidence, and empowerment after participating in this fellowship. They have stated that they feel more confident dealing with physicians and feel that they can make important contributions and changes—even as a new nurse. Other unit directors noted improved relations between departments after the rotations were started. Some of the nurses have gone on to do poster presentations of their case studies and best-practice projects at local and national conferences.

### **EB83 Do You Really Want to Know What Families Think?**

Jody Heffernan, Kathryn Gustafson, Stephanie Packard; Boston Children's Hospital, Boston, MA

**Purpose:** Family-centered care (FCC) is associated with shorter hospital stays, more efficient utilization of resources, and a reduction in litigation risk. Literature supports that FCC yields improvements in satisfaction of patients and their families, bonding between parents and infants, well-being of preterm infants, and parents' mental health outcomes. The purpose of the neonatal intensive care unit's (NICU's) Family Advisory Council (FAC) and the Families First Committee (FFC) are to give parents a voice and to serve as change agent in the NICU. **Description:** Following discharge, families who meet selection criteria are invited to participate in the NICU FAC. This 1-year commitment includes quarterly multidisciplinary meetings. These meetings are focused on engaging families to provide honest feedback regarding the care they received while hospitalized. The quarterly meetings of the FAC give NICU leaders the opportunity to elicit direct feedback from families regarding their NICU experience. This feedback is then reviewed by NICU leaders, and recommendations for practice change are made to the FFC for implementation. **Evaluation/Outcomes:** Examples of practice changes include modifications of the NICU environment such as renovations of the family waiting area, revision of communication tools that help families ask questions of their care providers, and streamlining and enhancing patient care by establishing the surgical liaison nurse role and guidelines for parents' presence on rounds.

### **EB84 Early Mobility for ICU Patients**

Norma Stockel, Jeff Berger; St John Hospital and Medical Center, Detroit, MI

**Purpose:** Intensive care units (ICUs) are resource intensive and contribute significantly to the overall cost of health care. Research has demonstrated that early mobility programs in ICUs can improve patients' outcomes and reduce ICU and hospital length of stay. Our organization identified mobility programs as a single causative factor in decreasing ICU and hospital length of stay and sought to determine whether the cost of implementation substantiates the cost benefit. **Description:** This mobility project was initially pilot tested in the surgical ICU. We examined the costs associated with the

staffing and equipment needed to implement early mobility in the ICU and compared those costs with the savings realized from reductions in ICU and hospital length of stay. These results were previously seen in a study done at Johns Hopkins University: "Other studies Needham reviewed showed that early physical medicine and rehabilitation therapy, while patients are on life support in the ICU, can safely allow patients to get out of bed and walk more quickly, resulting in shorter time on a ventilator and a shorter stay in the ICU for these critically ill patients." Collaboration occurred between nurses, physical therapists, respiratory therapists, and physicians. Inclusion and exclusion criteria were developed, and data were collected to determine the number of patients who actually met the criteria. This was necessary to provide appropriate staff from all disciplines in order to make this successful. Gait training demonstrations and other educational sessions were provided to nurses and respiratory therapists. These sessions allowed time for a question and answer session and for hands-on practice using different equipment. **Evaluation/Outcomes:** Initial data show an increase in mean distance walked at ICU discharge from 20 to 90 feet; mean distance walked at hospital discharge increased from 71 to 113 feet; and mean hospital length of stay decreased from 17 to 14 days. One day in the ICU costs approximately \$5000, which equates to a \$15000 savings per patient. Some research suggests that with team work, training, and restructuring it may be possible to provide early mobility in the ICU without requiring additional resources. We used this concept. Restructuring occurred when we designated specific time frames for mobility. Participants ensured their availability, thereby making this successful.

#### **EB85 Early Sepsis Identification: Getting Patients to the Appropriate Level of Care**

Pam Zinnecker; Billings Clinic, Billings, MT

**Purpose:** Sepsis is the 10th leading cause of death in the United States. Patients admitted with septic shock have a 46% mortality rate. Delays in treatment that result from inappropriate placement often necessitate emergent transfer to an intensive care unit (ICU) and are associated with increased mortality rates. Before implementation of an early goal-directed sepsis plan, Billings Clinic had up to 3 patients a month who were emergently transferred to the ICU with a sepsis diagnosis that resulted in treatment delays and deaths. **Description:** A sepsis plan was

developed by a multidisciplinary team led by nurses from the ICU, medical-surgical unit, and emergency department (ED). Following the Surviving Sepsis Campaign guidelines, the team implemented a sepsis plan that included (1) a triage sepsis assessment performed upon arrival in the ED and 2 hours later, (2) a computerized cue that identifies the patient as "possible sepsis," (3) sepsis, and (4) guidelines for placement (ICU vs medical-surgical unit). Nurses are the driving force behind early recognition and communication with the physician and are essential for implementation of the orders and evaluation of the treatment. **Evaluation/Outcomes:** Sepsis-related emergent transfers to the ICU were eliminated for 6 consecutive months by using the ED triage tool. ICU length of stay was decreased by 1 day. Implementation of consistent blood cultures and antibiotics for patients with suspected sepsis increased from 60% to 100% and has been maintained for 6 months.

#### **EB86 Eliminating Catheter-Associated Bloodstream Infections in a Pediatric Intensive Care Unit Via Chlorhexidine Bathing**

Christopher Morgan, Cynthia Kling; Arnold Palmer Hospital, Orlando, FL

**Purpose:** A central catheter-associated bloodstream infection (CLABSI) can cost approximately \$45 000 and increase mortality by 15% to 25%. Epidemiologic studies have shown higher rates among pediatric populations, but have also shown that CLABSIs are 65% to 70% preventable. Although current efforts in our pediatric intensive care unit (PICU) have decreased our CLABSI rates, the intent of this project was to improve patient safety by meeting the new hospital benchmark of a CLABSI rate of zero. **Description:** Although using central venous catheter (CVC) insertion/maintenance bundles and alcohol-impregnated CVC caps had brought the rate down, the goal of eliminating CLABSIs triggered a project that required new and innovative thinking. The Iowa model and Plan-Do-Study-Act (PDSA) method were used as a framework for this evidence-based practice project. The initial team conducted a literature review, which yielded significant evidence for reduction of CLABSIs in both pediatric and adult ICU populations through chlorhexidine gluconate (CHG) bathing. Once evidence of patient safety in the pediatric population was provided to the medical team, a plan to implement CHG bathing upon admission, daily, and preprocedurally was developed.

A collaborative effort by our PICU clinical nurse specialist, medical team, and nursing practice committee produced a cost-effective guideline for the bath. Once the CHG bathing protocol and staff/family education were developed, supplies were added to the unit. Implementation involved one-on-one education for each team member, extra availability to answer questions and address issues, observational and documentation audits, and reminders and updates for the new guideline. **Evaluation/Outcomes:** Using the Institute for Healthcare Improvement's model for a quality improvement project, our goal measurements were 100% compliance with the CHG bath, positive staff feedback via survey, and to obtain a zero CLABSI rate at 90 days after implementation. After 90 days, we achieved 100% on 3 subsequent compliance audits, so a survey was provided to the PICU staff. Of the 18 respondents, 100% thought that CHG bathing was either somewhat or much better than our previous bathing protocol. Several reported barriers and 1 complication associated with the protocol were addressed and corrected. At 134 days after implementation, a 0% CLABSI rate was maintained, providing a successful outcome for this quality improvement project.

### **EB87 Eliminating Catheter-Associated Bloodstream Infections Through Frontline Engagement**

Stacy Steiner, Leslie Smith; Shawnee Mission Medical Center, Shawnee Mission, KS

**Purpose:** Illustrate reduction in rate of central catheter-associated bloodstream infections (CLABSIs) through evidence-based practice integration. Explain leadership engagement of frontline staff using the comprehensive unit-based safety project (CUSP) approach to identify system failures, opportunities for improvement, and actions to prevent harm. Describe the innovative "beyond the bundle" approach to practice integration.

**Description:** The staff of Shawnee Mission Medical Center (SMMC) intensive care unit (ICU) dramatically reduced CLABSIs by using the CUSP approach to transform a culture. Sustaining a CLABSI rate of zero for more than 16 months is the outcome of leadership engaging frontline staff to be open, honest, and innovative in their pursuit of quality and excellence. The frontline ICU staff focused on evidence-based maintenance care strategies to reduce the CLABSI rate: care provider hand hygiene, scrub the hub, dressing/tubing changes according to evidence-based protocol, use of a chlorhexidine-impregnated

sponge at insertion site, patient/visitor hand hygiene, nurse empowerment to stop and/or redirect care, daily chlorhexidine bathing, and daily review of catheter necessity. The team used the CUSP framework to discover system failures, opportunities for improvement, and actions to prevent harm. They took an innovative approach to resolve the communication issues identified as a global unit system failure. They implemented a clinical coaches model to provide a communication avenue to the frontline nurse and resolve an identified knowledge gap on central catheter maintenance care strategies. They embraced rounding to influence as a nonintimidating auditing method to drive successful practice integration at the bedside through coaching and elimination/identification of obstacles. The staff perform daily quality checks creating reliability and excellence for every patient every time. The team determined an outcomes data-sharing approach that is meaningful to staff. The last date of each hospital-acquired condition is posted on a quality bulletin board. **Evaluation/Outcomes:** Engaging frontline staff and addressing communication as a system failure created a unit-based culture shift from task-oriented work to quality-driven work. As a result of this project, SMMC ICU has been CLABSI-free since April 2011 with a 60% reduction in CLABSI from year end 2010 to 2011. The ICU Safety Attitude Questionnaire survey for this period reveals a 10-point increase in safety climate.

### **EB88 Empowering Critical Care Nurses in the War Against Central Catheter-Associated Bloodstream Infections**

Justin Dilibero; Beth Israel Deaconess Medical Center, Boston, MA

**Purpose:** Central catheter-associated bloodstream infections (CLABSIs) are serious hospital-acquired infections with an attributable mortality of 12% to 25% and a financial cost of \$25 000 per case. Preventing CLABSIs requires the collaborative effort of a multidisciplinary team. The goal of this project was to improve patient and organizational outcomes through the implementation of the central catheter bundle components from the Institute for Healthcare Improvement (IHI) and the Centers for Disease Control and Prevention (CDC). The overall goal is to achieve a sustainable zero rate of CLABSIs.

**Description:** When a sharp increase in our incidence of CLABSIs was noted, an interdisciplinary team was formed and a plan was developed to achieve a goal of zero

CLABSIs. Although many aspects of the CDC and IHI's central catheter bundle were already in place, areas for improvement were identified. Key interventions included requiring an attending physician to supervise residents for all central catheter insertions, and empowering nurses to monitor for sterility and to complete central catheters checklists. Interventions to empower nurses were focused on fostering interdisciplinary communication and collaboration. These interventions included educating all interdisciplinary team members on one another's roles, and setting an expectation that nurses and physicians communicate to identify a mutually acceptable time for nonemergent placements of catheters. True collaboration was facilitated by empowering nurses to stop the procedure for any break in sterile technique. Support of key nurse and physician has been fundamental to the successful implementation of these interventions. **Evaluation/Outcomes:** We have been successful in reducing our CLABSI rate from 3.78 to 0.34 with a continued downward trend toward zero. Furthermore, we have achieved a rate of zero CLABSIs in many ICUs for 2 consecutive quarters. Although implementation of the CDC and IHI bundles can drive the CLABSI rate toward zero, only the development of a culture of quality and safety can facilitate a sustained reduction in central catheter infection rates. We will continue to foster this culture of quality and safety by empowering staff and facilitating communication and collaboration among interdisciplinary team members as we set our sights to achieve and sustain a zero CLABSI rate.

#### **EB89 Going for the Gold: A Unit-Based Approach to Influence Change and Reinforce Compliance**

Kristina Sokol, Erin Ferrara; Mayo Clinic, Rochester, MN

**Purpose:** The 2012 Olympics took a different approach to "letting the games begin" on a 24-bed medical intensive care unit (MICU). The purpose of this project was to influence change and reinforce compliance on the unit in 10 events by using competition among staff members. Ten events were strategically chosen by unit leaders to address areas of new initiatives and identified areas for growth. **Description:** Using the 6 sources of influence from the book "Influencer," the 2012 MICU Olympics embraced social motivation and social ability. Competition and current events were used to motivate staff to "Go for the Gold." Staff were asked to compete in 10 events: daily weight dash, medication reconciliation wrestling,

unit cleanliness and corridor clutter contest, narcotic book badminton, RN-PCA delegation white-board diving, transfer project card match, classification accuracy archery, time-card signature tennis, universal protocol playoffs, and the secret event extravaganza. The unit transformed into an Olympic arena with e-mail and poster-based marketing, treats, and a transformed red, white, and blue break room. The 3 teams competed for "gold," which equaled an ice cream social. Individual recognition was offered by the opportunity to nominate a most valuable player, 6 of whom would be drawn for a prize. A designated staff member and unit leaders audited compliance in these events. Auditing tools were developed to ensure accurate data collection. The project embodied staff to be "vigilant guardians," further improving care at the bedside. **Evaluation/Outcomes:** The success of the project was measured by an overall increase in compliance, in staff awareness of new unit initiatives, and in unit morale. When compared with previous months' audits, the collection of universal protocol cards increased by 41%, charted daily weights increased by 24%, and medication reconciliation documentation improved by 48%. However, the "secret event" (bedside report) decreased by 24% in the audits. Overall, the project brought increased awareness to the remaining events, which were newer initiatives on the unit. Each event played a role in improving patient safety at the bedside by encouraging staff to pay attention to detail.

