NTIAbstracts

2008 National Teaching Institute Creative Solutions Abstracts

Presented at the AACN National Teaching Institute in Chicago, Illinois; May 2-8, 2008

Session A: Monday 8 am – Tuesday 1 pm
Chapter Posters

CS101 Chapter Challenges and Successes? Call the CAT!

Bratcher L, Madrid P; AACN Chapter Advisory Team

Purpose: AACN Chapters face many challenges from member recruitment and hurricane recovery to missing officers. Through a case study approach, this poster presentation will remind chapter leaders that the Chapter Advisory Team, more specifically their Regional CAT, is there to help on many levels. **Description:** What is a CAT and when should you call? One chapter has a treasurer that has gone missing with the financial books and account information. Who are you going to call for help? The CAT! A chapter president is suspected of inappropriate use of chapter funds. Who is the board going to call? The CAT! A chapter is having very poor attendance at their monthly meetings. Who are you going to call for help with a needs assessment? The CAT! Some chapters struggle through the hard times while others fold under and disappear from National's radar. The Chapter Advisory Team wants chapter leaders to know that they are here to help the chapter successfully get back on its feet. How do they do that? They are available to help in many different ways from advice to site visits, interpretation of rules and regulations, mediation, help with strategizing and just good old fashion cheerleading. The CATs do this by helping the chapters focus on and infuse AACN mission, vision, values, and key initiatives. A chapter is promoting AACN initiatives through a certification dinner. Who are you going to call? The CAT! CATs like to celebrate, too! **Evaluation and Outcomes:** The chapters leaders will learn what a CAT is and when they should call. Chapter leaders will learn that the CAT is available to help them in any situation, good or bad. bratcl@shands.ufl.edu

CS102 Collaboration With Healthy Work Environment Education: A Seed Is Planted

Ward J, Scruth-Chavez E, Yokum C, Rossie J, O'Leary-Kelley C; South Bay Chapter, CA

Purpose: Awareness of and education about healthy work environments (HWE) for bedside nurses, educators, and nurse managers within the San Jose, California area is a South Bay Chapter goal. Chapters are truly neutral territory not belonging to any particular hospital, clinic or work setting. **Description:** The South Bay Leadership Team reflects our membership, which is composed of critical care nurses, acute care nurses, nurse managers and nurse educators from community and county hospitals, HMO organizations, government and teaching hospitals and clinics of the South Bay. We all share a commitment to creating and maintaining an HWE for nurses. We planted the seed in November 2006 with a CEU class highlighting awareness and offering solutions to the moral distress-surrounding end of life situations. In the summer of 2007, we secured grant money from the Chaplaincy of El Camino Hospital in Mountain View, CA. With these funds and through collaboration with the chaplain and the nurse manager of the CCU we watered the seed we had planted. We were able to offer another class of HWE and have funds left over to honor nursing leadership. Our seed had grown into a small sapling. The CEU class in November 2007, "Creative Tools to Revitalize Nurses and Promote Healthy Work Environments" was completely funded through the grant money. The class included 2 speakers from AACN's HWE speaker Web site. Every participant received a copy of AACN's "Standards for Establishing and Sustaining HWE." **Evaluation and Outcomes:** Thirty nurses attended the first class in 2006; in 2007 there were 37. Fifteen nurse leaders came for food and networking and gave us positive feedback about our Leadership Night. Class participants ranked both classes very high in content, speakers, and usefulness in their jobs. We as a Chapter are excited. We look to the future for new possibilities and opportunities for collaboration and promotion of healthy work environment. jqrward@sbcglobal.net

CS103 Encouraging Regional Conference Attendance Utilizing Quality Chapter Education Offerings

Lucas G, Leas L; Heart of Illinois Chapter-AACN; Peoria, IL

Purpose: Attendance and participation in the Heart of Illinois Chapter-AACN programs in 2000 had decreased to 5 members at chapter programs and attendance at the annual spring conference had only 30 participants. **Description:** Because of declining interest in chapter programs, a concentrated effort to produce quality education programs using noted speakers, both nurses and physicians, was implemented. After surveying the educators and/or managers of critical care and acute care areas of Peoria's regional hospitals, the chapter addressed trauma, surgical, medical, and neuroscience critical care as the main areas of interest and need for education. Acute trauma and critical care became and is now the focus of the annual spring conference. Two Saturday Critical Care Brunches were developed to attract those that could not attend programs during the weekdays. The Fall Brunch focuses on Surgical & Medical Critical Care and the January Brunch focuses on Neuroscience Acute and Critical Care. Between each of these yearly programs, dinner education programs with speakers are offered to members when the opportunity arises. In 2006, an additional conference with a nationally recognized speaker was initiated. Speakers, from different healthcare backgrounds and locations, allowed for programs that highlighted both established and new technologies, techniques, and viewpoints to validate and enhance nursing practice. **Evaluation and Outcomes:** The chapter's program rosters show the annual spring conference now has 250 to 290 participants each year and the Critical Care Brunches now have 85 to 135 participants. Evaluations are very positive, with suggestions that are noted and implemented. Registrations confirm that in addition to the desired increased regional attendance, an unexpected positive outcome is the increase in participants from outside the Peoria region. galucas@att.net

CS104 Growing Your Chapter Through Creative Use of the Internet

Asleson A; Rum River Chapter; MN

Purpose: As a new chapter, the Rum River Chapter was looking for an efficient means of spreading the news about our annual educational event. Use of the internet allowed us to not only spread the word about our chapter and our educational events, but also to collect fees and keep track of enrollees. **Description:** The first step was selecting an internet provider outside the AACN chapter site. This allowed for more control of the functionality of our site and fewer limitations on space. Selection of a web hosting site was through trial and error; 3 sites were attempted before finding the one we currently have (which also provides us with our own domain name). Use of paypal allowed our chapter to accept not only checks but also credit card payments for our annual educational event (our third annual event is scheduled for this upcoming April). Registrations were accepted through our Web site as well as via snail mail. For those registering online payment was made via Paypal at the time of

registration; with a Paypal payment registrants were able to pay via credit card. **Evaluation and Outcomes:** This method has been used for 2 events, and for both events the ratio was about 50/50 between online and mail registrations. One of the most positive feedbacks we received about the event was the ability to register online and pay by credit card. Drawbacks include the difficulty linking the Paypal payment to the registration form and the fee paid to Paypal for each transaction (although we consider the fee well worth it for the convenience). Amy.Asleson@Allina.com

CS105 Impacting Specialty Certification Through Collaboration
Artuso C, Timmerman R, Keith J; Providence Alaska Medical Center; AK
Purpose: The location and size of Alaska provides challenges in meeting educational needs among nurses. The purpose of this project was to maximize resources through collaboration, offering certification review courses to nurses and promoting success on both PCCN and CCRN certification examinations. **Description:** In June 2006, Providence Health System Alaska received a HRSA grant, designed to provide resources for evidence-based practice and onsite preparation, testing and recertification for nurses. In May, 2007, the South Central Alaska Chapter of AACN was rechartered and identified goals including the provision of educational programs, certification review courses, and joint nursing research. Providence Health Care systems sponsored one successful PCCN review in the spring of 2007. The individuals who developed this review were the founders of the South Central Alaska Chapter. An opportunity to share resources and achieve objectives was recognized. The chapter would provide an excellent forum for advertising, reaching members in remote locations, and expert faculty. The organization could subsidize advertising, hospital contacts and mailing lists, conference space and refreshments. A decision was made to offer both PCCN and CCRN reviews, funded by the grant, in the fall of 2007. The chapter planned their annual fall conference to coincide with the CCRN review, allowing participants to maximize their investment and earn up to 30 contact hours. The conference topics focused on evidence-based practice, and featured national faculty. **Evaluation and Outcomes:** PCCN and CCRN reviews are scheduled for October 2007. Registrations include nurses from all regions in Alaska. Both programs have validated success in completion of the certification examinations, and also provide opportunities for ongoing continuing education, maximizing the investment for nurses who must travel distances to attend any program. Written evaluations of both programs will be used to evaluate outcomes, in addition to exam success.
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CS106 One Chapter's Quest to Bridge the Gap Between Practice and Research: Addressing the Barriers
Hirsch R, Vitez I, DeStefano L; Greater Long Beach-Orange County Chapter, CA
Purpose: Nursing practice based on evidence improves patient outcomes. Chapter members reported significant barriers that prevent them from incorporating research findings into their practice. The Greater Long Beach-Orange County Chapter developed a unique journal club format to reduce these barriers. **Description:** In 2002, the Chapter initiated a monthly journal club to engage acute and critical care nurses from local hospitals in discussion of research findings. The monthly topics were selected based on clinical relevance, educational assessment, and articles suggested by members. The monthly Journal Club meetings take place at the same time and place in a local restaurant with vendor-sponsored dinners. Methods to decrease the inherent barriers related to critiquing academic research included a chapter led critique and review of research finding themes. This method decreased anxiety related to lack of skills to critique or synthesize the literature and difficulties interpreting the findings by many nurses. Chapter facilitated discussion of complex research by placing less emphasis on interpretation of statistics and research methodologies and focused on adaptation of findings into clinical practice. The confidential, nonthreatening, supportive environment promoted open, frank discussion and diminished intimidation. The use of research in everyday practice is promoted by simplification of complex research topics and promotes replacing practice based on tradition with practice based on evidence and results in positive patient outcomes. **Evaluation and Outcomes:** Over a 5-year period, the monthly journal club attendance increased from 4 members in 2002 to 50 members currently and continues to grow. Several members travel more than 50 miles to attend. A community subgroup was established to review sedation protocols prompted by a journal club topic. The Board of Directors received

numerous member anecdotal accounts of the influence meetings have played in their professional lives. hirsch_rosemarie@sac.edu

Creative Solutions

CS107 Achieving and Sustaining a Culture of Safety in Our ICCU
Crawford I, Campbell K; Chelsea Community Hospital, MI
Purpose: Nothing seems more fundamental than to provide safe care in our ICU. Four years ago we joined a statewide initiative, partnering with Johns Hopkins to improve the safety in our unit. Our goal was to develop a plan to ensure the provision of safe care in our ICCU. **Description:** All of our staff viewed the "Josie King" video to foster staff engagement. The Josie King story tells of the death of a young girl following a tragic series of medical errors and miscommunications. Through specific bundling of tasks, we amended care following a defined blueprint for evidence-based practice. We educated the staff by posters, articles, and Power Point presentation. In order to have a culture of safety we have to be able to work in an environment that fosters open communication that addresses system, not human failure. We conducted annual safety attitude questionnaires (SAQ), solicited safety concerns from staff and patients and implemented improvements, based on team input. A team was developed to review evidence-based practice and CDC guidelines in order to tailor a bundle for insertion of central lines and prevention of ventilator-associated pneumonia that was appropriate for our ICCU. Improving communication is one of the most difficult challenges in safety and quality. Therefore, a team developed a "Daily Goal and Rounds" sheet to facilitate communication, helping the team focus on our patient's needs, and improve efficiency and effectiveness of staff. **Evaluation and Outcomes:** Achieving and sustaining a culture of safety in our ICCU is measured by our annual response rate and feedback to the SAQ. In addition, our ICCU established a method for tracking central line infections and instituted a hospital initiative to decrease line infections house wide. By promoting a culture of safety, we improved our processes that ultimately raised the safety of our practice. Ultimately, we ranked #1 in Patient Safety in our state. icrawford@cch.org

CS108 Advancing Knowledge, Skills and Perceptions of Competence in New Graduates in Critical Care Settings
Mossburg S, Wavelet J, Hughes B; Inova Mount Vernon Hospital, VA
Purpose: The intent of the Nursing Residency Program (NRP) at Inova Mount Vernon Hospital (IMVH) is to transition new graduate nurses into the work environment through increasing their knowledge, skills and perception of competence. The NRP incorporates tenets of the AACN's Healthy Work Environments. **Description:** The previous orientation program at IMVH was not adequately preparing new graduates to work in a critical care environment. To remedy the situation, a Nursing Residency Program was created, which implemented the following: 1. Increased orientation time. 2. Clinical experiences in related hospital areas. 3. Weekly classes to integrate knowledge from ECCO into practice. 4. Teaching practices using active learning principles. The Residency is a 3-phase program lasting for 1 year. The first phase focuses on introduction to the hospital, nursing, and basic skills. Curriculum during phase I includes review of systems, review of clinical skills, professional development, and regulatory preparation. The second phase is the Critical Care Fellowship, with the incorporation of regular meetings with the Master Preceptor to review content from ECCO and ask questions. The third phase is ongoing support and education, which focuses on practice after orientation is completed. **Evaluation and Outcomes:** Three primary outcomes are being evaluated. 1. Knowledge: ECCO module tests and the Basic Knowledge Assessment Test (BKAT). 2. Skills: validated performance of skills (Core Curriculum for Critical Care Nursing, 2006). 3. Perceived competence: Casey-Fink Graduate Nurse Experience Survey©. All new graduates have met testing and competency requirements. In December, data will be collected to evaluate perception of competence.
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CS109 Bridging the Gap: A Multidisciplinary Approach to Discharge Teaching for Heart Center Patients
LaReno M, Kearney P, Apter J; Duke University Health System, NC
Purpose: To provide our Heart Center patients with the essential tools for heart disease management at home following discharge and to help them maintain a heart healthy lifestyle. **Description:** Our patients

may leave our care filled with questions and confusion despite our best teaching efforts. Are verbal explanations and written materials the most effective format? What about individual learning styles? Based on the questions raised, the decision was made to "tailor make" a Heart Center discharge video for in-hospital education and take-home use. This would allow patients to view the video with staff available, provide a home resource and appeal to the audiovisual learner. We received approval for a Heart Center patient education grant. A multidisciplinary team of nurses, physicians, pharmacists, nutritionists, physical and occupational therapists, social workers, patient volunteers and hospital education staff was formed. With direction from our media department we broke into small groups to work on content, scripting, editing and casting. After final production, the video "Bridging the Gap: From Hospital to Home" was made available for viewing on the hospital's closed loop educational channel and each patient's admission packet included a DVD copy for take-home reference. **Evaluation and Outcomes:** To gauge the effectiveness of the video, the first 100 copies of the DVDs included a questionnaire to assess response related to content, delivery, teaching effectiveness, and overall impression. Demographic data and educational level were also assessed. To date, the survey response rate has been 12%. The responders include a cross section of our hospitalized patient population. All responses have been very favorable. frank001@mc.duke.edu

CS110 Bringing Staff Education Into the World of the Web: Online Journal Club

Ginsburg J, Grabenstein R; Sinai Hospital, Baltimore, MD
Purpose: A continuing challenge for nurses in the PICU is opportunities for education. In our small PICU we also face the issue of a small number of staff (20 RNs). The staff expressed a desire to develop a journal club to promote evidence-based practice, which mandated a creative means for all staff to participate. **Description:** In searching for the best way to accomplish participation in a journal club, we noted the fact that it is difficult for people to always physically meet in person so we decided to take advantage of the fact that all staff have computer access. We developed an on-line journal club, which everyone can access from their work email or their own personal email account. Staff members rotate selecting a recent article that is relevant to the PICU practice setting. The person who is responsible for the article posts it online as well as placing a few hard copies in the unit. Several thought provoking questions accompany the article. Each staff member then reads the article and responds to the questions using the "reply to all" button. Robust discussions about the article take place among all staff members. At the end of the allotted time (usually 2-3 weeks) the person who originally posted the article provides a summary of all responses. The summaries provide for further discussion and are kept on the unit for future reference. **Evaluation and Outcomes:** Staff members have embraced this method of participating in a journal club. People look forward to the next article and are reading about topics which they would never have read before. We have changed some of our practices based on evidence presented in the articles, which we feel has helped our patients. This method also stimulates staff to open their eyes to the world outside and examine what others are doing which may be working better. janieginsburg@comcast.net

CS111 Capturing Interest in ECG Rhythm Identification: Rhyme, Relationships and You Tube

Walsh R, Thomas T; Renown Regional Medical Center; Reno, NV
Purpose: Basic rhythm identification is part of the foundation of a critical care orientation. The basic concepts can be difficult to understand for the staff of different educational levels and modes of learning. A class was created to meet the challenges of this diverse population. **Description:** In the critical care area, there is many staff that is required to identify rhythms. This group includes both Certified Nursing Assistants (CNAs) and RNs. The RNs and CNAs present with diverse educational backgrounds, educational needs and methods in which education is received. A 16-hour course was developed to meet that challenge. The educators of a progressive care unit (PCU) developed a course to run for 16 hours over 4 days. Content was delivered on all 4 days with a comprehensive exam at the end of the course. Lecture, discussion, study guides, extensive in-class review - group and individually, daily homework utilizing actual ECG strips, analogies of marriages between complexes and dysfunctional marriages, rhymes to retain information, identification bingo and use of a You Tube music video are a few of the innovative methods that have been used to spice up a dry subject. **Evaluation and Outcomes:**

Participants successfully identify basic arrhythmias in a fun and safe environment with multiple methods to retain information as evidence by a comprehensive exam, high pass rate and positive evaluations. rwalsh@renown.org

CS112 A Cardiac Services Discharge Lounge: Setting Priorities in Patient Discharge Teaching and Achieving Outcomes

Washington T; The Washington Hospital Center, Washington, DC
Purpose: The project purpose was 2-fold; provision of patient/family focused and accurate, complete and individualized patient discharge instructions. **Description:** The Cardiac Catheterization Lab at the Washington Hospital Center is one of the busiest in the Washington, DC region. The lab does approximately 16,000 catheterization procedures annually. These procedures include Percutaneous Coronary Intervention, diagnostic catheterizations, and peripheral interventions. The patients who have these procedures are admitted to one of 4 medical cardiology units post-procedure. These units comprise approximately 110 beds. Because the average length of stay on these units is approximately 1.2 days, the ability to facilitate throughput while providing excellence in patient preparation for discharge is critical. To meet these needs, a discharge lounge was implemented on Unit 4NE. The lounge has 4 tables and is able to seat 20 people at the busiest times. Patients are sent from all 4 units to this lounge for discharge instruction and then released from the lounge to home. A procedure was written to provide guidelines for those patients appropriate for this process. A core group of staff nurses were provided with focused training and are used to function in the role of discharge nurse. This provided consistency while allowing for individualization in patient discharge instruction. **Evaluation and Outcomes:** The discharge lounge continues to be a successful process. Patients discharged via this process have led to our exceptional core measure metric for Acute Coronary Syndromes. Additional positive outcomes include enhancement of patient throughput and high patient satisfaction scores related to discharge instruction/teaching. Tonya.R.Washington@MedStar.net

CS113 Caring Companions: Providing Safe Passage for Patients

Westphal C, Oyeleye O, Plasky R, Gorski N; Oakwood Healthcare System; MI
Purpose: Providing a safe environment for confused patients can be challenging. Trained volunteers, under the direction of the critical care nurse, can provide diversion and activities which limit use of restraints, reduces risks of falls and self-extubation. **Description:** The Caring Companions (CC) program was piloted in Summer 2007. Five college students enrolled in health profession programs received education and skills training related to delirium, use of restraint alternatives and interacting with patients. Nurses assess at-risk patients and complete an assignment form with information about the patient and potential activities based upon the patient's functional status. A CC visits with the patient, providing conversation and diversional activities such as puzzles, coloring, simple exercises, stories and games. The length of the visit depends upon the needs of the patient. At the conclusion of the visit, the CC records observations on the assignment sheet which the nurse uses for documentation. Based upon pilot feedback a more structured orientation has been developed with videotaped patient scenarios, an activities mapping guide and mentored patient visits. In Fall 2007, ten additional volunteers were trained. **Evaluation and Outcomes:** CC evaluations have been very positive in terms of the education and support received, the contributions they felt they made and the feedback received from patients and families. Nurses reported that CC made a valuable contribution to care and helped to avoid restraints. Nurses recommended program continuation. Formal data collection regarding restraints, falls and extubations is in progress. westphac@oakwood.org

CS114 Challenges in Complex Care: Managing Pulmonary Hypertension in Progressive Care

Savage L; Virginia Commonwealth University Health System, Richmond, VA
Purpose: The goal of this project was to ensure a consistent method for training patients to manage complex therapies associated with pulmonary arterial hypertension. To achieve this outcome, a core group of specialty nurses was developed on the progressive care unit. **Description:** Patients starting on new, complex therapies for PAH were admitted to a 20 bed progressive care unit. Therapies included Epoprostenol, Treprosti-

nol and Iloprost. These require daily training of patients and their families. The regimen includes: mixing medication, managing a CADD pump and learning central line catheter care. Skilled observation of patient responses to medication is necessary. Staff must be aware of side effects of "too little" or "too much" drug and know how to intervene quickly. The goal was to develop competence and confidence in the progressive care staff. The CNS created "specialty nurses" by enlisting support of senior staff. A "recipe" for care was developed to ensure that all nurses were giving patients the same information. A cheat sheet for pump operation was developed with the input of patients and their families. Staff underwent hands on training consisting of medication preparation and setting up the continuous ambulatory pump. Staff role played "patient" and "nurse" to further develop skills and competence. After inservicing the CNS resourced staff during their first patient teach. Once staff demonstrated competence, the CNS covered patient care to provide nurses with uninterrupted teaching time. **Evaluation and Outcomes:** When progressive care nurses provide training, length of stay (LOS) averages 3 days. As benchmarked with other PAH centers, LOS = 7 days or more. Specialty pharmacies send nurses into many of these hospitals to teach patients. Care is provided on the progressive care unit as opposed to a costly ICU. Finally, nurse satisfaction is high as they see patients progress from "novice" to "expert" in managing their own care. lsavage@mcvh-vcu.edu