#### **EB90 Going With the Flow: Critical Response Nurses**

Kathryn Thomas, Sarah Barsotti; Legacy Meridian Park Medical Center, Tualatin, OR

**Purpose:** The purpose of the critical response nurse (CRN) is to decrease diverted hours in the emergency department (ED) and reduce costs by decreasing the on-call times for nurses in the catheterization laboratory, while maintaining national standards for door-to-intervention times. This role was developed by using AACN's national practice standards for promoting a healthy work environment. **Description:** In 2011, the CRN position was developed in response to The Joint Commission's recommendation that a hospital have a process to support the flow of patients throughout the hospital. The CRN is a critical care nurse who is available hospital-wide 24/7. The CRN responds to rapid response and code blue activations, facilitates transfers between the ED and the intensive care unit (ICU), and circulates



in the catheterization laboratory during off hours. The CRN makes the initial contact with the patient in the ED and continues with the patient to the catheterization laboratory and/or to the ICU. With fewer handoffs, this has improved the continuity of care for the patient, resulting in less stress on the patients and their families, and has improved communication and reports between staff. Critical care nurses were either cross-trained to the ED, or ED nurses are cross-trained to the ICU and all were cross-trained to the catheterization laboratory. A period of “mentoring” was also given after the initial orientation. A nurse from the catheterization laboratory remained on call for approximately 2 months, ensuring that all cross-trained critical care nurses were competent and comfortable during emergency procedures in the catheterization laboratory. **Evaluation/Outcomes:** The addition of a CRN has resulted in fewer ED diverted hours from a mean of 22 hours in fiscal year 2010 to less than 2 hours in fiscal year 2012 and have maintained national standards for door to balloon times of less than 90 minutes without jeopardizing patient safety. From August 2011 to August 2012, the CRN was the primary circulating nurse during off hours in the catheterization laboratory for 75 cases of ST-segment elevation myocardial infarction. This resulted in an estimated savings of 225 hours of on-call time. Overall, the contributions and the creation of the position of CRN have shown positive results.

#### **EB91 Handle With Care: Preventing Staff Injury Through Body Mechanics Workshops**

Meredith Long, Jennifer Mondoc, Joanne Pileggi; Cedars-Sinai Medical Center, Los Angeles, CA

**Purpose:** Owing to an increased number of musculoskeletal staff injuries related to patient care, an intervention was needed to assess and enhance staff knowledge, skills, and ability of proper body mechanics and safe patient handling. To prevent further injuries, nurses and physical therapists collaboratively designed a didactic and “hands-on” workshop to educate the staff on safe patient handling techniques with return demonstration. **Description:** According to the Department of Health and Human Services, health care professionals have a high probability of experiencing musculoskeletal injuries due to patient mobilization. They also identify that through evidence-based practice, proper body mechanics provides protection from forces associated with mobilizing patients. Data on the number and type of injuries

were reviewed. There was an increase from 11 injuries (from January 2009 to December 2010) to 25 (from January 2011 to April 2012). Because of the significant increase in injuries, a survey was given to assess staff readiness, knowledge, and awareness of body mechanics. In coordination with the physical therapy department, interactive workshops on body mechanics and safe patient handling were required for the nursing staff of the 3 Saperstein-universal progressive care unit to attend. The objectives of the workshop included definition of body mechanics, relevance of proper body mechanics in the patient care environment, common types of workplace injuries, environmental risk factors, hospital and unit resources, and review and demonstration of proper body mechanics for safe mobilization of patients. Immediate peer-to-peer and physical therapist feedback and tips were given to staff after the demonstration. **Evaluation/Outcomes:** Surveys and evaluations of the workshop were completed by staff after the workshop. Three key areas were looked at: “I am confident with my abilities to safely transfer and ambulate patients,” “I am able to identify the characteristics of an unsafe work environment,” and “I always utilize the proper resources and practices to prevent unsafe work conditions.” Results of the survey revealed that staff “strongly agreed” (compared with results of the survey from before the workshop) that the education increased their skill and competence in safe handling of patients. Since implementation of the workshops in April 2012, there have been no staff injuries related to patient care.

#### **EB92 Hospital-Acquired Pressure Ulcer Reduction Program in a Medical/Surgical Progressive Care Unit**

Deborah Louis, Jinny Choi, Griffin Kinney, Tiffany Cabine, Jennifer Bishop; Kaiser Sunnyside Medical Center, Clackamas, OR

**Purpose:** Hospital-acquired pressure ulcers (HAPUs) result in significant morbidity, mortality, and cost. HAPUs develop in 2.5 million patients annually, the associated cost is \$11 billion/year, and the Centers for Medicare and Medicaid Services stopped reimbursement for treatment of HAPUs in 2008. There is a 60% mortality in the first year. HAPUs are an important indicator of nursing quality. The medical/surgical progressive care unit (MSPCU) had variable prevalence rates of stage II HAPUs in 2010, ranging from 0% to 11.11% with a mean of 4.55%, exceeding the benchmark of the Collaborative Alliance for Nursing Outcomes (CalNOC). The goal was to reduce

the incidence of stage II HAPUs to achieve a target of zero. **Description:** Preventing HAPUs requires knowledge of risk factors. Modifiable and mitigatable patient risk factors include dry skin, low or high body mass index, confusion, incontinence, impaired mobility, and malnutrition. Patients admitted with pressure ulcers must be identified, and documentation should reflect their presence on admission (POA). An evidence-based risk assessment tool should be routinely used. Prevention strategies are related to skin care, mechanical loading, mobility, and nutrition. Early detection by routine thorough assessment is required. The MSPCU already used a risk assessment tool (Braden) and pressure redistribution surfaces. A plan was developed to increase staff awareness through education that included review of quality data and weekly pressure ulcer rounds where all patients had a skin inspection. If a pressure ulcer was identified, a chart review was performed to ascertain if it was POA. Analysis of HAPU events determined whether the HAPU was due to lack of prevention, lack of documentation on admission, or was unavoidable based on review by a wound ostomy care nurse. Results were posted weekly. Cushioning for oxygen tubing and a trial of foam dressings was conducted. **Evaluation/Outcomes:** Education sessions and weekly skin rounds were initiated in March 2011. Findings from the initial rounds were HAPUs related to nasal cannulas. Oxygen tubing protectors were tried because of those findings. The foam dressing trial was initiated in October 2011. The past 3 CalNOC quarters have had zero pressure ulcers. The weekly prevalence data show no HAPUs of any type from February 7, 2012 to June 28, 2012. This project has improved not only assessment and documentation but the quality of nursing care for pressure ulcer prevention on every patient in the MSPCU.

### **EB93 Hourly Rounding: Improving Patient Satisfaction in the Emergency Department**

Alfie Ignacio, Elisa Castillo; Torrance Memorial Medical Center, Torrance, CA

**Purpose:** According to Press Ganey results from 2011 to 2012, the top 3 common themes of patient dissatisfaction in this emergency department (ED) include patients not being updated on the plan of care, pain not being adequately addressed or managed, and treatment delays not being explained. The purpose of this project was to describe the outcomes of hourly rounding in improving patient satisfaction in the ED. **Description:** Research

indicates that hourly rounding is one of the best interventions that ED staff can provide to reduce patient anxiety and help control their pain. Explanation of treatment delays will keep patients in the ED rather than leaving without being seen. A formalized process of hourly rounding in the ED was developed by the clinical nurse specialist (CNS) in collaboration with the ED staff, nurse manager, and director. A 1-hour class on patient rounding was provided to the staff during skills fair and multiple in-service training sessions were conducted. Documentation of ED rounding was provided by a rounding log that was reviewed by the nurse manager, supervisor, and the ED CNS for compliance and accountability. ED technicians rounded during even hours and the ED nurses rounded during odd hours. Pain, explanation of plan of care, and delays in treatments were addressed during rounds.

**Evaluation/Outcomes:** Patient satisfaction scores in the ED had increased by 3 months after implementation of hourly rounding. Patients' satisfaction scores based on how well the nurses explained patients' treatments increased from 80% to 85.8% and scores based on nurses' explanations of the reasons for the delays in treatments improved from 64.9% to 73.3%. Patients' satisfaction with how well their pain was controlled increased from 75.3% to 82.8%. The frequency of patients leaving without being seen was reduced from 4.2% to 3%.

### **EB94 How Care Redesign Improved Patient Outcomes in the Cardiac Surgery Intensive Care Unit**

Susan Gabriel, Dawn Tessier, Theresa Seeley, Maria Bentain-Melanson; Brigham and Womens Hospital, Boston, MA

**Purpose:** Coronary artery bypass (CABG) surgery is a high-volume operation with potentially serious complications and is very costly. The goal of the project was to decrease CABG cost, making the program match a Society of Thoracic Surgeons-like institution. We projected to do this by decreasing time spent in the intensive care unit (ICU), thereby shortening patients' hospital length of stay. **Description:** The hospital lean/performance improvement project framework was used in the application process. Focus groups were convened to brainstorm issues, solutions, sustainability, and iterative testing. The Plan-Do-Study-Act method was used for testing changes, testing, and evaluation. The hospital's cardiac surgery service (CSS) website was used to obtain real-time clinical outcome data from before and after the intervention.

Both nurses and physicians showed variability in patient management related to various practices in the ICU that contribute to longer ICU stay. The 4 areas that had the most variabilities were practices related to sedation management, start of  $\beta$ -blocker therapy, length of intubation or extubation time, and removal of arterial catheters. Surgeons, physician assistants, and nurses reviewed the data related to those practices from 2011. After quality benchmarking with other institutions and the STS database, the unit translated them into 4 clinically applicable recommendations: to decrease sedation time to 2 hours; decrease extubation time to 6 hours; remove the arterial catheter on postoperative day 1; and start of  $\beta$ -blockers within 16 hours of admission to the unit. **Evaluation/Outcomes:** After a 6-month period, improvements were apparent in all areas. Sedation was stopped within 2 hours from 28% to 87% of the time. Extubation within 6 hours increased from 47% to 67%. Arterial catheter removal on postoperative day 1 increased from 50% to 65%.  $\beta$ -Blockers were started within 16 hours from 4% to 53% of the time. Finally the ICU length of stay went from 3.7 days in 2011 to 2.0 days in 2012 (year to date), and postoperative hospital stays decreased from 7.6 days in 2011 to 6.5 7 days in 2012 (year to date). These changes can result in lower hospital costs and can potentially make our program compete with STS-like institutions with lower CABG cost.

#### **EB95 Impact of a Multidisciplinary Approach to Airway Management in Suspected Tracheostomy Decannulation or Displacement**

Deborah Audette, Tony Ruppert; Wellspan Health/York Hospital, York, PA

**Purpose:** Failure to recognize and manage accidental tracheostomy decannulation or displacement may lead to poor outcomes for patients. In addressing staff concerns, it was noted that our institution's tracheostomy care policy did not address identification and management of accidental decannulation. The purpose of this project was to answer the practice question, "What is the best practice for management of a patient airway when accidental decannulation or displacement of the tracheostomy tube is confirmed?" **Description:** PubMed, CINAHL, and Google Scholar databases were searched using key words tracheostomy, decannulation, and displacement. This search resulted in more than 5000 citations. The search was refined adding trach, accidental

decannulation and patient care, bringing the total to 130. Thirty-one articles addressed the practice question. A multidisciplinary team appraised the evidence by using the Johns Hopkins Nursing evidence-based practice model. Fourteen articles were of sufficient quality to translate into clinical practice. Recommendations from the evidence suggested the following strategies to identify and manage accidental decannulation and displacement of a tracheostomy tube: (1) having standardized equipment available at the bedside; (2) ensuring proper tracheostomy tube size and length; (3) placing signs about emergent airway management over the bed; (4) teaching health care providers about recognition and use of retention sutures if present, actions to minimize traction on the tracheostomy, proper fit of securement device, who to call for emergency airway management; and (5) using simulation and computer-based testing to train health care providers. **Evaluation/Outcomes:** Recommendations from the literature review identified areas not addressed in our existing policy and education. As a result of these findings, the policy was revised, standardized education using computer-based training and simulation are in place. Both educational offerings include identification of factors predisposing patients to decannulation, measures to prevent dislodgment and decannulation, signs and symptoms of dislodgment and decannulation, and management of patients with tracheostomy-related emergencies with and without upper airway obstruction. Success of the education is demonstrated by competency verification.

#### **EB96 Implementing Normothermia in a 4-Hospital System**

Mary Ried, Anne Crandall, Elizabeth Ryan, Jacqueline Steuer; Northshore University HealthSystem–Evanston Hospital, Evanston, IL

**Purpose:** After attending the Northwest Chicago area chapter of AACN's Neuro Update 2010, staff of Evanston Hospital's intensive care unit (ICU) realized that care could be improved by applying best practice, specifically normothermia, to recommended populations. A challenge was getting support from medical teams within a 4-hospital system. Once critical care, neurosurgical, trauma and stroke neurology teams reviewed literature, they agreed with the recommended treatment. A comprehensive order set, guideline, and education program including competency was instituted. **Description:** According to Bader, hyperthermia in critically ill patients

who sustain neurologic injury results in worse outcomes through several mechanisms that increase secondary injury. Research shows that a 1°C difference in admission body temperature of stroke patients corresponds to a 30% difference in relative risk of long-term mortality, and for each 1°C increase, the relative risk of poor outcome (eg, death) increases by 2.2%. Elevated body temperature also is associated with increased ICU and hospital length of stay. The medical teams had concerns with the use of meperidine and buspirone for shivering with associated changes in mental status. Additionally there was concern that a goal temperature of 38.6°C would result in increased shivering. Therefore the teams compromised on a new goal temperature of 38.1°C. This was based on the assurance that chart audits would be completed to evaluate time to goal temperature, as well as the use of meperidine and buspirone. Once the program was in place, the final step was review of the treatment plan by the Corporate Critical Care Performance Improvement Committee (PI). It was unanimously approved and supported. Roll out of this program was implemented to the 4-hospital system over 2 weeks. **Evaluation/Outcomes:** One year after implementation of the normothermia program, chart audits were completed for 34 patients. The data are as follows: mean age 64 years, mixed patient population, most patients at goal temperature before initiation, mean time to reach goal temperature 2.5 hours, mean of 10 occurrences outside of goal temperature once initiated, 1 patient required meperidine and 1 patient required buspirone. Results were shared with all medical teams, including PI. Recommendations included use of temperature probes with hourly temperatures, continued administration of scheduled acetaminophen despite temperature, and reminder to ordering providers of recommended populations.