CS115 Chest Tube Management: Novices or Experts

Taubert J, Bungay S, Adams A, Banaglorioso C, Descartin D, Magana E, Mathew J; M.D. Anderson Cancer Center; Houston TX

Purpose: To achieve and maintain nurses' expertise and competency in the management of chest tubes and facilitate our service as a resource for consultation by nurses throughout the institution, we directed the initiative of creating a standard of care for management of a patient with a chest tube. **Description:** During 2006, 4500 lung resections were performed in our Thoracic/Cardiovascular Intermediate Care Unit. Lung resections are a common modality of treatment for patients with primary lung tumors and secondary sites. With these surgeries, chest tubes play an essential role. Nurses provide a critical component of postoperative care; therefore, emphasis on the nurses' knowledge and skills with management of chest tubes was essential. To achieve and maintain the highest level of competency among nurses, our evidence-based nursing practice group identified and implemented the following steps: 1. Performance of an evidence-based literature review. 2. Pretest of the nursing staff to evaluate baseline knowledge. 3. Development and dissemination of guidelines and standards of care. 4. Creation of "Chest Tube Jeopardy" as an interaction educational process. 5. Chest tube post test. 6. Creation of an online chest tube educational interactive module. Focusing on our pretest results, areas for improvement were identified, which included chest anatomy and physiology, patient assessment, complications with chest tubes, and appropriate interventions. **Evaluation and Outcomes:** TA post-test conducted after implementation of interventions demonstrated significant improvement in nurses' knowledge and expertise with chest tube management. Their improvement was also seen in their interactions at the bedside. An interactive chest tube module was developed and implemented online. This module serves as not only a teaching tool but also a resource for all nurses, both new and experienced nurses. jtaubert@mdanderson.org

CS116 Clinical Mentoring and Charge Nurse Team in the Cardiovascular Intensive Care Unit

Brache T, Cook D, Fowler L, Stalica L; University of Rochester, Strong Memorial Hospital; NY

Purpose: The goal of the Clinical Mentoring and Charge Nurse Team is to provide a consistent group of experienced nurses to coordinate resources on all shifts including nights and weekends. The role was developed to provide clinical support and mentoring to a growing population of new staff nurses. **Description:** The unit leadership interviewed senior staff nurses who applied for the role. The application process included an updated resume. The staff also included a cover letter that gave examples of excellent customer service, examples of role modeling, career goals, communication style and examples of their support for the unit leadership. Six nurses were identified as highly effective in the areas of education, communication, clinical skills, and service excellence behaviors. The initial meeting outlined team responsibilities, mentor education, and role expectations. Their responsibilities include proactive rounding with staff to provide clinical support and mentoring opportunities, facilitate throughput with other patient care units, manage rapid response calls, and provide assistance in the emergency department with the hypothermia protocol for patients in cardiac arrest. Team meetings are held monthly with a clear agenda and time for open discussion. We review policies, discuss staff issues, and discuss the development of the role. Unit leadership is responsible for acquiring peer evaluations of the team from all unit leadership, staff nurses, and fellow team members. **Evaluation and Outcomes:** The Clinical Mentoring and Charge Nurse Team created educational opportunities for the bedside nurse, provided timely throughput of patients, and was a senior resource to staff and patients on all shifts including nights and weekends. Mentor and charge nurse peer evaluations were done at specific intervals. These peer evaluations provided constructive feedback on areas of strengths and areas for improvement. teresa_brache@urmc.rochester.edu

CS117 Clinical Resource Nurse to the Bedside: Helping Nurses Grow Clinically and Confidently

Boyle L, Osborne D; Children's Hospital of Philadelphia; PA

Purpose: Since 2002, the pediatric intensive care unit (PICU) has increased from 38 to 45 beds and has hired 20 to 45 new nurses per year. A large portion of the PICU staff have < 2 years of experience. The Clinical Resource Nurse (CRN) role was designed as an adjunct to existing clinical development programs. **Description:** The CRN role was implemented in the PICU in 2005 after the identification and training of a core team. Qualifications included: significant PICU experience, approachability and a desire to mentor new staff. All interested parties were interviewed by 5 PICU nurses with ≤2 years experience. Each candidate was asked exactly the same interview questions. Interviewers then decided whether or not to recommend each for the role. The goal was to assign 1 to 2 CRNs who did not have a patient care assignment per shift, per day. They worked with charge nurses to identify the staff most in need of resourcing each shift. They focused on development of new nurses' critical thinking skills and "big picture" outlook versus task-driven care. Pertinent "just in time" training (e.g. new diagnoses, procedures, technology, etc) was also provided. The intent was to avoid removing a nurse from an assignment/experience that he/she had never had while maintaining patient safety through use of the CRN. Finally, the CRNs were encouraged not to ask "do you need anything?" but rather to discuss the patient's plan of care with the bedside nurse. All CRNs completed a progress report which is shared with the PICU clinical managers at the end of each shift. **Evaluation and Outcomes:** CRNs are now a vital component of the education and clinical development of the PICU nursing staff. One to 2 CRNs are consistently available per shift per day and are utilized non-stop over the course of each day. Staff express that this is an important role and that they routinely utilize the CRNs as a resource. Clinical managers use the progress reports to evaluate and monitor the development of both CRNs and newer staff. boylel@email.chop.edu

CS118 Contain It! A Simple Solution to Decrease Nosocomial Infections

Castillo M, Regan E; Harborview Medical Center; Seattle, WA

Purpose: The CDC estimates 1.7 million healthcare associated infections occur each year in the United States. Decreasing hospital-acquired infections by using the simple solution of patient specific containers for disposable instruments help the SICU work toward preventing cross contamination between patients. **Description:** Before implementing patient specific containers, disposable instruments such as scissors, hemostats, and carpujects, were either stuffed in the pen and pencil container or left lying on the bedside counter. Often, staff overlooked these instruments when preparing a room for a new admission after the previous patient was transferred. By introducing a graduated cylinder, a simple container, labeled with the patient's information, nurses could consolidate disposable instruments in one spot. When the patient transferred, the instruments could be sent with the patient or disposed of easily. The unit's medical assistants are important element in implementing this new strategy to prevent cross contamination because they ensure previously used instruments are discarded and new containers are available on the bedside counter. **Evaluation and Outcomes:** Providing a simple means to store disposable instruments helped decrease the potential for cross contamination between patients. Using a container for supplies also helped decrease duplication of instruments and prevent waste. Like consistent hand washing, patient specific instruments are a basic but effective way to prevent nosocomial infection. malouvs@u.washington.edu

CS 119 Continuous TEN and Aspiration Risk Monitoring in the Neurointensive Care Unit

Mouradjian D, Hujcs M, Callahan D, Golaszewski A, Ledwith M, Levine J; Hospital of the University of Pennsylvania, PA

Purpose: Enteral feeding in neurocritical care has not been well defined with evidence to support practice. A performance improvement measure was implemented to standardize continuous gastric enteral feedings, monitor patient risk for nosocomial aspiration and maintain concurrent glycemic control. **Description:** Staff nurses, a nutrition support specialist, advanced practice nurses and physicians reviewed literature for evidence supporting 2 practices: continuous versus intermittent enteral feeding and gastric versus small bowel administration. The team outlined standards for administering gastric feeding including FT residual checks, HOB elevation, oral care; standards for managing aspiration risk; conditions to discontinue feeding due to risk; and indications to use gastric versus post-pyloric administration. Staff nurses received education emphasizing risk factors and interventions for aspiration precautions. Physicians and nurse practitioners were educated to the protocol guidelines for continuous feeding and managing aspiration risk. Bedside audits were conducted measuring frequency of oral care, appropriate HOB elevation, and documentation of FT residual checks. A retrospective chart audit was conducted to evaluate change in practice from intermittent enteral feeding to continuous gastric enteral feeding and protocol management of aspiration risk. **Evaluation and Outcomes:** After implementation, in the neuro ICU, enteral feedings were initiated earlier and utilization of parenteral nutrition decreased. Compliance with documentation of FT residual checks increased to 100% within 6 months; observed practice changes associated with oral care and HOB elevation were maintained at greater than 90%. Overall, blood stream infections and ventilator associated pneumonia decreased when compared to the previous year. mouradjd@uphs.upenn.edu

CS120 Continuum of Competence: Trials of Educating in a Tele-ICU

Karpowicz M; Lehigh Valley Hospital, PA

Purpose: The advanced intensive care unit (AICU) nurse serves as a clinical resource to bedside nurses during the night, providing an "extra layer of care." They come from various specialty ICUs, thus it is crucial to educate them in all aspects of critical care, ensuring confidence during virtual rounds. **Description:** An education program to provide a continuum of competence was developed by one AICU in an academic, community Magnet hospital to increase confidence among nurses on virtual rounds. This program is facilitated by a nurse educator, who is dedicated for the AICU. This role is very unique, as there no other nurse educators we are aware of for tele-ICUs in the country. An "Educational Needs Assessment" was completed by AICU nurses to help prioritize education needs and determine the most effective learning techniques. The results focused around a single theme: increased education in critical care areas in which each AICU nurse was not an expert. This resulted in the creation of a blog for the AICU staff that enables resources to be at their fingertips. The blog includes evidence-based web links; decision support tools; hospital wide protocols and patient care manuals; self-learning packets; educational Power Point presentations; and web access to the hospital library. An e-learning tool, with modules utilized for competencies and as a quick reference guide, was purchased and placed on the blog. The AICU nurse can quickly and confidently supply details to the bedside nurse on any ICU utilizing the various tools on the AICU blog. **Evaluation and Outcomes:** A satisfaction survey was distributed to nurses in the AICU regarding the blog as an educational tool. Positive feedback was ascertained regarding the blog and the teaching tools utilized, such as e-learning. The AICU nurses felt they were more confident during virtual rounds. Matthew.Karpowicz@lvh.com

CS121 Determining Complication Rates for a Nurse Coordinated Femoral Sheath Removal Program

Gregory S, Mulligan L; Robert Wood Johnson University Hospital; NJ

Purpose: Nurses in the Cardiac Progressive Care Unit have removed femoral sheaths for 10 years. To ensure that nurses were providing optimal care for our patient population, a nursing initiative was implemented to determine our post–sheath removal complication rates. **Description:** An interdisciplinary group consisting of staff nurses, physicians, members of the hospital Performance Improvement Department and the cardiac catheterization lab team collaborated to design a sheath removal data collection tool. This tool measured complications such as vascular and bleeding events, pseudoaneurysms, as well as compression time, sandbag usage and postprocedure dressings orders. National complication rates for post cardiac sheath removal complications do not exist; therefore, a thorough literature search and national listserve inquiry were made to determine practice across the country. Nurses on our sheath removal team were trained on the use of the tool to ensure that the data was collected in a consistent manner. Nurses collected data on every patient to determine the incidence of complications immediately after and 24 hours after the procedure. Data were collected for 1 month to establish baseline statistics and continued on a daily basis. Quarterly meetings with the interdisciplinary team were conducted to analyze our results. Since this project began, we have collected information on more than 2000 patients. **Evaluation and Outcomes:** Our results demonstrate that our complication rates are less than 2%, which is below rates found in the literature. Based on information collected, we have revised our nursing competency program and sheath removal protocol. Our physician order sets have been revised and we have enhanced communication with our physician stakeholders. This initiative has enabled us to benchmark our success and improve patient outcomes. suzanne.gregory@rwjuh.edu

CS122 Developing an Organizing System to Provide Timely Access of Narcotics for Pain Management and Patient Safety

Adams A; Childrens Hospital and Regional Medical Center; Seattle, WA

Purpose: To provide a vial holder and counter in a pharmaceutical delivery system that allows quick access and count backs of narcotics for nurses working in areas where pediatric patients necessitate rapid retrieval of medications for safety and pain control. **Description:** A clear plastic vial holder was developed to fit snuggly in the drawer of the delivery system. An added benefit was a visual numbering of the compartments to allow quick assessment of number of vials taken and those remaining. Through shear frustration, bedside nurses voiced their concern over the time it took to access the medications required to sedate and provide pain control in their pediatric patients in the Intensive Care Units. Through the mechanism of shared governance, the Operations Council provided a voice for this mounting concern. Looking for resources from either a drug company or the delivery system to no avail, it was decided to design and have custom made a solution to this problem. Originally the design was to encompass the intensive care units, but when the director of the pharmacy department heard of the project he collaborated in the design features and provided funding to ensure that the whole hospital had access to the new organizer. Several obstacles made this project slightly more time consuming. The template needed some adjustments as vials were found to be different sizes from multiple vendors. In collaboration with a local plastics company a prototype was developed and made to fit our drawers. **Evaluation and Outcomes:** First and foremost this project provided a solution to the concern about timely delivery of medication to our patients in the intensive care units. It also gave the bedside nurse a feeling of being heard, and the impetus for finding other solutions to problems we witness everyday. Another unit in the hospital gave their full gratitude and reported the savings of time measured over a week. Nurses voiced their thankfulness for the creative solution. annette.adams@seattlechildrens.org

CS123 Developing Nursing Competency in Continuous Renal Replacement Therapy (CRRT)

Hagaman C, Ballard-Hernandez J, Cabaluna V; Hoag Memorial Hospital Presbyterian; CA

Purpose: Dialysis nurses taught CRRT for many years. However, inconsistencies in nursing practice and understanding brought to light the need for an improved program. Our goal was to ensure patient safety by providing newly trained nurses with support, leadership and standardized best practice. **Description:** CRRT expert nurses were identified within the unit to team with the lead dialysis nurse in the development of a curriculum based on adult learning principles. Classroom instruction was provided on the goals and principles of CRRT, as well as a review of renal anatomy and physiology. Objectives, befire and after education testing, and a CRRT newsletter with best practice, literature reviews, nursing care and policy reminders and identified physician concerns was developed to keep practice consistent. Additionally, a unit expert precepts the hands on competency training at the bedside. Twenty-five newly trained CRRT nurses are developed each quarter, with all CRRT nurses receiving practice updates and mentoring throughout their employment. A list of experts is available on the units to provide support and review of concepts.

Open communication of questions and concerns is actively sought by the team through formal evaluation and peer review. Intensivists, nephrologist, pharmacist and advance practice nurses are invited to review and contributed to the newsletter to ensure medical accuracy and collaboration. The development of an onsite program with mentoring has empowered our staff through an increased working knowledge of CRRT. **Evaluation and Outcomes:** Increasing the staff nurses' understanding of this complex therapy has lead to greater nurse job satisfaction. Physician-nurse collaboration was facilitated and nurses feel better equipped to contribute to the decision making process during critical care rounds. The newsletter has helped bring best practice to the bedside. Collaboration between our dialysis nurses and unit experts has standardized the practice of CRRT within our organization. chagaman@hoaghospital.org

CS124 Development of a Critical Care Nursing Education Program in Peru

Gunther J, Henson J, Ceballos ER; CardioStart International

Purpose: CardioStart International is a 501(c)(3) charity whose mission is development of open-heart surgery programs in countries around the world. In 2005 a partnership was formed with Honario Del Gado Hospital in Arequipa, Peru to begin such a program. **Description:** Before each partnership a scouting mission takes place by organization members to assess the educational background of the nursing staff, cultural variations in health care, as well as the level of current patient care provided. Based on a needs assessment developed by team members and hospital nursing leaders, educational classes have been held since the very first mission. These have evolved from reviews of body systems to inclusion of basic, advanced and pediatric life support. Heavy emphasis has been placed on care of the patient undergoing cardiac surgery. AACN educational materials have been supplied to Honario staff and used in course development. Dedicated Peruvian translators who assisted with each mission have translated classes and lecture materials into Spanish. Selected Peruvian nurses were designated to assist in a train-the- trainer role thereby facilitating post-mission training. A reassessment of educational needs is done during each mission in preparation for the upcoming mission. Clinical time at the bedside is crucial to integrate classroom studies with patient care. Multidisciplinary rounds have provided a model for optimal patient care. **Evaluation and Outcomes:** The Peruvian nurses have become adept at caring for patients throughout the open-heart surgery process. During the most recent mission in September 2007, Peruvian nursing staff provided all patient care. CardioStart nursing volunteers were available as bedside resources. Patient outcomes meet those of all national and international guidelines. A Peruvian nurse id developing a research study on VAP. jlg0618@aol.com

CS125 Development of an ICU Preceptor Program Based on the AACN Synergy Model for Patient Care

Welch S, Austin C; Mother Frances Hospital; Tyler, TX

Purpose: To establish the effectiveness of an ICU preceptor program based on the AACN Synergy Model for Patient Care for retention of graduate nurses and to prepare new ICU and graduate nurses to confidently care for ICU patients. **Description:** A new preceptor program was developed by our ICU nurses based on the AACN Synergy Model for Patient Care. ICU competencies were formulated into stages from novice to competent. Orientation areas were applied to the Synergy Model. Daily and biweekly evaluation tools were revised to reflect the Synergy Model. Preceptors were matched with preceptees based on the 8 nursing characteristics. Ongoing dialogue of the preceptee's daily progress was evaluated by the preceptor and critical care educator. Biweekly growth and development of each preceptee was discussed during a preceptor/preceptee conference with focus of progress on learning outcomes and feedback for improvement, establishing plans for successful completion of goals based on the Synergy Model's levels of competency. Identified learning goals were the focus of the preceptee. A competencies notebook was developed with goals set for each new segment. The book was arranged from basic to complicated care with expected timelines for completion. Charge nurse and ICU educator assisted with patient assignments for the preceptee based on learning needs and competencies. Target dates were established to complete all competencies. **Evaluation and Outcomes:** We were able to successfully adapt the AACN Synergy Model for Patient Care into an effective preceptor program for our ICU. Success is measured by a nursing satisfaction tool where we are able to show better trained, more confident graduate nurses in our ICU when compared to our previous program.

Evaluation of the program's impact continues with our second group of orientees. Outcomes measured are patient safety, nurse competence and satisfaction. sstage@aol.com

CS126 Donation After Cardiac Death

Sullivan D; HealthEast Care System; St. Paul, MN

Purpose: Our 3 acute care hospitals have an active Donation after Brain Death program. Based on the 2000 IOM report, longer transplant waiting lists, Joint Commission requirements, and opening of our Neurovascular Center, it was decided to add a "Donation after Cardiac Death" (DCD) program. **Description:** Staff were very comfortable with the process of donation after brain death, so the multiprofessional committee—including staff and managers from critical care, respiratory care, spiritual care, operating room (OR), clinical education, LifeSource, and an ethicist—met to discuss the differences and similarities between donation after brain death and donation after cardiac death, evaluate staff learning needs, establish a system-wide DCD policy, and oversee implementation of the program. After reviewing the literature and consulting with other regional organizations that have a DCD program, we worked with our regional organ procurement organization to develop a process and education plan for each facility. Education of the clinicians, spiritual care, social work, respiratory care, and supervisors focused on "why add DCD?," benefits, family involvement, ethical issues, what to expect, roles of the participants, comfort care measures, and how to support families. Additional training for OR staff included OR setup for DCD cases, how to prepare the room for family presence during withdrawal of support, maintenance of sterile fields, and immediate actions following pronouncement of death. **Evaluation and Outcomes:** Staff response to DCD has been positive. Training content was modified after the first education session to focus more on predonation process, especially ethical issues related to approaching the family only after a decision is made to remove life support. Within 2 weeks of beginning training, we had 3 DCD cases, and each one went smoothly. Ongoing training and debriefing of events is being provided on a regular basis. cropper1021@msn.com

CS127 ED/ICU Rotation: A Strategy for Staff Retention and Improvement of Patient Care in the Critically Ill

Beckman J, Brown L, Davis C, Hanley J, McCoy T, McAteer J, Nash S; Sharp Grossmont Hospital, CA

Purpose: The emergency department and intensive care units developed a program for job sharing of experienced RNs. This project was designed to facilitate excellent care of critical patients regardless of location. It has provided an opportunity for experienced nurses to have new learning opportunities. **Description:** In search of seeking new experiences, several ED nurses requested the opportunity to work in the ICU at the same time ICU nurses were looking for new challenges. In response to this request, the educators of both units with the support of management evaluated many different programs prior to implementation of this pilot project. The history of previous attempts of this venture and feedback from an ED staff member, who had recently attempted to transfer to the ICU, was added to the plan to avoid potential problems. The program participants had a 6-week orientation on the new unit then switches to an alternating schedule between the 2 units. The educators set the acceptable criteria to be met. To continue the quality of care in each unit, the applicant must have worked 2 years in home unit, take a knowledge assessment test for the new unit and receive 80% to participate in this program. The new staff members are required to complete initial competencies during orientation and also participate in the yearly competencies required for both units. This plan was then taken to the managers and directors of each area, who set the criteria from an administrative perspective, ie, weekend commitment, vacations, and time allotment for orientation. **Evaluation and Outcomes:** A survey was given to 30 staff members including ICU and ED nurses and physicians. The survey assessed the impact on the quality of care for the critically ill in the ED and the impact on the ED/ICU relationship. Of the staff surveyed, 100% felt that the ED/ICU rotation had increased the staff confidence level in providing care for critically ill patients. 99% of the staff felt that this program had improved relations between the ICU and ED. jenbeckman@cox.net

CS128 Educational Interventions and Compliance Monitoring on Sedation Minimization in Mechanically Ventilated Patients