#### **EB97 Implementation of a Nurse-Driven Catheter-Associated Urinary Tract Infection Bundle in an Adult Intensive Care Unit**

Laura McCartney, Leann Shipp; Veterans Hospital Administration San Diego, San Diego, CA

**Purpose:** The Veterans Hospital Administration San Diego (VHASD) intensive care unit (ICU) experienced a notable increase in catheter-associated urinary tract infections (CAUTIs). The VHASD ICU's CAUTI rate during fiscal year 2011 was 2.83 per 1000 catheter days, significantly higher than the national average of 1.46. The goal

of this project was to decrease the ICU's CAUTI rate and increase staff knowledge about the infection risks associated with indwelling catheter use. **Description:** CAUTI is the most common infection in the acute care setting. In 2009, the Centers for Disease Control and Prevention (CDC) published revised guidelines regarding CAUTI. After performing a literature review, it was found that the implementation of a bundle approach has proven successful in preventing hospital-acquired infections, including CAUTIs. Based on current evidence-based research, a CAUTI bundle was established in the ICU. The nurse-driven bundle created and implemented incorporates CDC-recommended elements at the bedside level of care. The VHASD bundle is entitled, "CAUTIon" which is an acronym: C = Closed system with red seal intact, A = All indwelling urinary catheters placed using aseptic technique, U = Use soap and water or periwipes for care every 12 hours, T = Tubing secured with a securement device and clipped to patient's bed, I = Indications for use and daily needs assessment, O = Obstruction free, no kinks, bag below level of bladder, N = No dependent loops. In order to engage and educate staff while implementing this unit-wide change, a variety of educational methods were used, to include 1-on-1 teaching, group in-service training sessions, and visual cues using CAUTI bundle posters prominently displayed within the unit. **Evaluation/Outcomes:** Before the intervention, data on indwelling catheter care were collected and assessed for compliance with the CAUTI bundle elements. Following data collection, staff members were educated on indwelling catheter care and the nursing documentation was revised. Various teaching methods were implemented to raise awareness of catheter care. Two months after implementation, data were collected again. Implementation of and compliance with a nurse-driven CAUTI bundle made a positive impact. CAUTI rates decreased from 2.83 per 1000 down to 2 per 1000 catheter-days during a 6-month period. Future plans include reinforcing the CAUTI bundle and continuing to track data with the goal of decreasing rates below the national benchmark.

#### **EB98 Implementing Evidence-Based Interdisciplinary Code Team Training to Improve Teamwork, Communication, and Adherence to Basic Life Support Requirements**

Cynthia Perez; Oregon Health & Science University, Portland, OR

**Purpose:** The need for high-fidelity computerized training with simulated human patients for both team and individual code blue responders was identified. “Simulated Code Interdisciplinary Team Training” (SCITT) provides an evidence-based training and development program for members of the code blue team by using simulation and immediate constructive feedback through debriefing. The goal of this program is to train high-performing teams to manage complex and dynamic crisis situations efficiently and expertly. **Description:** Some of the research used to develop the SCITT Evidence-Based Program includes The Joint Commission’s Root Causes and Percentages for Sentinel Events from January 1995 to December 2005 and the 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. SCITTs are surprise, in-situ, use the sim-man classic and occur weekly in various patient locations (days or nights). Participation in SCITTs is mandatory and supported by senior leaders. To run a SCITT, we use a trained crisis resource management debriefer, an Advanced Cardiovascular Life Support (ACLS) instructor, a simulation specialist and 2 nurse actors. SCITTs are paged out as a “mock code” and, once the code team arrives, run for 10 minutes. Each SCITT is video taped and followed by a 30-minute debriefing. All code team members sign a confidentiality statement after the debriefing. The majority of the SCITT debriefing is focused on elements of crisis resource management, which includes role responsibility, communication strategies, situational awareness, and decision making. Thirty-six SCITTs were logged between August 2010 and August 2011. Data for SCITTs are collected by using a validated tool for crisis resource management known as the Clinical Teamwork Scale (CTS) and a Critical Action Checklist (CAC) created by the Interdisciplinary SCITT Committee that measures individual member’s adherence to roles and knowledge of the ACLS algorithm. **Evaluation/Outcomes:** The data for fiscal year 2011 are compared with baseline data from 16 mock codes (fiscal year 2010). Of significance for CAC: the physician team leader recognizes the need for prompt defibrillation ( $P = .02$ ). Of significance for CTS: overall communication ( $P = .03$ ), orient new members ( $P = .002$ ), transparent thinking ( $P < .001$ ), overall situational awareness ( $P = .04$ ), resource allocation ( $P = .05$ ), role clarity ( $P = .02$ ). Additionally, after each actual code, each responder is invited to submit an evaluation. Fifty-five evaluations were logged in 2011. Initial

results of performance during actual codes show improvement in communication and teamwork after implementation of the program. More research is needed to confirm this (data for 2012 are being analyzed). This study was approved by the institutional review board.

### **EB99 Improving Compliance With the Severe Sepsis Bundle: A Multidisciplinary Approach**

Danielle Fraser, Angela Day, Alan Muster, Regine Thigpen, Gerald Hobbs, Deval Patel; WellStar Kennestone Hospital, Marietta, GA

**Purpose:** Sepsis is the leading cause of death in non-coronary intensive care units (ICUs), with more than 500 deaths nationally each day from severe sepsis. Our team’s goal was to reduce sepsis mortality by achieving at least 75% reliability with key components of the sepsis resuscitation bundle, including measurement of serum lactate, collection of blood cultures before giving antibiotics, administration of antibiotics within 3 hours of triage time, and providing adequate fluid resuscitation. **Description:** Our hospital had previously developed a severe sepsis screening tool and order set. However, momentum had been lost and evaluation of our performance was not occurring because of limited resources and competing initiatives. With the support of administration, we enrolled in the Institute for Healthcare Improvement (IHI) Reducing Sepsis Mortality Collaborative. A multidisciplinary sepsis team was developed that included nurses and physicians from both the emergency department (ED) and the ICU as well as representatives from pharmacy, quality improvement, and administration. We began our project with guidance from the IHI faculty, focusing on patients with severe sepsis and/or septic shock admitted to the ICU from the ED. The ICU clinical nurse specialists screened patients daily using the Severe Sepsis Screening Tool. Patients who screened positive for severe sepsis were entered into a sepsis database and a chart review was conducted to determine compliance with each of the elements of the sepsis resuscitation bundle. Results were entered into the IHI database and shared with the sepsis team at biweekly meetings. All team members participated in data analysis and development of action items to improve compliance. **Evaluation/Outcomes:** Several changes were made to improve our metrics. Computerized physician order entry in the ED was modified. Blood culture and lactate orders were “bundled” together. A weight-based fluid resuscitation order was

built so that adequate fluid bolus amounts were automatically calculated when selected. Our team met its goal for the lactate and blood culture components of the bundle with 93% and 94% compliance. Antibiotic administration and adequate fluid resuscitation scored lower, at 72% and 62%, respectively. However, the overall trend for both measures increased. Participation in the collaborative allowed us to regroup our efforts to improve compliance with the severe sepsis bundle and reduce sepsis mortality.

### **EB100 Improving Compliance With the Severe Sepsis Protocol: Putting Guidelines Into Practice**

Kim Raines, Lisa Hurst, Emily Shears; UPMC Hamot, Erie, PA

**Purpose:** The goal of this 2012 study was to demonstrate improvement in the care of patients with severe sepsis at UPMC Hamot after evidence-based interventions were initiated. In 2011, we measured baseline compliance with UPMC Hamot severe sepsis protocol. This protocol and order set comply with International Surviving Sepsis Campaign guidelines. A subsequent assessment of performance was completed in 2012 establishing a statistically significant increase in compliance. **Description:** At UPMC Hamot, a multidisciplinary team was established. This team created and implemented a screening tool for early identification of severe sepsis and a hotline for reporting a positive screening. A computer-generated daily report alerts nurses to patients who screen positive for systemic inflammatory response syndrome (SIRS). The tool is then applied to evaluate patients with SIRS for sepsis or severe sepsis. Additionally, ongoing education is provided to staff about severe sepsis. The severe sepsis team analyzes individual patients' outcomes for process improvement opportunities. Similarly, Levy and other experts in the care of patients with severe sepsis noted that evidence-based clinical practice guidelines often do not get integrated into bedside practice in a timely fashion. This was the impetus for a performance improvement study by these experts involving 165 hospitals internationally. Levy's study also included a team, a screening tool, and ongoing education. As in our study, a statistically significant increase in compliance with all sepsis bundles was accomplished. **Evaluation/Outcomes:** Specific elements of the resuscitation bundle were compared with 2011 baseline data and showed a significant increase in compliance: blood cultures obtained before antibiotic

administration within specified time (26% vs 93%,  $P < .001$ ), antibiotics administered within appropriate time (34% vs 83%,  $P < .001$ ), serum level of lactate measured within specified time (24% vs 79%,  $P < .001$ ), order set use (18% vs 51%,  $P < .001$ ). In this 2012 study of 102 patients, all elements of the resuscitation and management bundles were captured and analyzed for compliance. Overall, the compliance rates for the resuscitation and management bundles were 63% and 56%, respectively.

### **EB101 Improving the Implementation Process for Therapeutic Hypothermia in Out-of-Hospital Cardiac Arrest Patients**

Tana Rodgers, Rhonda Fleischman, Cynthia Webner; Aultman Hospital, Canton, OH

**Purpose:** To streamline the implementation process for therapeutic hypothermia (TH) for the out-of-hospital cardiac arrest (OOHCA) population admitted to the coronary care unit (CCU). The goals were to (1) decrease the time from initiation to achievement of target temperature and, (2) improve nurses' satisfaction with structures and processes guiding care of this high-risk, low-volume population of patients. **Description:** The use of TH has demonstrated improved outcomes in nonresponsive survivors of OOHCA. One key component of this therapy is the rapid achievement of target temperature. The OOHCA population represents a vulnerable group of patients because of the high-risk patient features and the complexity of the therapeutic hypothermia treatment. Nurses in the CCU identified system barriers in the implementation of TH that arguably hindered the recommended rapid cooling times associated with good outcomes for patients. In response to identified barriers, a "Cool Toolkit" and "Chill Checklist" were developed to provide an organized structure and process to assist the point-of-care nurse in the implementation of evidence-based practice. Twenty-five items needed to initiate the TH protocol were included in the toolkit and available at the nurses' fingertips. The checklist serves as a visual cue in guiding the nurse in sequencing of initial interventions. Baseline data were collected on all OOHCA patients receiving TH admitted to the CCU from January 2010 to October 2010. All OOHCA patients receiving TH admitted to the CCU from January 1, 2011 to July 31, 2012 served as an intervention group. **Evaluation/Outcomes:** Use of the toolkit and checklist has improved nursing efficiency of care and facilitated the achievement of time

to target temperature in >85% of the patients since the implementation of the project. Nurses using the toolkit and checklist evaluated the resources by using a feedback survey to assess nurses' satisfaction and usefulness of the resources. All respondents ranked satisfaction and usefulness as 5.0 on a Likert scale of 1 to 5, with 5 representing very satisfied and very useful. The results of this project demonstrate that a point-of-care-driven practice improvement initiative can influence patient care outcomes and increase satisfaction of nurses.

### **EB102 Is Your Patient Delirious or Is It Just You?**

Cathy Druckenmiller, Amy Leshar; Pinnacle Health System, Harrisburg, PA

**Purpose:** The purpose of this evidence-based project was to introduce and educate the staff of the medical surgical intensive care unit (MSICU) on the use of the Confusion Assessment Method-ICU (CAM-ICU). The goal was to identify and treat patients with delirium. Education was provided to the staff about the use of the CAM-ICU through in-service training sessions, poster presentations, and face to face. An increase in the use of the CAM-ICU has resulted in the proper diagnosis and treatment of delirious patients. **Description:** Research studies have found delirium to be associated with higher rates of complications and increased discharge to a long-term care facility. The complications include increases in the rates of intubations and reintubations, nosocomial infections, falls, and use of restraints; marked declines in cognitive and functional abilities; and high 6- and 12-month mortality rates. Several studies have shown that delirium results in longer ICU stays and is an independent predictor of longer hospital stays. Other studies have shown that, when not actively monitored, hypoactive delirium is undetected in 75% of the patients and is associated with higher rates of complications than are hyperactive and mixed delirium states. In an effort to decrease complications associated with delirium, improve patients' outcomes, and decrease hospital stays and costs, the MSICU implemented the use of the CAM-ICU assessment tool. A 2008 systematic review revealed that this tool was recommended in more than 30 published clinical practice guidelines and has a 95% to 100% sensitivity rating. **Evaluation/Outcomes:** Active monitoring for delirium began in 2012. Use of the CAM-ICU and detection of delirium has increased. The MSICU has seen an increase in the number of patients in whom delirium is

diagnosed. Use of benzodiazepines for treating delirium has decreased, and use of neuroleptics has increased. Progressive mobility and early weaning and extubation contributed to the decrease in the incidence of delirium.