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Purpose: This study determined the impact of educational interventions and compliance monitoring on sedation minimization in mechanically ventilated patients related to mechanical ventilator days, ventilator-associated pneumonia (VAP), and drug costs. **Description:** Research demonstrates that sedation minimization is associated with a decrease in mechanical ventilator days, VAP, and ICU length of stay (LOS). Education opportunities in a 32-bed ICU were identified in February 2007 followed by a 2-week period of bedside sedation minimization discussions. In May 2007, formal ICU RN education was provided. Compliance monitoring through daily rounds with on the spot education were utilized to sustain knowledge. This assisted in dispelling myths about sedation and the ventilated patient. Incentives were given in weekly drawings for minimizing sedation appropriately and compete charting of sedation minimization. Impact from these interventions was evaluated. Baseline data included information 7 months before the educational intervention (July 06- Jan 07). Post intervention data were collected for 6 months (Feb 07- July 07). **Evaluation and Outcomes:** Ventilator days and ICU LOS decreased after educational intervention. The VAP rate for FY07 was 0.32/1000 vent days, with 0 VAPs in the last 10 months. Lorazepam, fentanyl, and propofol use decreased with an approximated annualized savings of $72,600. Education and compliance monitoring was instrumental in maintaining guideline adherence which improved patient outcomes and cost savings. kinderl@ohiohealth.com

CS129 Eliminating Central Line–Associated Blood Stream Infections in the ICU

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Purpose: Patients with central venous catheters are at risk for central line–associated blood stream infections (CLABSIs). Such infections often result in increased ICU and hospital LOS, ICU mortality and cost associated with patient care. **Description:** Multiple evidenced-based practice changes have been implemented in the ICU in an effort to decrease CLABSI rates. Recent changes include an intensivist model, daily multidisciplinary rounds, use of a central line cart, preinsertion cleansing with chloraprep, and silver-impregnated central venous catheters. **Evaluation and Outcomes:** Baseline data, reported as infections per 1000 patient days, have been extracted from data reported to the National Healthcare Safety Network over the past 7 years. Annual trended rates are: 2000 = 3.76; 2001 = 2.71; 2002 = 2.55; 2003 =0.82; 2004 =1.25; 2005 = 0.99. Peripherally inserted central catheters infections were added to our data collection in 2006 subsequent rate was 1.3.
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CS130 End-of-Life Care: Improving Nurses' Communication With Patients and Their Families

Taylor S, Kok M; Harborview Medical Center/University of Washington School of Nursing; Seattle, WA

Purpose: Both nurses and families have identified lack of good communication as one of the key barriers to providing effective end-of-life care. The purpose of this project was to develop a tool for improving nurses' communication with patients and their families around spiritual and cultural needs. **Description:** In response to the AACN's Peaceful Death recommendations for competencies necessary for nurses to provide high-quality care to patients and families during the transition to end of life, a project was undertaken to develop a tool for effective and compassionate communication that demonstrates respect for the patients' views and wishes during end-of-life care. To identify initiating queries to effectively address the spiritual and cultural needs of patients and their families, 14 professionals, identified as experts in palliative, spiritual, cultural, or nursing care, were interviewed. Experts in initiating communication around spiritual and cultural care, created a pocket card of dialogue cues of commonly used phrases to assist in initiating conversations around spiritual and cultural care. An educational offering was developed for presentation in multiple venues for those interested in reflecting on and improving their communication skills during end-of-life care. An existing instrument for the measurement of nurses' satisfaction in meeting family needs was adapted to create an evaluation form. This adapted instrument was utilized at the educational events for measuring nurses' satisfaction with communication skills around the spiritual and cultural needs of patients and their families. **Evaluation and Outcomes:** The data will be reviewed to assess nurses' self-reflection of their communication skills and to identify the best dialogue cue. With the desired goal to improve quality

of communication with patients and their families during end-of-life, the most meaningful evaluation of the effectiveness of the tool and success of the educational event resides with the nurses, patients, and their families as they interrelate during the end-of-life experience.
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CS131 Ensuring Airway Safety in High Risk Patients: Getting the Word Out!

Myles V, Corpuz C; Jersey Shore University Medical Center; NJ

Purpose: To ensure availability of emergency equipment by team members of rapid intervention in patients at high risk for cardiac or respiratory compromise. **Description:** Cardiac surgery patients are at risk for developing cardiac and respiratory compromise postoperatively. Tracheotomy/ventilator patients are at risk for airway occlusion. On a 38-bed surgical step-down unit, bag-valve mask devices were set as a standard to be at each bedside for this patient population. Educating staff to the importance of implementing this practice was done at staff meetings. Compliance, though improved, did not meet the goal of 100%, since it was difficult to maintain contact with all the staff to reinforce behavior change. It was decided to use a web- based staffing and open shift based management system as a creative solution. This system employs a messaging component for contacting staff for assignment to open shifts. Since all staff had to access the program for their work schedules, the messaging component was utilized to contact all the staff to increase compliance for the project. The team developed a poem to create humor to "Get the Word Out" and sent it to the surgical step-down as well as the cardiothoracic intensive unit staff. **Evaluation and Outcomes:** Compliance with the objective following the use of the messaging system rose from 75% to 90%. The use of a humorous poem resulted in dialogue within and between the units to ensure and maintain bag-valve-mask devices at bedsides of high-risk patients. Different types of poems and humor were developed each month utilizing this creative solution. vibien@aol.com

CS132 Ensuring Nursing Priorities: Certification Linked to Patient Safety and Demonstrates Expert Knowledge of Nursing Staff

Legg M, Elam C; Virginia Commonwealth University Health Systems; VA

Purpose: Encourage Registered Nurses of the coronary care unit (CCU) to become CCRN certified in an effort to increase the number of nurses who are certified and improve patient safety and nurse expertise levels. **Description:** Healthcare is increasingly complex and challenging. Certification has emerged as a mark of excellence. The CCU provides an educational environment that embraces lifelong learning, inquiry and critical thinking to enable each critical and acute care nurse to make their optimal contribution and recognizes that certified nursing practice ensures the competency and knowledge level of nurses. The link between certification and patient safety is reinforced in research. In 2006, inasmuch as the CCU had only 2 CCRNs—the clinical nurse specialist (CNS) and one staff nurse—the leadership decided to promote certification to encourage additional education and improvement of nursing practice on the Unit and increase the numbers of certified nurses. Our unit provided review materials, reimbursed testing costs after passing, and paid for staff to attend review courses. In addition, the hospital pays an annual bonus to those certified. Our CNS with other ICU CNSs taught a hospital review course. Our nurse manager became certified to serve as a role model. Each new CCRN would be recognized with their name engraved on a unit plaque, and receive a CCRN pin and recognition through congratulatory emails and hospital-wide newsletters. **Evaluation and Outcomes:** Certification is a sign of excellence and leads to a sense of accomplishment and positive self-esteem. It also demonstrates meeting national standards for expert knowledge in one's area of practice to provide optimal patient care delivery. With our nurse manager and CNS setting the standard last year, 6 more CCU RNs became certified with one of those also becoming certified in cardiac medicine (CMC). An additional 7 are preparing to test soon. dlegg@mcvh-vcu.edu

CS133 Evidence-Based Strategies to Improve Education for Heart Failure Patients

Osevala ML, Schirm V; Penn State Milton S. Hershey Medical Center; PA

Purpose: Teaching patients about heart failure (HF) improves care outcomes. Conflicting practices and knowledge deficits about HF education create barriers. This project uses research evidence to develop and implement a systematic approach to enhance nurses' participation in HF patient education. **Description:** The project was conducted on a 44-bed

medical surgical unit at an Academic Medical Center, with approximately 50 full time RN staff. Institutional Review Board approval was granted, and 45 nurses provided consent to participate. Nurses were introduced to the HF teaching program by a cardiology advanced practice nurse (APN). A 1-hour didactic session was held and individual sessions were offered to nurses unable to attend scheduled sessions. Content included review of HF, use of interdisciplinary educational records (IER), accessing patient educational materials on the Internet, and use of a HF DVD. The cardiology APN and HF cardiologist created the DVD to augment home going instructions for HF patients. Patients were given the DVD at discharge. Nurses completed an evaluation of the program at 6-months and 12-months post implementation. A reward and recognition program was held quarterly for unit nurses to acknowledge teaching excellence and consistent documentation of HF core measures. Chart audits of discharged HF patients were done to monitor outcomes, including documentation of HF core measures. HF patients were contacted by telephone post-discharge and asked about their understanding and satisfaction with their HF education. **Evaluation and Outcomes:** Results showed positive trends. Nurses found the DVD enhanced their teaching of patients and their own knowledge about HF. Use of the electronic IER was somewhat helpful. Patients gave excellent ratings to nurses teaching, written materials and use of the DVD. Chart audits of discharge instructions showed 85% compliance with patient education on HF; showing improvement from a 16% documentation compliance prior to project implementation. mosevala@psu.edu

Supported by: American Association of Critical-Care Nurses

CS134 Family Activation of the Rapid Response Team

Bybee D; Blessing Hospital, Quincy, IL

Purpose: Failure to rescue is an issue that healthcare organizations are confronted with. The goal of rapid response teams is to decrease the number of codes, codes outside of ICU and hospital mortality. While nurse activated rapid response teams have impacted these goals, opportunities still exist. **Description:** Acknowledging families know their loved one better than anyone the decision was made to include families in the activation process of the rapid response team. These specially trained teams bring critical care skills to the bedside of the loved one. A process to involve families in rapid response activation was developed. The process included family education upon admission, posters throughout the facility and ongoing encouragement to communicate concerns to the nursing staff regarding the condition of the family member. Using scripted language and a consistent process, staff were taught how to support families and assure swift activation of the team. Education for all medical and nursing staff was needed to allay fears that families would activation inappropriately. A pilot was done on one floor but family activation was quickly adopted throughout the facility. **Evaluation and Outcomes:** Family activation occurs on the average of once a month. Families have expressed increased satisfaction knowing that they can call the team when they are concerned or worried about their loved one. Codes outside of ICU continue to decrease. Patients surviving their code to discharge have demonstrated a significant improvement. dbybee@blessinghospital.com

CS135 Family Centered Care in PICU: Implementing the American College of CC Medicine Clinical Practice Guidelines

Hagan L, Harmon P; Sinai Hospital of Baltimore, Baltimore, MD

Purpose: Since nurses play a major role in helping families tolerate the indescribable experience of their child's critical illness, PICU staff sought to implement evidence-based practices for improving family centered care. **Description:** Parents in PICUs play a fundamental role in providing for their child's needs, yet historically they have often felt uninformed and alienated. The literature provides ample evidence for the causes of parental stress in the PICU including difficulties in communication with the health care team and changes in their role as parents. A multidisciplinary Family-Centered Care Committee in the PICU was convened and determined that implementing the clinical practice guidelines for support of the family in the patient-centered intensive care unit could help parents become active partners in decision making and care. The group examined the recommendations which include decision making, family coping, stress related to family interactions, cultural support, spiritual and religious support, visitation, environment of care, presence on rounds, presence at resuscitation, and palliative care. Based on these guidelines, the parents are considered members of the multidisciplinary team which has strengthened the integration of family-centered care into

the culture and functioning of the PICU. A new parenting guideline has been developed which avoids the use of the word visiting with the philosophy that parents are not visiting; they are parenting. **Evaluation and Outcomes:** Thirty-four recommendations in the clinical practice guidelines have been implemented in the PICU with planning for implementing the others as appropriate. Since the implementation of this program, parents have reported increased satisfaction with care and decreased feelings of being alienated from the team. The parents report a high level of satisfaction with the degree of integration within the PICU. lhagan@lifebridgehealth.org

CS136 First Things First: One Cardiothoracic ICU Shared Governance Council's Approach to Meeting Basic Staff Needs

Hill K, Pasko E, Pierson R, Mounts R, Deran B, Farinacci-Nugent G, Shreffler W, Charvat S, Brooks CA, Cook M; Cleveland Clinic; OH

Purpose: The unit-based Shared Governance Council (UBSGC) of this 55-bed cardiothoracic ICU represents 300 staff members. Identified as the cardiothoracic ICU, the unit is actually divided into 5 smaller, individualized patient care areas. The purpose of the project was to enhance collaboration. **Description:** The physical division and management structure presented challenges in the areas of communication and consistent staffing practices. The UBSGC decided to get back to the basics by improving staff satisfaction, recognizing that making changes in nursing practice requires an engaged, motivated workforce. The UBSGC compared its activities in meeting needs related to communication, staffing, scheduling, and recognition to Maslow's Hierarchy of Needs. Using Maslow's Theory to frame the approach recognized that if an employee is secure, needed, and appreciated, then motivation and commitment is possible, and self-actualization is achievable. All levels of staff (RNs, clinical technician, equipment technician, patient care support associate, health unit coordinator) were involved in decisions affecting communication, vacant positions, and peer recognition. The Council identified that the staff members needed to know that decisions made about the monthly schedule, about floating, and about posting and filling open positions were made equitably and openly. The project discussed the logic and emotions associated with the myths, hearsay, and traditions associated with these basic precepts of staffing an ICU. **Evaluation and Outcomes:** A uniform format for staff meetings was developed. A survey of staff was conducted to determine the best of 3 options to guide monthly schedule development. A consistent application process for posting vacant unit positions was established. Guidelines for floating were standardized. A program of peer recognition for superior practice was implemented. Recognition promoted retention and productivity among staff. hillk4@ccf.org

CS137 Football and Nursing? Get Ready!

Lindsay M; Duke University Hospital; Durham, NC

Purpose: The emergency department had poor attendance (30%) at monthly staff meetings. Significant leadership transition and construction were occurring during this time. It was imperative that communication occur as frequently as possible as well as develop a forum to reach as many staff as possible. **Description:** Football has always used a team huddle before execution of a play. During this time, next steps, predetermined plays, or changes were discussed amongst the team. Opportunity for clarification existed and the huddle broke to execute the play. If this worked so well in the sports arena, why not use this in the nursing operations field? In the spring of 2006 the daily huddle was initiated, by the Clinical Operations Director of the emergency department, as a method to improve and increase communication on a consistent basis. Nursing surveys indicated the staff wanted communication from leadership. Staff was informed the huddle would begin 5 minutes prior to the start of each shift and last approximately 3 to 6 minutes. A template was developed to ensure consistency in presentation. Items that were addressed on a consistent basis included: staffing, sick calls, security concerns, construction updates, and other including welcome new staff, staff awards, inservice topics. The huddle was led by the Emergency Department supervisor/ Clinical Operations Director initially to ensure buy in. The supervisor or charge nurse led the huddles after the initial few weeks. Each shift led the huddle for the oncoming shift. **Evaluation and Outcomes:** Follow-up surveys were conducted to ensure the staffs' needs were met regarding improved communication. Staff stated that they were knowledgeable about daily concerns, huddles allowed a forum to address staff concerns, and communication had improved. Improvements to the huddle template were made based upon staff suggestions. One improvement was the

information is repeated for 7 days to ensure all staff receive the information. Mary.Lindsay@duke.edu

CS138 From Graduate Nurse to Critical Care Nurse: Getting There Safely and Staying There

Armola R, Brandeburg J, Tucker D; The Toledo Hospital; Toledo, OH

Purpose: The hospital developed a pilot critical care residency program in June 2006 with the purpose to supportively transition graduate nurses from the student role to a safe, competent practitioner in the adult ICUs. A second aim was to promote recruitment and retention. **Description:** Five graduate nurses accepted the opportunity to trial the new program. The pilot included extensive guided clinical experiences starting in progressive care to develop beginning RN skills and then rotating to all of the adult ICUs advancing from lower to higher acuity patients. The program also included internet learning using Essentials in Critical Care Orientation, assigned readings from AACN Essentials of Critical Care Nursing, supplemental critical care classes, formal mentoring, and bi-weekly reflective learning sessions. During the reflective learning sessions, the nurses have an opportunity to reflect on patient care, discuss conflicts, review questions in a safe environment, and receive support from a clinical nurse specialist. Additionally, education and critical thinking techniques are applied at each of these sessions. Near the end of their orientation, the orientees selected open positions in their ICUs of choice. **Evaluation and Outcomes:** Four of the 5 RNs completed the program in 7 to 8 months. Outcomes at 9 months showed high satisfaction with the program, appropriate level of knowledge, and moderate to high levels of autonomy and confidence with patient care. Unit directors and the 4 new RNs were satisfied with the ability of the program to transition these graduate nurses to become competent practitioners in the ICUs. At 16 months retention rate is at 100%. rochelle.armola@promedica.org

CS139 Growing Our Graduates

Ronk C, Kishbaugh L, Hite T, Morris K, Reich S, Schena M; Geisinger Medical Center; Danville, PA

Purpose: The nursing shortage demands creative strategies to meet staffing needs hospital-wide. This need prompted us to hire graduate nurses directly into our ICU. To properly prepare and assimilate the new nurses, we developed and implemented a stage-based orientation program. **Description:** The critical care fellowship stages begin in a medical-surgical unit and advance to the critical care units. The initial stage is intended to provide a foundation for basic nursing, time management, and computer charting skills. A rotation-specific preceptor is designated for each graduate nurse in all unit rotations. Multidisciplinary classes are also held throughout the fellowship. The orientation stages continue in the ICU. Stage I consists of stable ICU patient assignments centered on learning unit-specific routines and standards. Stage II consists of increasingly challenging assignments and development of advanced critical care nursing knowledge. The focus of Stage III is fostering independence in preparation for the end of orientation. Formal evaluations occur at 4 week intervals throughout this 23 week orientation. After orientation ends, one to one mentoring begins, to provide a clinical resource and further stimulate critical thinking skills. **Evaluation and Outcomes:** After 2 years of implementing the stage-based fellowship, 75% of our graduate nurses successfully completed the program and continue to thrive as critical care nurses. The stage-based approach has also allowed us to appropriately place new grads and weed out those not suitable for critical care, thus saving time and money. cnronk1@geisinger.edu

CS140 Hemodialysis: Quality From Within

Tu A, Lawson L, Greco S, Freeland C, Allen C; University of Washington Medical Center

Purpose: Provide high-quality hemodialysis (HD) program for patients with acute and chronic renal failure utilizing in house specialty trained RN team. **Description:** Across the country, use of hemodialysis and continuous renal replacement therapy has increased dramatically. Over the last 5 years, the University of Washington Medical Center has seen an increase in HD from 2215 to 3572 (160%) and a nearly 14-fold increase in CRRT 24 to 331. A majority of organizations contract hemodialysis services through an outside source, requiring the hospital to rely on the contracted organization for access and timing to all hemodialysis care. Led by a nephrology clinical nurse specialist, a team of 70 trained RNs employed at an academic medical center administers hemodialysis services. HD RNs participate in specialty training, providing a minimum

of 5 HD runs quarterly in the first year. In addition to improved access, the in-house program offers a unique perspective: nurses implementing the HD therapy are also responsible for the patient's ongoing care needs. Technical support services for equipment maintenance, solution preparation and sterilization are also available, freeing the HD RN to provide one-on-one, holistic nursing care. In the critical care units, the turnover rate for RNs that are HD trained varies on a monthly basis from 0% to 8% compared to overall staff turnover rate (12.5%-25%). **Evaluation and Outcomes:** An onsite HD program offers immediate access and holistic care for patients with renal failure and patients requiring continuous renal replacement therapy. In addition, the program provides nurses with the opportunity to develop a unique skill set that can lead to improved workplace satisfaction and reduced turnover. annietu@u.washington.edu

CS141 Here Ye! Here Ye! Calling for Clinical Experts in a Pediatric Cardiac Intensive Care Unit

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Purpose: With the ever-changing patient population and advancements in technology, nurses in the pediatric cardiac intensive care unit (PCICU) need to be familiar with diagnoses and procedures. In our high-acuity PCICU, it was decided that clinical experts were essential for the optimal care of our patients. **Description:** Given that Duke Children's has separated the pediatric critical care population into multidisciplinary and cardiac teams, acuity level and specialization has increased and nurses are required to be more focused in their patient population. To facilitate this process, our cardiac nurses have chosen to become experts in congenital heart defects, surgical procedures, treatments, and/or pieces of equipment. Each cardiac nurse chooses his or her area(s) of expertise and develops a clinical resource notebook. The notebooks include diagnosis, signs and symptoms, pre- and post-operative care for congenital heart defects, treatments and relevant journal articles. Completed notebooks are placed in a central location, available to the entire multidisciplinary medical team. These notebooks are revised and updated annually. Clinical experts are asked to teach during advanced cardiac core educational days and can be used as a resource when questions arise. After the success of cardiac clinical experts, the multidisciplinary pediatric ICU team has implemented clinical experts as well. The education committee developed focuses and again allowed each staff member to choose their area(s) of expertise. **Evaluation and Outcomes:** Education in a critical care setting is a necessity. Clinical experts allow for specialization within critical care and foster nurses to be empowered, without being overwhelmed, with knowledge to provide excellent patient care and to teach coworkers. Nurses advance on the clinical ladder, which improves job satisfaction. This specialization has proven to be beneficial to our patients and their families. wilso219@mc.duke.edu

CS142 Huddle Up! Creating a Morning Huddle to Get Everyone in the Same Movie

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Purpose: Organization in a busy pediatric critical care unit (PCCU) is not easy to maintain. The PCCU at Duke Children's Hospital went through Crew Resource Management/Team Training to improve collaboration and increase teamwork. One of the concepts that were quickly adapted was a morning huddle. **Description:** Every morning at 7:25 AM the team huddles at the patient board to give a brief overview of the day. A standardized communication format is utilized to assure consistency and collaboration. Utilizing the SBAR (Situation, Background, Assessment, and Recommendation) format provides a structure to insure that the huddle is consistent and concise. All team members that make decisions that affect the entire unit are required to attend; this includes the charge nurse, intensivist, post-call fellow, on-coming fellow, and the unit coordinator. Over time many other team members have found this huddle to be crucial in order to organize their day. During the huddle the team discusses the status of the unit, planned admissions, potential transfers/discharges, and any other patients in the unit that have required recent attention from the critical care team. **Evaluation and Outcomes:** The 7:25 AM huddle has become an essential tool to start the day for many key team members. In a blinded survey of staff (RNs, MDs, RRTs, Residents, etc), greater than 83% agree that the huddle: improves collaboration, improves teamwork, is essential to plan the day, provides valuable information and helps develop a unified plan. kristi.ryan@duke.edu