### **EB103 It Takes a Village!**

Josi DeHaven, Jamie Madison, Ashley Eberhard; IU Health Goshen Hospital, Goshen, IN

**Purpose:** Care for critically ill patients receiving mechanical ventilation is performed by a team of physicians, nurses, and respiratory and physical therapists who are dedicated to caring for the patient but often fall short in collaboration, communication, and teamwork. A growing body of research has demonstrated that introducing rehabilitation earlier in the intensive care unit (ICU) stay improves outcomes and prevents many complications for patients receiving mechanical ventilation. Because of the complexity of progressive mobility (PM) in an ICU setting, no single practitioner is able to introduce the change without coordination with the other team members. The purpose of this project was to use a multiprofessional team to safely implement PM in patients receiving mechanical ventilation by using an evidence-based protocol. **Description:** In a small community hospital setting (hospital < 100 beds, ICU = 12 beds), ensuring resources and staffing for ICU support and services requires creativity and collaboration. A multiprofessional group (directors of critical care, respiratory, and rehabilitation services, physical and respiratory therapists, and ICU nurses) implemented PM in the ICU setting by using the Iowa Model for Evidence-Based Practice. The unit is directed by a sole intensivist who helped champion the change among the physician colleagues and who provided direction and oversight to the protocol development. The ICU nursing director sought out both hospital and community resources to purchase equipment needed to mobilize patients (portable ventilator, portable monitors, etc). The director of rehabilitation services worked around complex scheduling and staffing demands to provide part-time dedicated rehabilitation services to the ICU patients. Nurses and therapists grew together in knowledge and experience within the team to move from a culture where bed rest was the norm for all ventilator patients to a new culture where all patients were mobilized earlier in their ICU stay. Team members consistently collaborated during daily multidisciplinary rounds. **Evaluation/Outcomes:** The practice change was

detailed in a PM protocol and checklist, which described the progression of mobility through 5 levels of activity and includes exclusion criteria developed from a thorough review of literature. Initial pilot evaluations completed in the first 60 days showed no complications (unplanned extubations, staff injuries, patient falls, or others). In the first 6 months of implementation (February-July 2012), 25.9% (n=17) of patients receiving mechanical ventilation were progressed out of bed to sit in a chair, stand, or ambulate. This was a significant practice change for a unit for which bed rest had been the norm. Collaboration and the creative use of resources have resulted in a culture change regarding PM.

#### **EB104 Journey to Eliminating Hospital-Acquired Pressure Ulcers in Intensive and Progressive Care Units**

Jenita Gutierrez, Todd Griner; Cedars-Sinai, Los Angeles, CA

**Purpose:** Our organization exceeded the Collaborative Alliance for Nursing Outcomes (CALNOC) hospital-acquired pressure ulcer (HAPU) benchmark for 7 quarters from late 2009 to 2012. Intensive care units (ICUs) and progressive care units were primary contributors to these negative results. In addition to the impact on the quality of patient care, we would also be affected by looming changes in reimbursement for HAPU and took personally the outcomes because they are tied directly to the practice of nursing. **Description:** Our journey began with formation of a prevention-focused critical care HAPU elimination team. Membership included wound care-certified unit champions. Consolidating an 8-part bundle to 4 parts simplified nurse education: assessment, pressure, incontinence, and nutrition. Barriers to use of specialty surfaces were addressed. Patients at risk were placed on alternating pressure mattress without administrative approval. Debriefing each HAPU began January 2012. Staff who cared for patients during the 3 shifts leading up to HAPU discovery are included in a nonpunitive learning event led by the co-chairs of the HAPU elimination team. Unit staff bring a timeline including Braden score, skin assessment, activity, nutritional status, and prevention measures. Contributing factors and lost opportunities are identified, looking for both process and individual behaviors leading to HAPU formation. Clinical pearls gathered during these debriefings are shared divisionally during change-of-shift huddle, department meetings, divisional meetings, and in one on one encounters.

Staff who participate in care leading to a HAPU are left forever changed with better understanding of their role in influencing outcomes of care with nursing practice.

**Evaluation/Outcomes:** Organizational CALNOC values for the second quarter of 2012 outperformed benchmark for all stages for the first time in 8 quarters. Incidence of HAPUs, including device-related HAPUs, has decreased since the debriefing and education. Results are as follows: January, 47; February, 34; March, 18; April, 18; May, 22; June, 33; July, 28; and August, 17. A collaboration between respiratory therapy and nursing resulted in elimination of HAPU related to bilevel positive airway pressure through face mask rotation every 3 hours for the month of August. Prevention focus and debriefing transformed attitudes. Acceptance that HAPUs are unavoidable has shifted to the perception that prevention is possible and is up to nurses. Nursing practice is now extremely focused on HAPU prevention in the ICU and progressive care units.

#### **EB105 LEAN Methods: Meeting the Golden Hour in Stroke Care**

Robin Jackson, Larisa Golding, Jalil Bentaleb, Lewis Eberly; Inova Alexandria Hospital, Alexandria, VA

**Purpose:** The purpose of this evidence-based project is to decrease the interval between arrival at the hospital and starting thrombolytic treatment (door-to-needle) by using value stream analysis and the LEAN method.

**Description:** During an acute stroke, the golden hour starts with the first onset of symptoms; every minute that passes increases damage done by ischemia and increase in permanent disability. Examining the process of all steps and identifying steps that are unnecessary is called value stream analysis. Starting from the time the patient arrives in the emergency department, each step for administration of tissue plasminogen activator (tPA) was examined and unnecessary steps eliminated.

**Evaluation/Outcomes:** We are able to treat 69.2% of our stroke patients with tPA in fewer than 60 minutes door-to-needle time since implementation of our new process. Thrombectomy-treated patients reduced from 39% to 23% because of the faster administration of tPA.

#### **EB106 Multidisciplinary Point-of-Care Documentation for Delirium Screening and Intervention**

Lisa Job, Amy Essner, Linda Heitman, Barbara Mueller; Saint Francis Medical Center, Cape Girardeau, MO



**Purpose:** The purpose of this evidence-based project was to provide a multidisciplinary point-of-care electronic documentation process as a component of a newly developed delirium policy and protocol for critical care. The site provided a record of the process of delirium assessment and subsequent nursing interventions for patients who had delirium develop in critical care. The documented process also provided a method to evaluate the outcomes of specific nursing interventions as well as the individual multidisciplinary consultations. **Description:** A multidisciplinary delirium team was organized to initiate a process to screen all patients for delirium upon admission to the critical care unit and at designated intervals throughout their stay. Didactic classes and individual mentoring were provided for staff on delirium assessment, nursing interventions, documentation, and the multidisciplinary consultation process. The initial documentation tool included the Richmond Agitation Sedation Scale, the Confusion Assessment Method for the ICU, nursing interventions, a consult notification process, and staff signature. Data were transferred to the electronic point-of-care system, which resulted in automatic electronic consultations with physical therapists, pharmacists, and respiratory therapists. Data were collected by an electronic report created by Clinical Information Systems. Assessments for delirium, subsequent nursing interventions, and multidisciplinary consultations were analyzed for their influence on determination of patient outcomes. **Evaluation/Outcomes:** The project has increased verbal and written collaboration among the multidisciplinary team members, saving valuable time in initiating appropriate interventions for patients with delirium. Implementation of the project has resulted in the creation of 2 new policies: spontaneous awakening trial/sedation interruption and ICU sedation, which has improved patient safety and the quality of care. Staff has reported that the documentation for delirium has been easy to use, which has resulted in increased compliance with consistent delirium assessment for patients admitted to critical care.

#### **EB107 New Methods to Cover Cardiac Emergencies: The ST-Elevation Myocardial Infarction Bridge Team**

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**Purpose:** The ST-elevation myocardial infarction (STEMI) is a cardiac emergency. Best-practice guidelines

for minimizing tissue damage and reducing mortality call for emergent balloon angioplasty with diagnosis-to-treatment (door-to-balloon) times of less than 90 minutes. Like many, we found it challenging to meet these guidelines during off-shift hours. This project outlines an innovative approach at the University of Maryland Medical Center to ensure our ability to meet this national quality benchmark. **Description:** We needed a fail-safe and sustainable process for meeting the 90-minute door-to-balloon time for our STEMI patients who came at night or on weekends. Using Pelletier's problem-solving process, we pulled together an interdisciplinary team from our cardiac and emergency service areas. Our major gap was that by the time the on-call team for the catheterization laboratory got to the hospital, they did not have enough time to prepare the laboratory and the patient and still meet the 90-minute window for the angioplasty. We introduced the "bridge team," which provides in-house support when the catheterization laboratory is activated. A key member of the bridge team is the charge nurse from the cardiac care unit (CCU). These nurses received hours of training and completed competency validation in operations of the catheterization laboratory. Now when the emergency department receives a patient with suspected STEMI, a code STEMI is called. The hospital operator notifies the catheterization laboratory team on call and alerts the CCU charge nurse. During off hours, the CCU charge nurse opens the catheterization laboratory, turns on the equipment, and sets up the room. The emergency department brings the STEMI patient to the catheterization laboratory, where the CCU charge nurse prepares and drapes the patient. By the time the on-call catheterization laboratory team arrives, the patient and the laboratory are ready for the procedure to begin. **Evaluation/Outcomes:** Before implementation of the bridge team, data demonstrated a 50% ability to meet and maintain the 90-minute benchmark. Data from after implementation show zero delays in activation and a 100% ability to meet the 90-minute benchmark for the past 10 consecutive months. The use of an in-patient cardiology bridge team is a highly innovative approach to quality improvement. It has demonstrated success. It promotes best practice, and it creates a seamless 24/7 approach to STEMI care delivery.

#### **EB108 New to Practice Nurses Making Changes: Tracheostomy and Peristomal Care in the Neurointensive Care Unit**

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**Purpose:** Engaging nurses who are new to practice in practice change facilitates socialization to a new environment. Activities involving teamwork, innovation, and new knowledge promote professional development and peer communication skills. As the incidence of tracheostomy/peristomal breakdown on a neurointensive care unit increased, a performance improvement project was undertaken to document prevalence, identify risk factors, implement standardized treatment measures, and mentor new-to-practice nurses. **Description:** The new-to-practice nurses partnered with a unit-based clinical nurse specialist to develop, implement, evaluate, and report a practice process as part of an organization-based nurse residency program. These nurses had primary accountability for the project in which the concepts of performance improvement and translation of evidence were used. A review of the literature did not provide specific guidelines for prevention or management of tracheostomy/peristomal breakdown; recommendations for peristomal skin breakdown management were defined on the basis of expert consensus and evaluated. A data collection tool was created to guide documenting prevalence for tracheostomy size, procedure date, time to suture removal, and peristomal skin characteristics. Current organizational practice standards were reviewed and a checklist developed for reference. For a 6-month period, the new-to-practice nurses conducted patient rounds, collected and evaluated prevalence data, used the checklist to promote proper equipment utilization and care procedures, implemented treatment measures for breakdown, and discussed the patient care with the primary clinical nurse. These nurses in turn are mentoring the next group to manage this project. **Evaluation/Outcomes:** Prevalence of tracheostomy/peristomal breakdown was 77% in this unit. Most frequently, peristomal breakdown was unbroken, reddened skin from moisture related to secretions or related to pressure from the tracheostomy face plate. Successful treatment measures included replacing the gauze dressing with a hydrocolloid dressing; ensuring timely removal of sutures and increasing frequency of oral hygiene. Using a bedside checklist improved team communication and implementation of plan of care when peristomal breakdown occurred. Peer-to-peer communication facilitated adaptation of treatment

measures and risk assessment. Further evaluation is needed to identify the impact of preventive measures.

### **EB109 Noise Adversely Affects Patient Satisfaction**

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**Purpose:** Noise interferes with healing. In a national survey, patients identified the noise levels in/around rooms at night as the factor with the most need for improvement. The staff of an inpatient medical cardiology unit at UPMC Presbyterian recognized low patient satisfaction scores related to environmental noise levels. The purpose of this project is to increase patient satisfaction scores by at least 10% by identifying causes of noise and implementing noise reduction interventions. **Description:** Guidelines set by the World Health Organization state that sound levels should not exceed 35 dBA during the day and 30 dBA at night. This project was implemented in a 6-month period. A sound meter was installed at the nurses' station to increase staff awareness of noise levels. The meter has a green light for acceptable noise levels, yellow to indicate increasing levels, and red to indicate levels above an acceptable range. To assess patients' perception of noise, we developed a survey on noise reduction. Surveys were random and completed anonymously. Noise factors were identified by using a pick-list choice. Comments were solicited on the survey. On admission, patients were given headphones and earplugs. The staff implemented a key phrase to decrease noise and improve patients' rest before bedtime, "It is really important to us that you get a full night's sleep and it is quiet in your room at night. We will do our best to make you comfortable and decrease the noise." We collaborated with doctors and the pharmacy department to limit the number of interruptions at night for assessment of vital signs and medication rounds. Posters were hung on the unit and in patients' rooms to remind staff, visitors, and other patients to be aware of their voice level. **Evaluation/Outcomes:** Delivering patient care involves a certain amount of noise, and noise reduction is a priority on our unit. The noise-reduction strategies implemented have benefited the staff and patients. Preservation of patients' sleep should be a priority for contributing to improved clinical outcomes for hospitalized patients. Since implementation of this project, each set of our unit's survey scores have increased by at least 15% in a 6-month

period. This indicates patients' improved perception of quality of care and their satisfaction with noise reduction. Periodic assessments of hospital noise can identify new noises and help staff maintain a quieter environment.