CS143 "I Can't HEAR You"

Osborne K, Spurney Y, Niemchak S; Duke University Hospital; Durham, NC

Purpose: Patients in the ICU are inundated with overstimulation and excess sound. Sounds increase anxiety and commonly result in administration of additional anxiolytics. The most common adverse noise is one from a ventilator, increasing the patient's stress and decreasing compliance with the respirator. **Description:** Staff noted that the noise level seemed to be on the rise in our ICU. Rest times were often interrupted by the sounds coming from our various pieces of equipment: ventilator, infusion pumps, telemetry, dialysis machines. After questioning some of the family members, they too agreed that their loved ones did not seem to be resting as well as when it was quiet for an extended period of time. Two staff members suggested the use of earplugs to decrease the stimulation during certain hours of the day and night. Families agreed to this intervention. Earplugs were used for the ventilated patients. Some families provided their loved one with an iPod with music the patient enjoyed. **Evaluation and Outcomes:** Patients appeared more rested as evidenced by awake times during the day. Less anxiolytics were used which enabled a quicker wean from mechanical ventilation. Patients were more cooperative with their caretaker. Staff were pleased to see that such an easy solution improved patient care overall and that interactions with families improved the overall team approach to caring for the patient. osbor013@mc.duke.edu

CS144 The ICU SWAT Nurse: Saving the Lives of ICU Nurses

Dicklich-Cobb C, Hopkins N, Goddard J, Becker C; Wyoming Medical Center; Casper, WY

Purpose: As the nursing shortage and patient acuity continue to climb, hospitals must look for creative ways to care for not only patients but also fellow staff. In our ICU at Wyoming Medical Center, we created a position called the "Swat Nurse." **Description:** After several surveys continued to note staff frustration with patient load and acuity and rarely getting breaks or lunch, we tried to "think out of the box" to find solutions. Our local nursing shortage was the result of more nurses choosing part time status, creating "holes" in staffing. Those choosing part time often sited reasons of childcare issues and general fatigue of long shifts. Thus the idea of the "SWAT nurse" was born. We targeted nurses desiring part time, and times when childcare could more easily be found, to boost staffing. By providing the extra hands during lunch and dinner times, the primary care nurses felt comfortable in taking breaks and lunches, knowing someone would be there to watch their patients. Furthermore, since peak diagnostic test times occur during the day, the extra nurse helped facilitate patients traveling to procedures that must be done outside of the ICU. For those diagnostics that can be done in ICU, the SWAT nurse assists or floats as a resource for the other patients or other nurses needing some help. **Evaluation and Outcomes:** By adding flexible staffing via short shifts during peak times, we found a win-win for the ICU staff. Staff verbalizes satisfaction by having resources at hand, and the SWAT nurses feel valued by providing their services while meeting their needs outside the facility. Staff satisfaction numbers support this, showing improvement in ability to take breaks and lunches, and feeling more satisfied with the patient care load. cbeckermsrncns@yahoo.com

CS145 The Impact of a Nursing Peer Review Model on Nurse's Perception of Autonomy, Decision Making, and Professional Status

Fujita L, Johnson K, Harris M; The Queen's Medical Center; HI

Purpose: Healthy working environments are linked with nurse's perception of autonomy, decision-making and professional status. The intent of this project was to positively impact nurse's perceptions by integrating a Nursing Peer Review (NPR) Model into an existing Shared Governance (SG) Model. **Description:** The nursing literature demonstrates that having an organizational SG Model promotes nurses to express and manage their practice resulting in the perception of empowerment, control over their practice and professional autonomy, leading to greater accountability. These perceptions contribute to the delivery of quality patient care and a healthy work environment. In order for nursing practice to be truly autonomous there must be some form of professional accountability to the general public, the employer, and other disciplines as well as to the nursing profession. An approach to doing this is to develop a self-regulated peer review model. Literature reviews on organizational NPR Models were found to be sparse. Therefore, a NPR Model was developed by integrating it into an existing SG Model, with RN staff comprising the majority of the membership. This presentation describes our hospital's journey for gaining leadership support, engaging staff nurses in the process, clarifying the purpose of the NPR Committee, developing a process for referrals, handling of protected and privileged information, and defining roles within the organization. Lessons learned and future model implications will also be shared. **Evaluation and Outcomes:** Outcomes being tracked to evaluate the impact of integrating the NPR Model into our SG Model include 1. RN satisfaction scores for 3 dimensions of the annual RN satisfaction survey: autonomy, decision making, and professional status; and 2. Number of NPR referrals. Data thus far demonstrate an improvement in RN satisfaction scores for FY 06 and 07 in each of the 3 dimensions and an increase in the number of NPR referrals. lfujita@queens.org.

Supported by: The Queens Medical Center

CS146 Implementation of a Nurse-Driven Intensive Insulin Infusion Protocol in a Surgical Intensive Care Unit

Bullock A, Allred S, Barnes M, Udekwu P, Smith A; WakeMed Health & Hospitals; Raleigh, NC

Purpose: A randomized, controlled trial published in 2001 found that maintaining a tight glycemic threshold of 80-110 mg/dL reduced morbidity and mortality among critical care patients in a surgical intensive care unit (SICU), regardless of a history of diabetes mellitus. **Description:** A multidisciplinary team that included the unit medical director, nurse manager, clinical pharmacist, clinical dietician, and staff nurse champions was developed. After an extensive literature search, the team implemented a protocol that uses a preset basic algorithm to determine appropriate insulin requirements. The protocol also provided for automatic nurse-driven transition to subcutaneous insulin. Once the patient was transitioned from a continuous insulin infusion, the protocol included formulas for calculating the total daily dose (TDD) and adjusted TDD on the basis of insulin usage while patients received the infusion. Subsequently, nursing staff automatically made daily adjustments to the subcutaneous regimen. To evaluate the safety and efficacy of the AIIIP, pilot orders were initiated and extensive education was provided to all nursing and medical staff. Hyperglycemia for all patients admitted to the SICU would be managed utilizing the AIIIP. Demographic and clinical variables including age, race, sex, body mass index, and previous medical history were collected prospectively and maintained in a database. The duration of infusion and source of glucose or nutrition while receiving insulin therapy were collected. **Evaluation and Outcomes:** One hundred forty-five patients were initiated on the AIIIP over the course of 12 months. The AIIIP was effective in maintaining glycemic control with 80% of blood glucose checks within the clinically desirable range of 80-150 mg/dL and 57% within the range of 80-110 mg/dL. Of the 11,076 blood glucose readings performed, less that 0.01% of concentrations were <40 mg/dL. Anonymous surveys were completed by the SICU nursing staff . abullock@wakemed.org

CS147 Implementation of a Stroke Protocol in a Community Hospital

Cuipylo K; Winchester Hospital, Winchester, MA

Purpose: As a community hospital, the provision of services is not that of a tertiary facility. We identified that patients developing stroke symptoms needed immediate interventions that we could only initiate, not thoroughly treat. **Description:** A multidisciplinary team came together to look at the issue and develop a plan for these patients. A stroke protocol was developed to be utilized in the emergency department and one to be used in the inpatient setting. Both settings included rapid evaluation and treatment and disposition to a tertiary facility where we had developed a transfer agreement. The rapid response team responds to inpatient events and the patient becomes a critical care patient immediately even though they may not be transferred to the ICU. **Evaluation and Outcomes:** The protocols developed have been successfully utilized in our organization. The time to CT scan is less than 30 minutes. Management of blood pressure and thrombolytics has been initiated. Patients are transferred to the tertiary facility for evaluation and possible interventional treatment. Patients have returned to our facility to thank us for our quick and professional treatment. kcuipylo@winhosp.org

CS148 Implementing the Brain Attack Coalition Guidelines Across a Service Line

Ellmers K; Oregon Health & Services University; Portland, OR

Purpose: To enhance implementation of the Brain Attack Coalition Guidelines across a Service Line in order to improve outcomes and prepare for Joint Commission Primary Stroke Center certification.

Description: Stroke is the third leading cause of death and the leading cause of adult disabilities in the United States. Our Stroke Program has been active in the clinical management of stroke and research trials since 1979. The emergency department, neurosciences ICU, and neuro acute care units all fall within one Service Line. The CNS for the Service Line was appointed to lead this project. A Stroke Advisory Group was formed that included nursing and physician leadership from each of the 3 units, as well as leadership from the other services that work with stroke patients, such as rehabilitation, radiology, pharmacy, and the laboratory. The evidence-based stroke guidelines were reviewed and a gap analysis performed. The flow of patient care was evaluated from EMS through admission and on to discharge with input from many direct care providers. Process improvements were implemented. Stroke Practice Standards were revised to address the care flow across the continuum. Access for direct care providers to stroke-related information was improved. Education was provided to each of the units and services involved. Data for all admitted patients was entered into the Get With the Guidelines (GWTG) Patient Management Tool as of 6/06. **Evaluation and Outcomes:** Our composite score for the GWTG Stroke Recognition Group measures increased from 63% to 97%. CT results are ready for review in 45 minutes or less for 73% of acute stroke patients. Laboratory, ECG, and chest radiograph results are ready for clinician review in less than 45 minutes 100% of the time. Primary Stroke Center certification was achieved in the fall of 2007. The multi-disciplinary team reports a high level of satisfaction with the improvements. ellmersk@ohsu.edu

CS149 Improving Goal-Directed Sedation Practices and Recognition of Delirium in the Medical ICU

Nelles S; Duke University Health System, NC

Purpose: To enhance assessment and communication of patient sedation levels, improve the recognition of delirium, and develop goal-directed treatments. **Description:** As part of the Society of Critical Care Medicine's national clinical recommendations to have established sedation protocols and assessment for delirium, a multidisciplinary hospital workgroup was formulated to assess current clinical practices, evaluate available sedation and delirium monitoring scales, and develop an education program to implement the recommendations throughout the hospital. Because our previous sedation scale was unable to capture various sedation levels and delirium, the Richmond Agitation Sedation Scale (RASS) and the Confusion Assessment Method for the Intensive Care Unit (CAM-ICU) was chosen as a trial in the Medical ICU. A training manual that included videos, publications, and a kit to implement the RASS and CAM-ICU provided by Vanderbilt University Medical Center was utilized as a starting point. The Collaborative Quality Improvement Committee developed goal-directed protocols for the MICU patient population. The implementation process was divided into 4 phases. **Evaluation and Outcomes:** Staff members expressed that the new RASS scale was objective and the assessment levels provided a clearer picture of a patient's sedation status. Unit audits revealed that hypoactive delirium in patients that were previously thought not to be delirious was being discovered with utilization of the CAM-ICU. Ongoing projects include developing tools to measure patient outcomes. nelle002@mc.duke.edu