### **EB110 Nurse-Led Multidisciplinary Team Approach to Prevention of Pediatric Sternal Wound Infection**

Cathy Woodward, S. Adil Husain, Dana Rohman, LeAnn Vela, Minnette Son, Lissa Tysinger, Richard Taylor; University of Texas Health Science Center San Antonio, San Antonio, TX

**Purpose:** Children with sternal wound infections (SWIs) after cardiac surgery have increased mortality and morbidity. No evidence-based protocol to reduce SWIs in children has been published. The Surgical Care Improvement Project addresses quality performance measures to decrease surgical site infections in adults; however, no similar efforts have been reported for children. The purpose of this project was to develop and institute a protocol to reduce SWIs in children. **Description:** In 2009, we recognized that our SWI rate was above the national average. We began an intense and focused project to reduce our infection rate by starting a nurse-led multidisciplinary team with members from hospital administration, nursing units, infection prevention, and medical staff. Using Frankel's model for collaborative teams of a continuous learning environment, we began the process to develop a pediatric protocol using evidence-based and best practices from adult guidelines from the Centers for Disease Control and Prevention (CDC) and the Society of Thoracic Surgery. A detailed prospective review of pediatric cardiac surgery patients was conducted during a 2-year period to follow adherence to the protocol and incidence of SWIs. The CDC's definitions of superficial, deep, and organ-space SWIs were used to determine depth and presence of infection. The team met often to analyze findings, discuss problems, and develop action plans. Feedback was provided to the front-line clinicians, both nurses and physicians, involved in the care of the patients. In addition, results were shared quarterly with the Infection Control and Prevention Committee and the Cardiology and Cardiac Surgery Mortality and Morbidity Committee. **Evaluation/ Outcomes:** During the first year of surveillance, the mean number of days between infections was 18. During the second year, with the protocol firmly established, the mean number of days between infections was 75. There were 19 total infections in 308

children during the 2 years of the project, 14 (8.8%) the first year and 5 (3.4%) the second year (a 64% decrease). Delayed sternal closure (DSC) was associated with increased risk of SWI (odds ratio, 5.4; 95% CI, 2.13-14.9;  $P \leq .001$ ). The use of the protocol with DSC patients was associated with a 71% decrease in infections during the second year. A nurse-led multidisciplinary team's institution of a protocol resulted in a decreased number of SWIs in children.

### **EB111 Nursing Education Improves Filter Life and Cost in Continuous Renal Replacement Therapy**

Mary Lavieri; Beth Israel Deaconess Medical Center, Boston, MA

**Purpose:** Continuous renal replacement therapy (CRRT) is used in intensive care units (ICUs) for managing acute kidney injury in unstable, high-risk patients. The blood flow rate in CRRT is low, so clotting of the dialysis filter circuit is common. Circuit clotting may result in blood loss, which increases patients' morbidity. More frequent circuit changes increase cost. Lack of staff education in troubleshooting the circuit and low use of citrate for anticoagulation contribute to both issues. **Description:** Before 2009, citrate was rarely used and such use was not emphasized in training. Most CRRT was run without anticoagulation or occasionally with heparin. The focus of nursing education was on circuit setup, which until 2001 was done by hemodialysis nurses. In 2009, the focus of education and training for renal fellows and critical care nurses was changed. The renal fellows were given a class on CRRT and the use of citrate for anticoagulation. They were also encouraged to page the clinical nurse specialist for consultation. The critical care nurses in the ICU were trained on: troubleshooting of the CRRT machine, use of a "rescue line" for return of blood and troubleshooting, use of citrate for anticoagulation, as well as physiological issues and appropriate prescriptions for replacement and dialysate fluids. We created a standard order set in "provider order entry" to guide our fellows in prescription of therapy and to ensure that safe standards were in place for both critical care nurses and renal fellows. Education of both nurses and fellows included case studies based on real ICU patients. Teamwork and collaboration were emphasized. **Evaluation/ Outcomes:** In 2009, the medical center purchased new CRRT machines. The nurses and renal fellows attended classes as described earlier. Since 2007, we have tracked

filter circuit use, blood loss, and patient days on CRRT. In 2008, the mean filter circuit lasted only 20 hours. Patient blood loss due to clotted circuits occurred in 40% of clotted filter circuits. In 2010, the mean filter life was 54 hours and blood was lost <10% of the time. Thus far, our 2012 data show continued improvement with filter life of 64 hours with a blood loss of <2%.

### **EB112 One Message One Time: Moving Toward Highly Reliable Handoff From Pediatric Intensive Care Unit to Operating Room**

Patricia DeCesare, Kit Leong, Deborah Franzon;  
Lucile Packard Children's Hospital, Palo Alto, CA

**Purpose:** Handoffs in health care are high-frequency events requiring high reliability, yet handoff-related care failures occur. Our aim was to reduce handoff-related care failures by 25% and achieve 90% compliance with the components of an effective handoff. The pediatric intensive care unit (PICU) incorporating specific elements of the "CHCA [Child Health Corporation of America] handoff change package" and using the "Plan Do Check Act" method, developed a standardized handoff process between the operating room and the PICU. **Description:** Care failures related to handoffs are associated with adverse outcomes. Lucile Packard Children's Hospital participated in the Agency for Healthcare Research and Quality's annual culture of safety survey, and satisfaction with handoffs and transitions decreased consistently from 38% in 2008 to 32% in 2010. A process map was developed and health care team members from the operating room and the PICU were solicited to provide feedback to improve the handoff process. Input and engagement from 10 surgical specialties was elicited by the PICU's medical director and quality department. Care failures were determined through peer review and reporting of adverse outcomes. The process "One Message One Time" comprised: (1) handoff tool in IPASS format electronically generated from patient's electronic medical record for use simultaneously by anesthesiologists and the receiving PICU team; (2) standardized scripted numbered role cards for all handoff members to speak sequentially initiated by bedside nurse with introductions; (3) an opportunity to ask questions and clearly transition care; (4) audit process embedded in sign-out and completed by bedside nurse. **Evaluation/Outcomes:** Outcome measures of interest were captured by external real-time audits. Instant feedback was provided to handoff participants. The mean

time to complete a handoff was reduced by 60% (15 min before to 6 min after). After implementation, a satisfaction survey showed 98% satisfaction. Care failures decreased from 23% to 2%. Ongoing compliance audits show (1) distractions have been minimized (97%); (2) appropriate team members are present (90%); (3) adequate information is available before arrival (88%) and the IPASS tool is used (88%). A standardized handoff process incorporating the elements of the CHCA change package is effective and sustainable in a multidisciplinary medical/surgical PICU.

### **EB113 Pediatric Critical Care Inpatient Transfer: System Modifications Decrease Length of Stay**

Mary Jo Grant, Shauna Skog, Jill Sweney; Primary Children's Medical Center, Salt Lake City, UT

**Purpose:** The resource-rich pediatric intensive care unit (PICU) is a key component of patient flow. Because the PICU is a crossroads for many patients, transfer delays can lengthen patients' stay and reduce efficiency. Effective flow of patients must be optimized at the system level with synchronized transfer to facilitate rapid movement of patients. The goal of this project is to decrease the time interval between the PICU medical team's decision to transfer and the patient's arrival in the new area. **Description:** The project was implemented in a 28-bed multidisciplinary medical-surgical PICU admitting 2200 patients a year with a mean daily census of 16 to 25 patients. We hypothesized that an electronic tool to simultaneously notify all key personnel of intended inpatient transfer would improve flow of patients. We modified the process for inpatient transfer. Before the change, transferring a patient from the PICU was a complicated 8-step process. We noted delays from orders to transfer to patients' arrival in the general care area. We implemented a web-based software application, Patient Tracker, that facilitates coordination of care and effective flow for hospital inpatients. The process was amended to (1) PICU medical team sends a single Patient Tracker page defined as "orders to transfer" to the charge nurse (CN), bed control supervisor (BCS), and accepting medical team; (2) accepting team contacts PICU team for handoff; (3) BCS notifies CN of bed availability; (4) CN notifies bedside nurse; (5) patient arrives in new area. **Evaluation/Outcomes:** A convenience sample of 247 patient transfers was compared with 587 patient transfers after the process change. The median time between medical team "orders to transfer" to patients' arrival in the

new area decreased 28%, from 124 minutes to 90 minutes. Median time from medical team orders to transfer to time bed assigned decreased 16% (from 50 to 42 min). The median time from request for bed to availability decreased 52% (from 167 to 81 min). Developing and implementing standard operating procedures, staff education, and a web-based software application decreased length of PICU stay and increased the efficiency of patients' transfers.

### **EB114 Preventing Unplanned Extubations in a Surgical Intensive Care Unit**

Adeluisa DeGuzman, Sandia Royal; Robert Wood Johnson University Hospital, New Brunswick, NJ

**Purpose:** Unplanned extubation (UE) can be a threat to patient safety and a cause of concern for the organization. Reintubation after UE can cause serious complications that can lead to poor outcomes and increase hospital length of stay. Driven by this patient safety concern, a nursing performance improvement project prompted the creation of a unit-based committee to explore evidence-based practices (EBP) for preventing UE. The goal for this ongoing project was to reduce incidence of UE by 10%.

**Description:** The unit-based committee was interdisciplinary, consisting of a clinical nurse educator, staff nurses, respiratory therapist, and infection prevention and critical care specialists. The team analyzed collected data from UE documentation and identified common risk factors associated with UE. The EBP literature showed that identifying risk factors and the use of weaning and sedation protocols were associated with decreased incidence of UE. Based on the literature, a self-extubation risk assessment tool (SERAT) for identifying high-risk patients was adopted and modified. The original SERAT was used from the 2008 study by Boriau et al and was modified by using the Glasgow Coma Scale and Richmond Agitation Sedation Scale. Based on patients' risk level, several prevention strategies were developed. Prevention strategies for high-risk patients included early weaning and timely extubation using a ventilator weaning protocol and continuous assessment for the need for adequate pain and agitation control, especially during the weaning process. Part of the implementation process was one-on-one education provided by staff nurse champions regarding the use of the SERAT to identify high-risk patients and prevention strategies for UE. **Evaluation/Outcomes:** The incidence of UE since implementation of the project was reduced by 41% in 2011. Our data showed that 98%

of patients who self-extubate did not require reintubation. This data indicate that early weaning and timely extubation were the primary strategies for preventing UE. Ongoing evaluation identified that delay in extubation, low levels of sedation and pain control, and lack of surveillance of patients during the weaning process were the common contributory factors for UE. Low compliance during the implementation process was also identified as one of the barriers to success. The team continues to search for and develop other strategies to increase compliance towards the achievement of their goal.

### **EB115 Quality and Safety Nurse Champions**

Marilea Higdon, Maile Mauer; UC Davis Medical Center, Sacramento, CA

**Purpose:** The goal of this program was to design and employ a multidisciplinary and sustainable program for reducing ventilator-associated pneumonia (VAP) in an academic medical center serving 33 counties and 6 million residents. An intensive care unit (ICU) staff nurse was hired from each of 7 adult ICUs. These full-time nurse champions, with a combined ICU experience of 117 years, had a vision to improve ICU culture by educating health care providers and reinforcing a VAP prevention bundle.

**Description:** The quality and safety nurse champions are responsible for implementation of the unit-based patient safety infrastructure by using evidence-based practices for the prevention of VAP and by facilitating, with leadership, a team- and skill-building curriculum. The concepts of Lean and Six Sigma methods, using the DMAIC (define, measure, analyze, improve, and control) framework, were combined with the intent of removing "silos" in the medical center and championing innovation and excellence. The champions recognized a need for a work-flow analysis and education about standardized work as well as re-engineering necessary to make it easy for staff to provide excellent care effectively and efficiently. Education of staff in real time is called "just-in-time coaching" and the "teach back" method is used. Another innovation is the "huddle," which is reviewed with the ICU staff at the beginning of each shift and updated daily. The champions combine real-time and retrospective automated audit methods based on the Institute for Healthcare Improvement's (IHI) VAP prevention bundle elements and the electronic medical record. **Evaluation/Outcomes:** 2009 was our baseline year, 2010 our implementation year, and 2011 our first

full year after the intervention. We exceeded our benchmark for bundle compliance within the first month and have had a decrease in VAP rates in each ICU. What began as a VAP initiative has grown to include other initiatives such as early mobility, hand hygiene, catheter-associated urinary tract infections, central catheter-associated bloodstream infections, and sepsis. The champions contribute in physician-led multidisciplinary rounds, serving as quality and safety experts to improve compliance with evidence-based bundles. Data from the initiatives are formed into the hospital-wide dashboards and are used for education.

### **EB116 Rapid Assessment Unit: From Vision to Realization**

Teresa Scholer, Shari Cammon; St Mary Medical Center, Langhorne, PA

**Purpose:** In order for health care institutions to survive in today's world of stringent reimbursement guidelines and increased cost, care delivery must change. To meet the needs of our community, we identified the need for a rapid assessment unit. Our goal is to determine, in less than 23 hours, a patient's disposition for an acute versus an outpatient level of care. This disposition is driven by assessment of the patient, diagnostic workup, and reimbursement criteria. **Description:** An observation unit is developed to decompress an overcrowded emergency department and to enhance quality and efficiency of care. With reimbursement capitation and the need for acute care beds, appropriate disposition of patients must be determined on initial assessment. Observation status applies to certain categories of patients whose needs can be managed within a 24-hour period. When a patient is inappropriately identified as an inpatient, an institution runs the risk of not being reimbursed to its fullest extent, resulting in a loss for the hospital because of payer denial. In a special 2009 report, "Managing Observation Patients," key factors for the development of a dedicated observation unit were identified. Among these factors is determination of the need for such a unit and the development of a clear vision, focusing on patients with initially uncomplicated diagnoses. In 2012, it was decided that our institution would convert half of an existing telemetry unit into a rapid assessment unit. Key elements of the conversion included a comprehensive educational plan, a physician champion, a dedicated case manager, development of disease-specific protocols, and work-flow changes to

expedite patient testing. **Evaluation/Outcomes:** Each observation case is reviewed every 4 hours to identify opportunities for expediting testing, or determine potential delays in discharge. The following data are reviewed weekly by a multidisciplinary team: overall length of stay, provider-specific length of stay, and any case that extends beyond 23 hours. **Evaluation:** In the past 7 months, our mean length of stay in the rapid assessment unit has decreased by 7.5 hours. We have been able to sustain a continued decrease, even with a substantial increase in the volume of patients evaluated. Given the increased volume and the decrease in length of stay, an additional 3.5 acute care beds have become available per day.

### **EB117 Reducing Catheter-Associated Urinary Tract Infections in Burn Patients Through Education and Accountability**

Regina Welch, Susan Brown; Arkansas Children's Hospital, Little Rock, AR

**Purpose:** Critically ill burn patients have an increased need for indwelling urinary catheters to closely monitor urine output and guide fluid resuscitation. Burn patients are twice as likely as other ICU patients to have catheter-associated infections. The purpose of this project was to develop a comprehensive educational program, a reliable audit tool, and a root cause analysis to decrease catheter-associated urinary tract infections (CAUTI) in a burn ICU along with providing for front-line engagement in quality outcomes. **Description:** In 2011, nurses noticed a gradual increase in the number of CAUTIs in our burn patients. The unit had CAUTI rates as high as 23.4 per 1000 catheter days with an average cost of \$108,000 in the past 2½ years. We realized that the Joint Commission has declared the prevention of CAUTI as a 2012 National Patient Safety Goal. Our shared governance council solicited a focus group to work on this project. After researching the literature, the AACN practice alert and the guidelines from the Institute for Healthcare Improvement and the Infectious Diseases Society of America (IDSA) were used to develop an evidence-based education and audit plan and CAUTI bundle. Education was provided through PowerPoint presentations and mannequin demonstrations on insertion and management of urinary catheters and the correct way to use a bladder scanner. Continued need for the device and alternative interventions were discussed in daily multidisciplinary rounds. Audits were completed daily to assess compliance, with

real-time teaching provided as indicated. Root-cause analysis was completed on any infection that occurred and staff were educated on the findings. This bundle was developed and audited by primary nursing staff to emphasize front-line engagement in quality improvement. **Evaluation/Outcomes:** The overall evaluation of this program was measured by the incidence of CAUTIs, the number of device days, the use of a bladder scanner before catheterization, the use of alternative methods to indwelling catheterization, and the audit compliance rates for our CAUTI bundle. The rate decreased from 23.4 in February 2012 to no CAUTIs in the past 4 months, along with a decrease of device days from 0.45 to 0.17. All patients are being reviewed daily for continued need of a catheter with a 90% increase in the use of a bladder scanner before catheterization. Device handling and management audits conducted for the past 5 months have shown a 93% compliance with the CAUTI bundle.

#### **EB118 Reducing Central Catheter–Associated Bloodstream Infections by Using Health Care Failure Mode and Effect Analysis**

Celeste Chandonnet, Denise Casey, Nadine Spigel, Kathleen Flaherty, Prerna Kahlon; Boston Children's Hospital, Boston, MA

**Purpose:** To significantly reduce central catheter–associated bloodstream infection (CLABSI) rates in the neonatal intensive care unit (NICU) by initiating a health care failure mode and effect analysis (HFMEA). **Description:** The NICU experienced an increase in the number of CLABSIs despite having made many attempts to address this problem in a 2-year period. This was concerning because increases in morbidity, hospital length of stay, and health care costs have been directly associated with CLABSIs. HFMEA offered an alternative systematic approach for identifying failure points in current systems and had been used in other health care settings. It was hypothesized that with this systematic approach for identifying failure modes, along with development of action plans for central catheter placement and maintenance, we could reduce our CLABSI rates. Between March and October 2011, a multidisciplinary team was assembled and completed the HFMEA process. Several failure modes were identified and action plans were developed. The action plans included practice changes and staff education that were based on the most common failure modes, including touch contamination, environment of

care, products, and practice variation. Staff were educated on practice changes and then these changes were implemented in November 2011. **Evaluation/Outcomes:** Through the HFMEA process, we have made a significant and sustained improvement in the NICU CLABSI rates. The preimplementation CLABSI rate was 2.6 (per 1000 catheter days), with 6 CLABSIs per 2325 catheter days. The postimplementation CLABSI rate was 0.8 (per 1000 catheter days) with 2 CLABSIs per 2411 catheter days. After implementation, we experienced our longest stretch (174 days) without a CLABSI since October 2009. Our use of catheters remained unchanged from before to after implementation of the changes.

#### **EB119 Reducing Central Catheter Days: Combining Technology and a Team Approach**

Jennifer MacDermott; Wexner Medical Center at The Ohio State University Medical Center, Columbus, OH

**Purpose:** Central catheter–associated bloodstream infections (CLABSIs) are associated with a 30% mortality and \$45 000 bill per case. Early this year, our hospital instituted an evidence-based bundle with a goal to reduce our rates to zero. After implementation, it was revealed that removal of unnecessary catheters was limited by issues with obtaining peripheral access. Patients were only receiving minimal intravenous medications, but upper extremity edema, obesity, and other factors were limiting successful peripheral cannulations. **Description:** Current literature on ultrasound guidance of placement of peripheral catheters remains limited to emergency departments; however, factors such as obesity, chronic medical conditions, intravenous drug abuse, and edema continue to be an issue after transfer to the intensive care unit (ICU). With an intent to reduce the numbers of central catheter days and CLABSIs, in January 2010, the surgical ICU trained its clinical nursing specialist (CNS) to use ultrasound to place peripheral catheters in patients. Initially, success in reducing central catheter days and CLABSI cases was seen; however, success was limited by the CNS's limited schedule on the unit. Starting in October 2010, the trained CNS began to identify and train staff nurses in the surgical ICU who were interested in performing the ultrasound-guided peripheral catheter insertion technique. All individuals completed a didactic course and 4 to 16 hours of hands-on training inserting peripheral catheters with the ultrasound in surgical ICU patients. As of September 2012, the surgical

ICU has a team of 15 nurses with 24-hour a day coverage for our patients. **Evaluation/Outcomes:** Since January 2010, the surgical ICU has inserted more than 1700 catheters using ultrasound guidance, maintaining an 88% success rate. Since the initiation of ultrasound-guided peripheral cannulation in January 2010, the number of central line catheter days in the surgical ICU has been reduced by 3.1%. Although this may appear insignificant, during the same time frame, the number of patient days has increased 9.3%. With the addition of this technique, the number of CLABSI cases has been reduced 46%, from 2.4 cases per month to 0.9 cases per month. In a year's time, that will potentially save 3 patients who may have died as a result of a CLABSI and more than \$500 000 in CLABSI-related treatment.

#### **EB120 Residual Neuromuscular Blockade in the Intensive Care Unit: A Quality Improvement Project**

Mark Ligad, Charles Murphy, Kesi Benjamin, Lynn McGugan, Danielle Ward, Jose Del Rio; Duke University Health Systems, Durham, NC

**Purpose:** Residual neuromuscular blockade (RNB) without sedation can lead to awareness during anesthesia or in the intensive care unit (ICU). Awareness should never occur, but it does occur at a rate of ~1%, and can lead to posttraumatic stress disorder. RNB has been observed in 11% to 88% of postsurgery patients. When a case of RNB occurred in our ICU, the Comprehensive Unit Safety Program (CUSP) Committee addressed the problem of RNB to prevent potential future awareness events. **Description:** Peripheral nerve stimulators are monitors that are routinely used in the operating room, or with continuous infusions of neuromuscular blockers, although no existing guidelines could be found for ICU use. As no existing protocols could be found for implementation, a multidisciplinary ICU committee created a protocol involving the use of readily available peripheral nerve stimulators to test for residual paralysis before discontinuing sedation. Nurses, a nurse practitioner (NP), the ICU medical director, and a cardiac anesthesiologist developed the protocol. Education for nurses occurred via face-to-face small group in-service training sessions provided by 2 superusers, posters, e-mails, and return demonstrations. Advanced practice provider (APP) education was conducted by an NP on the committee. Both nurses and APPs were given pre and post tests to evaluate knowledge and comfort level. Education occurred at

least 1 month before implementation of the protocol.

**Evaluation/Outcomes:** Both nurses and APPs showed improved knowledge of, and comfort with, performing and interpreting train of 4 data with a peripheral nerve stimulator. The protocol was used on 202 patients during the first 8 weeks. Of these 202 patients, 13 had peripheral nerve stimulator results that indicated they still had neuromuscular blockade. Sedation was continued in these patients until reversal agents were given, or their paralytics were metabolized, thus preventing RNB without sedation, which drastically reduces the risk of potential awareness.

#### **EB121 Standardizing the Management of Pulmonary Artery Catheters**

Sharon Wahl, Sarah Walker, Theresa Bilse-Kraft, Maryann Moon, Brian Meltzer, Beth Caven, Bethany Best; Abbott Northwestern Hospital, Minneapolis, MN

**Purpose:** Expansion of the advanced heart failure program at our institution has led to a marked increase in use of pulmonary artery catheters. A variance in practice existed between, as well as within, the cardiovascular intensive care units (ICUs). Additionally, nurses and physicians identified policy-related questions and requested review. A group led by a clinical nurse specialist and made up of nursing representatives from each ICU was formed to evaluate current practice, review evidence-based resources, and standardize management. **Description:** Each member reviewed a practice question and compared a related section of policy to evidence-based references. A nurse had identified a difference between policy and practice when discontinuing a pulmonary artery catheter (PAC). Extensive review of the literature and consult of experts showed either method—end expiration vs deep inspiration and holding the breath—to be acceptable. A lack of standardization in obtaining and interpreting waveforms was a priority issue. Literature supports elevating the head of the bed to 60° but the group chose a 45° maximum elevation to decrease variability. Recent introduction of a new brand of PAC had resulted in dampened waveforms and difficulty flushing ports. A fast flush of 2 seconds was supported by review, and nurses were encouraged to minimize obtaining blood samples from the distal port. Finally, the policy stated that nurses may not discontinue PACs in patients with existing right-sided catheters and physicians were requesting a change. Review of the literature and benchmarking



with other hospitals provided little guidance. Collaboration with physicians to obtain expert opinion resulted in a recommendation of no change to the policy. The policy was revised to incorporate the findings concurrent with evidence-based practice. **Evaluation/Outcomes:** The work of the group resulted in a revised policy that is reflective of best practice guidelines and user friendly. Information contained in the policy that was considered reference was placed in a manual composed of slides that is available on the intranet as a resource to all nurses. The revised policy and manual were presented to all ICU nurses as part of a mandatory skills day. In addition, a competency requiring nurses to accurately evaluate and read 3 printed waveforms was developed. A unit standard of “do not wedge without physician order” has been adopted. An electronic order is being created to clarify variables related to wedging and type of cardiac output.

#### **EB122 Stay Out of the Doghouse! Pressure Ulcer Prevention Strategy**

Melania Flores; Mayo Clinic Hospital, Phoenix, AZ

**Purpose:** To implement a pressure ulcer prevention strategy (PUPS) in high-risk cardiovascular patients before admission to the intensive care unit (ICU). Despite current evidence-based ulcer preventive interventions, our ICU’s highest rate of pressure ulcers occurred in high-risk cardiovascular patients. Evidence reveals that the cardiovascular/ICU patients are at the highest risk of pressure ulcers developing. The literature validates that prevention is the key to reduction. **Description:** To initiate this work flow, one or more of the following clinical conditions is anticipated: (1) implantation of a mechanical circulatory assist device, (2) complex procedure with a long operating room time, (3) postoperative hemodynamic instability and an open chest, (4) repositioning contraindicated, or (5) preoperative score <2 on the Braden mobility subscale. In collaboration, the ICU nursing staff and the operating room team identify the patients at risk and initiate the work flow. Once a patient is identified, the operating room uses a fluid-filled mattress specially fitted for operating tables to help reduce pressure ulcers. Nonadherent foam dressings are applied to the sacral area and both heels. At the end of the surgery, the patient is placed on a special low-air-loss bed prepared with the recommended flat sheet and dry flow pad, and the patient is transferred to the ICU. Owing to hemodynamic instability, open chest, device cannula

insertion sites, patients often have a “do not turn” order. Hence, the functions of the specialty beds, such as continuous lateral rotation therapy and maximum low air loss, optimize maximum benefits on arrival in the ICU. These PUPS were selected on the basis of evidence-based practices. **Evaluation/Outcomes:** Before implementation of the pre-ICU PUPS, our pressure ulcer incidence averaged 2 per quarter. After initiating the work flow, we have had 0 reported pressure ulcers. Our institution conducts a quarterly pressure ulcer prevalence survey. The ICU nursing staff has embraced this collaborative work flow with the operating room. The operating room and ICU teams have used a bedside handoff checklist that includes the sacral border dressing and specialty bed to aid in identifying needs before surgery. We continue to audit all high-risk cardiac surgery patients to ensure compliance.

#### **EB123 Therapeutic Hypothermia After Cardiac Arrest/Anoxic Brain Injury: Cool Lessons Learned**

Angela West, Darice Hawkins, Dawn Marie Kay, Victoria Barbara; Long Beach Memorial, Long Beach, CA

**Purpose:** To present analyzed data collected on 46 patients who were cooled from March 2010 through March 2012. Although a therapeutic hypothermia (TH) policy/procedure was written and inclusion/exclusion criteria were outlined, review of these cases demonstrated variability in clinical decisions. Situations occurred that caused clinicians to rethink some of the initial parameters. Our goal is to share the lessons learned from the outcomes of these decisions. **Description:** Although the benefits of TH were discussed in the 1950s, further research was required to support evidence-based practice changes in the care of patients comatose after full cardiac arrest. Literature review suggests variances in inclusion/exclusion criteria, cooling methods, length at target temperatures, temperature monitoring, and medication administration. TH is now considered the standard of care for patients with out-of-hospital ventricular fibrillation arrest. Our organization’s interdisciplinary team members, supported by executive leaders, participate in a TH committee. This committee analyzes case studies and applies learning experiences with the goal of optimizing patients’ outcomes. The team includes members of the Los Angeles County Emergency Medical System, the emergency department, Memorial Heart and Vascular Institute, intensive care unit, neuroscience department, and various ancillary departments integral to the care of

TH patients. Incorporating knowledge gained from a literature review, the TH team created policies and procedures, order sets, staff education including various methods of presentation, and data collection with analysis for reports. **Evaluation/Outcomes:** As initial evidence was limited, our team broadened the inclusion criteria to include nonshockable rhythms, older patients, unclear witnessed arrest, and anoxic injuries from noncardiac causes. In attempting to provide care for our patients when information was unclear, we made the decision to cool them. Lessons learned include the value of early computed tomography, continuous electroencephalography, and use of intermittent versus continuous paralytic agents to control shivering. Of 46 patients, 31 may not have been cooled based on established evidence. Even though most of these patients had poor outcomes, 16% (5/31) were discharged with a meaningful quality of life.

#### **EB124 Time Is Brain: Using In-House Stroke Alerts for Early Identification and Treatment of a Brain Attack**

Elizabeth Naber, Rachel Brown; Grant Medical Center, Columbus, OH

**Purpose:** Approximately 780 000 people have a stroke in the United States every year. A third of these die, a third become disabled, and a third recover. We put a process in place to identify stroke symptoms early so that appropriate treatment could be initiated and patients could be placed in those areas specifically trained in the management of stroke. The goal is to expedite care, which improves patients' outcomes. **Description:** A stroke alert notification policy was developed including the new process. When a patient is identified as having stroke symptoms, the rapid response team (RRT) is called and time of symptom onset is established. The RRT physician makes the decision to call a stroke alert. This mobilizes the on-call neurologist, radiology, interventional radiology, pharmacy, and the neurosciences outcomes manager. The RRT nurse takes the patient for computed tomography (CT). The radiologist and the neurologist decide if the patient meets criteria for administration of tissue plasminogen activator (tPA). Based on the level of care needed, the patient is transferred to a stroke unit where stroke-specific care can be given. Extensive education regarding stroke with special focus on early stroke symptoms using the FAST assessment was provided. Nurses from stroke-specific units and the RRT nurses were offered an Advanced Stroke Life Support course to further

enhance their knowledge on the early identification and care of stroke patients. **Evaluation/Outcomes:** Staff nurses were surveyed before and after education. Posttest results showed improvement in the areas of knowledge level and comfort in care of stroke patients. Competencies are validated through 8 hours of education annually, which is a requirement for certification as a stroke center. Each stroke alert is reviewed for care and timeliness of interventions at each phase and opportunities for improvement. Care phases include onset of symptoms to doctor, onset of symptoms to CT, onset of symptoms to CT interpretation, and onset of symptoms to administration of tPA. Since implementation, our outcomes are consistently within the target range per American Heart Association guidelines.

#### **EB125 Use of a Daily Goal Sheet to Decrease the Occurrence of Ventilator-Associated Pneumonia**

Georgia Jackson, Debra Barker; Emory University Hospital Midtown, Atlanta, GA

**Purpose:** The medical intensive care unit (MICU) experienced an increase in our ventilator-associated pneumonia rates (VAP) to 7.33/1000 patient days in 2007, significantly above the National Healthcare Safety Network benchmark. VAP is a significant clinical complication associated with increased length of stay, cost, morbidity and mortality. Our goal was to decrease the occurrence of VAP in all of our patients receiving mechanical ventilation through implementation of the daily goal sheet (DGS). **Description:** The MICU's VAP committee noted inconsistencies in compliance with the ventilator bundle recommended by the Institute for Healthcare Improvement. Using performance improvement tools identified communication across disciplines as the key to improving compliance with bundle components and reducing VAP rates. Examples of previous tests of change included the following: (1) Standardizing the location of the mouth care kits outside each patient's room to enhance visibility for all staff; (2) "Sedation vacation" protocol altered to accommodate nursing work flow. The DGS was implemented in November 2007. The purpose of the DGS was to serve as a checklist, promote compliance with the ventilator bundle, and enhance communication to provide a way for the interdisciplinary team to come together on a plan of care. The DGS was completed on ventilator patients and is placed outside each room. It is filled out by both day and night shift

nurses daily in conjunction with bedside shift report. Day-shift respiratory therapists are responsible for the weaning assessment, spontaneous breathing trial, and readiness to extubate portions. **Evaluation/Outcomes:** The process measures evaluated included compliance with the ventilator bundle, compliance with oral care, and compliance with all components of the DGS, including signatures of the nurses, respiratory therapists, and physicians. The VAP rate immediately before the DGS was implemented was 7.46/per 1000 patient days during fiscal year (FY) 2006. The VAP rate decreased to 4.9 at the end of the first year of implementation (FY 2007) and has declined steadily. In FY 2010, 1.28; FY 2011, 0.98; and FY 2012, 0.4. The DGS enhanced compliance with the ventilator bundle, resulting in a significant reduction in VAP episodes and improved communication among interdisciplinary teams and provided a more cohesive plan of daily care.

#### **EB126 Ventilator-Associated Pneumonia in Trauma Patients: An Accident Prevented by Thinking Outside of the Bundle**

Susan Ashcraft, Heather Klenk, Denise Wolfe, Heather Pitts, Megan Powell, Jessica Jarvis, Devon Lofters; Moses Cone Hospital, Greensboro, NC

**Purpose:** Ventilator-associated pneumonia (VAP) is a significant problem in trauma patients, increasing mortality and cost of care. Although adherence to VAP prevention strategies was 98%, our VAP rate revealed monthly variation (0-34) and a plateau for 2 consecutive years (8.04). Nurses in the neuroscience intensive care unit (ICU) recognized the need to apply different strategies to influence trauma patients' outcomes. A team was created to decrease VAP in trauma patients. **Description:** Our critical care nurses and trauma services recognized the importance of an interdisciplinary approach in their efforts to decrease the incidence of VAP. Additional persons with a stake in the process were added to the team, including a dietitian, pharmacist, respiratory and physical therapist and leaders from both nursing and respiratory therapy. A review of the literature revealed the positive impact of team rounding and use of an interdisciplinary tool on VAP rates. Each discipline was responsible for confirming specific evidence-based practices that prevent VAP. These strategies were then embedded into a check-off tool to be used during rounding. Initially, interdisciplinary team rounding occurred twice a week. Modifications to

the tool occurred frequently to improve communication during rounding. Recognizing the impact that rounding made on ensuring timely interventions, the neuroscience ICU began using the tool to round every day on all ventilator patients while maintaining biweekly interdisciplinary rounding with the trauma services. **Evaluation/Outcomes:** Since implementation of intentional VAP rounding and daily use of the interdisciplinary tool, trauma services have experienced a 0 VAP rate for 6 consecutive months. Implementing the same process on every ventilator patient, the neuroscience ICU has decreased their overall VAP rate from 3.0 to 1.54 in the same period. Vigilance to ensure continued rounding and prompt implementation of interventions continues to be a strategy supported by our leaders.

#### **EB127 Ventriculostomy Dressings: A Process Improvement Project**

Arlene Boudreaux; Vanderbilt University Medical Center, Nashville, TN

**Purpose:** To reduce the incidence of meningitis cases related to extraventricular drains (EVDs), to assess the effectiveness of changing a medical model to a nursing model of care for EVD dressing changes, and to bring the standard of care in line with current evidence. **Description:** The neurology/neurosurgery intensive care unit in a major teaching hospital was experiencing an increased infection rate in patients with EVDs. Policy at that time was for the neurosurgery resident to perform dressing changes on EVDs; nurses were only to reinforce. Significant wait times occurred if the resident was in the operating room or involved in a procedure, increasing potential for infectious materials to access the meninges. A search for evidence ensued, along with benchmarking of other hospitals for standards or policies. The American Association of Neuroscience Nurses' clinical practice guidelines do recommend having nurses change EVD dressings. Working with one of the neurosurgeons, a policy and protocol for nurses to change EVD dressings was created. Chlorhexidine gluconate was the cleanser of choice because alcohol is toxic to meninges. A hospital-specific EVD dressing kit was created with feedback from nursing staff and vetted through the clinical practice committee. The kit contained a mask and sterile gloves atop a sterile drape wrapped around a tray with 4 × 4s, a 2-oz packet of chlorhexidine, a transparent dressing, tape, and a label. A competency and learning tool were developed as well. **Evaluation/Outcomes:** Staff education

began in September of 2011, with the EVD dressing change kit available in January 2012. Staff were encouraged to perform the dressing changes with individual supplies until the kit was available. EVD-related meningitis cases in fiscal 2009-2010 were 4.3/1000 device days, 3.3/1000 device days in fiscal 2010-2011, and 0.3/1000 device days in fiscal 2011-2012. No EVD-related meningitis cases occurred at all for a consecutive 355 days.

### **EB128 Vigilance and Rates of Catheter-Associated Bloodstream Infections**

Virpal Donley, Sherri Reese; University of California, Davis, Medical Center, Sacramento, CA

**Purpose:** In 2005, the rate of central catheter-associated bloodstream infections (CLABSIs) in our pediatric intensive care unit (PICU) was 9.6/1000 central catheter days, exceeding the National Healthcare Safety Network (NHSN) mean rates for PICUs, 6.6/1000 central catheter days. The goal of our original project was to reduce the CLABSI rate in our PICU patients and to sustain that rate below the NHSN national benchmark for PICUs. In the process we discovered that sustainability of any change in practice requires continued monitoring of bedside practice in addition to ongoing staff education. **Description:** In 2006 we joined the National Association of Children's Hospitals and Related Institutions (NACHRI) PICU CLABSI Collaborative to study the application of Johns-Hopkins' adult ICU central catheter insertion bundle to the pediatric population and develop a maintenance bundle to reduce CLABSIs (part of the Keystone ICU Project). The insertion bundle included hand hygiene, full body drape, full sterile surgical attire, and site preparation with chlorhexidine. We corrected issues with hand sanitizer access and created a procedure supply cart with checklist and script for the observer when technique breaks were noted. When 80% compliance with each insertion bundle element was met, we developed a central catheter maintenance bundle. The bundle included hub disinfection, site observation, dressing changes, catheter changes, line entry frequency, daily assessment of catheters for necessity, and proper blood culture collection technique. Our maintenance bundle was systematically rolled out over 24 weeks using one-on-one education, quizzes/prizes, frequent reports on each bundle element and personalization of each infection with the patient's name and the staff involved posted in a secure location. **Evaluation/Outcomes:** Through the use of the central catheter insertion

and maintenance bundles we successfully reduced our CLABSI rates to 2.5/1000 catheter days and sustained a reduction for 2 years. As a result of our success, our bundles were rolled out to the entire hospital. However, owing to budget cuts, our committee was disbanded and maintenance efforts were discontinued. The lack of vigilance in regards to CLABSI prevention was reflected in our rates increasing to 9.0/1000 catheter days in 2009. We learned that although we temporarily affected our rates, we had not created the culture change necessary to maintain the lower rates and that close monitoring of practice was most likely the key to our earlier success.

### **EB129 We Can Prevent Central Catheter-Associated Bloodstream Infections**

Lorina Welper, Vicki Loeslie, Tammie Volkman, Beth Bakel, Ma Abcejo, Pamela Timmerman, Sharon Howe, Nanette Clark; Mayo Medical Center, Rochester, MN

**Purpose:** Prevention of central catheter-associated bloodstream infections (CLABSIs) was a 2012 National Patient Safety Goal. Cost of these infections is substantial in terms of morbidity and loss of reimbursement dollars. In 2010, the CLABSI rate in a 9-bed respiratory care unit was 2.8 per 1000 days; more than double the rate in general care units within the same hospital. The purpose of this project was to lower CLABSI rates through improved awareness and compliance with established policy.

**Description:** Efforts to reduce the incidence of CLABSI focused on staff knowledge and compliance with established policies and practices. Current nursing practice was reviewed in April 2011 to determine gaps that could contribute to our CLABSI rate. Weekly chart audits were performed to determine reason for initial placement of the catheter, bloodstream infection occurrence, site care frequency, and cap changes throughout the project. This project was implemented in 2 phases: Phase I—Staff education was provided to review institutional policies surrounding central catheters. A unit poster displayed questions of the week to reinforce hand hygiene, site care technique, hub access (15-second scrub the hub), cap change routine, and statistical information on the institutional cost of infection. Phase II—Peers observed staff performing site care, hub access, and cap change. Immediate verbal feedback was provided to staff to reinforce proper technique. Weekly chart audits continued and 3 times per week cap change routines were implemented. **Evaluation/Outcomes:** After implementation, only 1 CLABSI was reported in

2011 (0.5 per 1000 days). The team reevaluated our strategies, discussed with our division of infectious diseases and instituted an addition of the chlorhexidine gluconate patch. This patch was placed over the central catheter insertion site during weekly site care. Since this intervention, 0 CLABSIs have occurred to date (52 consecutive weeks). Data are continually shared with staff on a quarterly basis to empower staff efforts to reduce bloodstream infection, morbidity, and hospital costs.

### **EB130 Weaning Without Interruption: An Evidence-Based Solution to Continuous Analgesia and Sedation Weaning in a Trauma Intensive Care Unit**

Sarah Zea, Tara Sacco, Brenton Lariccia; University of Rochester Medical Center, Rochester, NY

**Purpose:** The use of continuous analgesia and sedation is associated with increased length of stay, prolonged mechanical ventilation, and delirium. Although sedation interruption is a component of ventilator-associated pneumonia (VAP) bundles, this approach can be problematic in the trauma population, and compliance often is <50%. Via a collaborative process among unit nursing and medical leaders, a nurse-driven, bolus load and infusion weaning guideline was implemented. **Description:** Provision of optimal analgesia and sedation is a challenge in the management of trauma patients. Trauma patients at a Magnet-designated medical center were not tolerating the complete cessation of all medication that occurs with daily interruption. Literature suggests that if pain and agitation are adequately controlled in advance, the use of continuous infusions will decline. Following a systematic literature review, a multidisciplinary team of nurses, physicians, and pharmacists developed an innovative pain and sedation guideline that coupled aggressive analgesia and sedation bolus loading with a regimented weaning program. If pain and agitation were controlled after initial loading doses, patients progressed to intermittent dosing rather than continuous infusions. Those requiring continuous medications were placed on the weaning guideline. A group of nurse champions convened for implementation. These champions educated staff via lectures, online learning, and just-in-time education at the bedside. Nurse buy-in was essential for success, and through the diligence of the unit champions, a culture change evolved. **Evaluation/Outcomes:** Compliance audits, staff satisfaction surveys, and routine outcome measurement were tracked. Because initial compliance

audits revealed room for improvement, ongoing education occurred as needed. Staff satisfaction surveys demonstrated that guideline use did not add significantly to workload. Comparison of outcome data from 2010 to 2011 revealed that guideline use had a meaningful impact. Total sedation days decreased by 77.88%, average ventilator time decreased by 17.81%, and mean length of stay in the intensive care unit decreased by 4.16%. Nurses' responsiveness to pain scores increased from 93.7 to 94.9. Most notably, during 12 months after implementation, no instances of VAP were reported.

### **CH131 Creating a Culture of Certification**

Bradley Robinson; Methodist Medical Center of Illinois, Peoria, IL

**Purpose:** The value of certification is often underestimated and underemphasized within the unit culture of nursing. In this cardiovascular intensive care unit (CVICU), the drive to become a CCRN and become "board certified" in critical care nursing was frequently discussed without a clear roadmap or direction to the nursing staff as to "why" it was important and more specifically "how" certification could lead to improved clinical outcomes for patients. A vision of creating a culture of certification was born through collaboration. **Description:** In 2008, the CVICU employed 38 nurses with 5 CCRNs. Despite being a CVICU and capable of caring for some of the highest acuity patients, there did not exist a culture supporting the value of certification and more importantly a standard established within the shared governance model making certification a priority and standard of care in the delivery model. Working alongside the existing certified staff, the nurse manager began with ensuring that staff understood why certification was important. The initial phase began with establishing that only CCRNs would train new open heart nurses and later expanded to serving as preceptors for all new nurses. Additionally, the council structure began certification challenges among the experienced noncertified nurses. The hiring process was altered to establish that the standard was to be certified with 3 years of the hire date. The culture had been established and soon the CCRN staff in CVICU had grown to more than 17 nurses. Phase 2 seemed inevitable, so in 2010, the bar was raised again and the call went out to add the CSC credential. The call was answered and the staff dared to embrace the challenge, soon adding 14 nurses who became dual certified. **Evaluation/Outcomes:**

Creating a culture of certification is spreading as the local chapter has become a community resource to spread the good news of certification. The CVICU has contributed 4 new chapter board members and proudly represents this local chapter as a 2011-2014 Bronze Beacon designee. This year brings additional challenges as the bar has been raised again with 10 nurses committed to sit for the CMC examination and bring the spirit of being certified in this chapter to a new high. The local chapter meetings have increased attendance, increased energy, and a focus on strengthening as well as expanding membership and certifications in the community of our critical care nurses. This unit has dared to excel.

**CH132 DARE to Be Followed and Friended:  
Engaging Current and Future AACN Chapter Members,  
Using Social Media**

Robert Beck; Dallas County Chapter AACN, Dallas, TX

**Purpose:** Maintaining a healthy, long-standing chapter with a strong membership is a challenge. As one of the strongest chapters in the country that is nearly 40 years old, goals have been in place to promote the mission and vision of AACN. For the past 5 years, chapter members have worked together to make our chapter stronger by focusing on increasing membership, providing education relative to the chapter members' needs, promoting certification, and extending a hand in volunteerism. To further achieve our goals, and to maintain a growing and active chapter, we *dared* to engage others by using social media! **Description:** To keep the chapter's goals moving forward, while remaining fiscally strong, the chapter has continuously worked on recruitment efforts for not only chapter members, but board members as well. Over the course of several months, the chapter has taken a journey through social media: exploring the various resources at their fingertips, encouraging nursing colleagues to join the conversation, and meeting nurses virtually they would have not met otherwise. What started as a social connection has transitioned into a crucial part of chapter communication and recruitment. This chapter has *dared* to remove the label of "social" media and transition into a professional chapter standard that is vital link in a changing health care environment, and with which even the busiest nurses and nursing students can stay connected and engaged! **Evaluation/ Outcomes:** Since 1972, the chapter has grown and now has more than 120 members, many of whom are long-term, dedicated members of the chapter.

Recruitment and sustaining membership has been possible through the guidance of a stable board and ability to offer excellent educational programs each month, additional educational programs, and certification review courses. Additionally, the chapter has a strong connection with the community through volunteer efforts supported by the membership. By using social media networks, the chapter has not only been able to stay connected with the current membership, but also has succeeded in recruiting *new* generations of members.

**CH133 Dare to Improve Your Chapter and Let the  
World Know How Great You Are!**

Charlotte Tyskiewicz, April Thums, Lee Ann Schulz;  
Aspirus Wausau Hospital, Wausau, WI

**Purpose:** Our purpose was to increase chapter membership, which in turn we expected would lead to an increase in meeting and conference attendance, and volunteer participation. We attempted to create an environment of growth by using best-practice standards such as shared governance and healthy work environment while keeping in mind the AACN mission, vision, and values, which correlate closely to our chapter statements found in our bylaws. We had a great chapter but struggled with attendance. **Description:** Via authentic leadership we used succession planning and made committee chair and member volunteer charts. Chair position responsibilities are described in our bylaws. With skilled communication our monthly meetings, symposium, and volunteer activities are advertised using mail, e-mail, and our website. A bifold explains what our chapter does for its members, the community, our patients, and families in the facilities that we work in. Using true collaboration, we asked different disciplines to speak at our meetings and conferences. We included nursing students in all of our mailings. Via meaningful recognition we awarded 6 student scholarships and 3 scholarships for the National Teaching Institute (NTI) and other conferences. Traveling posters celebrate our accomplishments. Certification boards are found in the units where we work. Using appropriate staffing, board member positions are posted and all requirements are found in our chapter bylaws. We have a volunteer chart for activities with the heads of the committees responsible for their organization. Effective decision making is used as we choose and vote for elected members, our budget, charitable activities, and our conference. Chapter bylaws and shared governance guide

our decisions. **Evaluation/Outcomes:** Evaluation: Success was measured by comparing 2011-2012 years' membership and attendance at our conference and chapter activities with the 2 prior years. Conference, monthly meeting, and volunteer activity attendance went up but chapter membership dropped. We had anticipated that an increase in chapter membership would lead to an increase in attendance in the other areas. There was no correlation between membership and attendance at our functions. **Outcomes:** Several members attended NTI's Leadership Workshop and sessions on improving chapters in Orlando this year, so we took what we learned and made our goal to increase membership by 20% and came up with specific interventions for next year.

#### **CH134 Embracing Intraprofessionalism: Collaborative AACN Chapter Meetings**

Karen Jeffries; St David's HealthCare, Austin, TX

**Purpose:** The Austin Chapter of AACN was interested in increasing meeting interest and participation by having more collaborative meetings with other nursing organizations. The board members spoke with board members of other specialty nursing organizations in our area to determine interest in having co-sponsored meetings. **Description:** The Greater Austin Area Chapter (GAAC) of AACN had 2 collaborative meetings. One was with the local Emergency Nurses Association (ENA) and one was with the local American Association of Neuroscience Nurses (AANN). The AACN/ENA meeting was well attended and included chapter information presentations by the respective presidents and a speaker presentation on using thrombolytic agents in stroke patients. The meeting was at a local restaurant and food was provided. The AACN/AANN meeting was also well attended and included a presentation on dealing with delirium in patients. The neuroscience and critical care nurses were able to share best practices and discuss recent developments in the area of neurology. This meeting was in a hospital classroom and food was provided. Since AANN provided the food, they requested that GAAC members pay a nominal fee. **Evaluation/Outcomes:** One outcome was that approximately twice as many nurses showed up at the meetings. The nurses were able to network about what each chapter was involved with and what their chapter goals were. Chapter ideas were shared and nurses requested future collaborative meetings. Some of the nurses joined the other specialty chapters. The feedback from the meetings was wonderful. Members expressed

gratitude with being able to collaborate with nurses outside of their own specialty. GAAC will be reaching out to other local chapters in the future to continue this successful intraprofessional collaborative practice.

#### **CH135 How to Best Identify and Serve Your Chapter Members' Needs**

Ruth Salathe, Joan Baker; Greater Miami Area Chapter, Miami, FL

**Purpose:** The Greater Miami Area Chapter of AACN has embraced the challenge of addressing the needs of critical care nurses by supporting the vision of AACN and promoting the care of the critically ill through networking, communications, education, and research. In order to best serve its members, the board wanted to find out what educational preference the members have. Therefore the chapter conducted a member needs assessment at the beginning of the fiscal year. **Description:** The member needs assessment was conducted for 4 weeks through SurveyMonkey. Ten questions in alignment with AACN's key initiatives for the chapters were sent to all members. The respondents were mainly interested in the CCRN/PCCN and CNRN (certified neuroscience registered nurse, 52%) review courses. Carefully analyzing the survey, the chapter decided to incorporate the members' feedback into the chapter's strategic plan for the year. The decision was made to offer the members two 2-day review courses simultaneously: CCRN/PCCN and CNRN. Two planning committees were formed for both review courses. The committees worked closely together, established a timeline, a budget and searched for a location and qualified speakers. To promote the review courses, the chapter created program brochures for each review course. The brochures were sent to the members and all local hospitals and information was posted on the national and local chapter's websites and on the chapter's Facebook page. Thus, for the first time, the Greater Miami Area Chapter conducted a 2-day review course for CCRN/PCCN and CNRN simultaneously. **Evaluation/Outcomes:** Both review courses were considered a success, measured by the number of attendees and their course evaluations. The CCRN/PCCN course had 35 attendees and the CNRN course had 30. The program evaluations for both courses had more than 90% of "strongly agree" in the following sections: the program met its stated objectives, the environment was conducive to learning, and overall the program was well worth attending. Asking members what their

needs are and creating programs that specifically target those needs was a road to success for the chapter. This venture allowed the chapter to accomplish its goal of addressing one of the key initiatives for chapters—sharing the value of certification.

### **CH136 Sharing Best Practice and Research, Chicago Style!**

Gerri Kaye, Linda Duncan, Araceli Mateo, Janet Palamone, Sheila Coogan; Weiss Memorial Hospital, Chicago, IL

**Purpose:** The Greater Chicago Area Chapter (GCAC-AACN) has always dared to be innovative in bringing evidence-based practice (EBP) education to nurses working in intensive care or progressive care units. Rather than monthly lectures, we suggested having a poster presentation, highlighting some of our members' EBP work in a fashion that resembles poster displays seen at many other local or major conferences. These posters included research, evidence-based solutions, best practice, and quality projects. **Description:** Initially, one of the monthly programs was going to consist of 2 of the board members presenting a quality poster that was done at their place of employment. The topic addressed how using an evidence-based care bundle reduced the central catheter-associated bloodstream infection (CLABSI) rate at their hospital to a target of zero. Upon discussion with the board, other members voiced their interest in presenting posters that reflected their achievements and the impact it made on nursing practice. This led to extending the offer to the current GCAC-AACN members. Continuing nursing education (CNE) credits were applied for using the AACN program approval application format. A total of 10 posters were required in order to obtain the 1.0 CNE. The session took place during one of our regularly scheduled monthly programs. Tables with easels were arranged in one of the conference rooms at our host hospital, allowing participants to walk around and view the posters. Each poster was represented by one of the authors, who discussed the findings with each individual and also provided additional information such as handouts, reference cards, and e-mail addresses. **Evaluation/Outcomes:** We had representation from various hospitals within the immediate Chicago area. Twelve posters were on display. Topics included prevention of deep venous thrombosis, CLABSI, rapid response teams, fall reduction, handoff communication, patient mobilization, open visitation in intensive care units

(ICUs), collaborative practice, heparin-induced thrombocytopenia, capnography, noise in ICU, and the Helmet Law. The poster session proved to be extremely successful as evidenced by the completed evaluations and verbal discussion with the participants. We received written comments such as, "this was the best way for nursing to share ideas with their colleagues" and "I learned how evidence-based practice ultimately leads to better patient outcomes."

### **CH137 Transformation**

Shelley Welch; Greater East Texas, Tyler, TX

**Purpose:** To share our venture into a "virtual" world to connect with chapter members. Our board examined our membership and the number of attendees at each monthly meeting and decided that we needed to transform our image. Our chapter wanted to be known as the place where nurses want to be. We reviewed healthy work environment standards and applied them to our chapter governance. We knew we had challenges to overcome, but we committed to "leap out of our comfort zone." **Description:** We used the resources available to us, including the AACN document library. We examined our problem with members who were not engaged and developed a plan. We decided to (1) create an exciting and accessible image, (2) commit to social interaction through social media. Although our chapter is visible and seen as a public service group, we were not able to connect our nurses into a meaningful group. We are using social media as a means of connecting the nurses in our community. Our first board meeting was conducted via conference call from our president's iPhone. This is a relatively inexpensive and, at the same time, advanced way of getting the board members together. Our chapter meeting in August was a sounding board for fundraising using technology to conduct an on-line "raffle," where tickets can be purchased for a chance to win tuition to an AACN-sponsored conference. We recognize our chapter members for their accomplishments such as certification, via Facebook and Twitter, where we recently had an announcement go viral. We tweet our meeting dates and times, post pictures of our newly certified nurses, and anything that may affect our nurses and patient care. **Evaluation/Outcomes:** Technology has opened up another world for us to position with people that matter to our chapter, people we can serve. Virtuality makes us easier to find because we matter to people. We have found a new venue to talk about certification and mentorship with our acute care nurses. CCN