CS150 Improving Nutrition Practices in the ICU Using an International Quality Improvement Project

Richardson J, Warren M, Chesnutt M, Enghouse A; Portland Veterans Administration Medical Center (PVAMC); OR

Purpose: To examine current practice regarding nutritional support in critically ill patients in the ICU at PVAMC, compare to guidelines endorsed by the American Society of Parenteral and Enteral Nutrition, and improve adherence to guidelines by participating in an international quality improvement project. **Description:** Current guidelines for nutritional support in the critically ill were published in 2003. The ICU at PVAMC has a dedicated dietician and a multidisciplinary nutritional support team who observed that the existing computerized order set for enteral nutrition was not utilized regularly and it was difficult to determine compliance with components of the guidelines. In 2006, the dietician enrolled the ICU in an international QI project to examine current adherence to the guidelines in 20 critically ill, ventilated patients and to provide benchmarks to regional/international facilities. **Evaluation and Outcomes:** Areas of strength include ICU/hospital length of stay, length of mechanical ventilation, and mortality rate less than sister sites. Areas in need of improvement/further study include inadequate calories and

protein received during first 4 days in ICU and lack of a standardized feeding protocol. The multidisciplinary team is using the results of the QI project to plan for a revised electronic order set, education, and practice changes. jeannette.richardson@va.gov

CS151 Improving RN Satisfaction and Team Communication: The RN in Daily Rounds and Implementation of a Daily Progress Note

Schuele D, Hujcs M, Ledwith M; Hospital of the University of Pennsylvania

Purpose: Communication has been identified as a leading factor in maintaining patient safety. A nursing initiative was undertaken to define the RN role in daily patient care rounds, generate a tool for RN reporting during these rounds and improve RN satisfaction with team communication. **Description:** As part of a coordinated effort to establish and sustain a Healthy Work Environment, the RN staff identified a need to clarify and structure the RN role in daily interdisciplinary patient care rounds. Staff Nurses present each patient's physical and psychosocial exam data (including a detailed neurologic assessment), medications, and nursing issues as part of the rounding team. This format was the first of its kind in our institution. The Daily Progress Note was designed by staff nurses, reviewed in Unit Council, tested by volunteers and finally implemented after revisions. Staff Nurses complete the Daily Progress Note after shift report and completion of the bedside patient exam twice a day. On morning rounds, the RN utilizes the completed form to verbally present the patient information in a structured manner. The data reviewed are described in a common language for all participants; the intent is that the entire team is describing the patient exam and plan in the same manner. The Daily Progress Note is utilized as the RN documentation of the patient plan of care and decreases duplication of information. **Evaluation and Outcomes:** Based on the NDNQI Database, after implementation, the Neuro ICU had an overall increased RN satisfaction in all areas and achieved Top Quartile Cut Point for Adult Critical Care in decision-making, autonomy and communication. Compared to our 2004 survey, there was increased satisfaction in RN-RN communication, RN-MD communication and Teamwork between co-workers. Our staff became comfortable with discussing patient related issues. schueled@uphs.upenn.edu

CS152 Incorporating Aquapheresis Into Therapy Options for the Treatment of Volume Overload: A CNS Driven Project

Peterangelo M; Good Samaritan Hospital - Dayton, OH

Purpose: Heart failure is a leading cause of recurrent hospitalization. National data show that 43% of heart failure patients are discharged symptomatic and 50% lose less than 5 pounds during hospitalization. The Heart Failure CNS began exploring therapy alternatives using current evidence. **Description:** The CNS presented hospital specific and national data to the Heart Failure Advisory Committee. The CNS suggested Aquapheresis as therapy to add to the hospital services. The committee agreed to purchase a device and maintain oversight of the order set, procedures, and outcome review. The CNS held responsibility for overall process issues, staff education and mentoring, physician support, and outcome data management. There was no available nursing literature regarding recommendation for details such as catheter and patient selection, heparin dosing, etc. General suggestions were provided by the manufacturing company and expert opinion was obtained from the Advisory Committee. The CNS drafted an initial order set and procedural guide. Nursing staff training and support was provided. Admitting and bedfellow staff, IV therapy, radiology, and laboratory services were identified as additional disciplines and departments vital to therapy success. Process refining continued over several months. The therapy was successfully moved from critical care to progressive care allowing for better allocation of resources and was recognized as an opportunity for progressive care staff growth and identity formation. **Evaluation and Outcomes:** More than 50 patients have received Aquapheresis to date, with no adverse events. Frequency of therapy use is increasing, with an average of 5.5 liters of ultrafiltrate removed per patient. Length of stay and recidivism are expected to decline with process refinement. Opportunities for improvement include earlier therapy initiation, an easier heparin protocol, and the availability of order entry in the computer system. mpeteran@shp-dayton.org

CS153 An Institutional Sepsis Collaborative: The Impact of a Continuous Quality Improvement Process

McLellan B, Mooney R, Boleski G, and the HFHS Sepsis Collaborative Group; Henry Ford Hospital; Detroit, MI

Purpose: Sepsis accounts for 3% of our hospital admissions, and it accounts for over 40% of the deaths and institutional costs of over $100 million per year. Recent evidenced-based therapies have shown improved outcomes; however, the full impact of these therapies may not be realized. **Description:** An institution wide continuous quality improvement (CQI) sepsis initiative to the resuscitation bundle was instituted over the last 18 months at Henry Ford Hospital (an inner city tertiary care hospital) to measure and improve the care of severe sepsis and septic shock. This CQI included establishment of a database (693 patients with severe sepsis and septic shock), a screening of baseline mortality, establishment of quality core measures to the sepsis resuscitation bundle, education, daily screening for bundle compliance, and performance feedback at the individual, departmental, and institutional levels were examined. The mean age of this population was 64.5 with an APACHE II score of 20.2. Overall bundle compliance improved from baseline of 22% to 60%. Overall mortality for severe sepsis and septic shock was reduced by 12%. Mortality when the bundles were met was 24.5% and bundle not met 36%. The resuscitation components ($P = .028$) and hemodynamic optimization elements ($P = .01$) of the bundle had the greatest impact on mortality. **Evaluation and Outcomes:** There is a significant correlation between compliance to resuscitation bundle and mortality. In spite of promising developments therapies to improve outcomes for severe sepsis and sepsis, compliance to these standards of care must be improved in order to realize maximum benefits. rmooney1@hfhs.org

CS154 International Study Buddies: Partners in Research Across the Continents

Ellis M, Granger B; Duke University Hospital, NC; Tashjian H; American University Hospital, Beirut, Lebanon

Purpose: The benefits of unit-based clinical research, including improved collegiality, professional development and ultimately, improved processes and outcomes for patient care, have been experienced by nurses in our university affiliated tertiary care Heart Center. **Description:** Our study, currently underway in the CTICU, was investigating the effects of vasopressors on capillary blood glucose values. The CNS at an international hospital was given a list of ongoing nursing research studies within our teaching hospital. After collaboration with her staff in the Beirut ICU, a research study was identified that best fit the needs of the patient population and interests of the nursing staff. The step-by-step process to implement the study was discussed in a series of conference calls with the Research Mentor, Study Primary Investigator (PI), and CNS. The study PI discussed lessons learned in the IRB approval process and patient enrollment to help the international group anticipate and avoid problems. All forms including the Study Protocol, IRB forms, data collection forms, and patient consent forms were shared via e-mail. The international team constructed a replication study by transferring the information to their IRB forms and translating the patient consent form to the native language (Arabic). **Evaluation and Outcomes:** Sharing of strategies, data collection forms and data collection experiences expedited the IRB process and the international team was able to achieve approval and begin data collection much faster than the original group. Sharing resources and expertise for research builds international relationships, improves nursing professionalism on a global scale and provides satisfaction to all involved. ellis030@mc.duke.edu

CS155 Keeping Up With Ventricular Assist Devices

Petlin A, Anderson D, Moody H, Shelton K; Barnes-Jewish Hospital at Washington University Medical Center, St. Louis, MO

Purpose: The surgeons at our hospital use 11 types of ventricular assist devices (VAD), some for acute patient management and others for long-term patient support. With so many different products it is easy for nurses to forget the finer points of a particular VAD. **Description:** We split our VAD education for nurses into 2 phases. Because long-term VADs are designed for patients with minimal literacy skills, it is reasonable to teach these devices early in a staff nurse's tenure. Both ICU and step-down staff receive this training. When a patient is critically ill and needs an acute VAD, the complexity of their care demands that only experienced ICU nurses receive these patients. We have teaching booklets for each phase of care—long-term VADs and acute VADs. It may be difficult for the nurse to find quick information in these detailed booklets. We supplement the detailed information with a quick-reference guide. We show all of our VADs in tables on a 2-sided page with the key distinctions, flow type, mechanics, support range, back-up method, precautions, labs,

transport considerations and documentation parameters. Long-tern VADs are on one side; acute VADs are on the other. The page also has a short version of our uniform VAD dressing change procedure. We validate staff competency annually on the devices. ICU nurses confirm their acute VAD competency during the ICU skills days. Both step-down staff and ICU staff demonstrate long-term VAD competency during skills days held in a different month. **Evaluation and Outcomes:** Our VAD education program helps staff keep up with this evolving therapy for acute and end-stage heart failure. This technology will continue to expand as devices become easier to insert and maybe even lower in price. As we introduce new devices, the nurses are able to fit them into what they already know about VAD patient care. Our program will help staff nurses keep up with VADs well into this twenty-first century. amp2645@bjc.org

CS156 Leading Change: An Externship Program in the Perioperative Setting

Roberson A; Virginia Commonwealth University Health Systems; VA

Purpose: To increase the awareness and knowledge of perioperative nursing to undergraduate nursing students and support their clinical experience as competent and confident novice nurses. **Description:** Through a collaborative effort between the Department of Perioperative Surgical Services at Virginia Commonwealth University Health Systems and Virginia Commonwealth University's School of Nursing, the Nursing 396 Externship Program was developed and implemented. This program offered a salary to sophomore and junior undergraduate nursing students who demonstrate an interest in exploring perioperative nursing. A total of 6 "externs" would be selected, based on interview and observatory outcomes, to participate in this program each semester. Each extern would rotate through the Perioperative Surgical Services' department, for a total of 180 clinical hours, gaining clinical knowledge and critically evaluating patient outcomes. The extern's evaluation is based on their demonstration of clinical competence, application of theoretical and evidence-based knowledge and collaboration with health care team members using effective and timely communications. At the end of the semester, each extern is required to present an evidence-based presentation related to patient safety. **Evaluation and Outcomes:** All of the externs were able to verbalize and provide staff documentation validating their attainment of several novice nurse competencies in the perioperative setting. Each extern received a salary and credit (1.5) for the program. At the end of the Fall Semester 2006, all (6) students returned for Externship II (100%) in the Spring 2007. (4) out of (6) students (67%) obtained continued hourly employment within our department. Aroberson@mcvh-vcu.edu

CS157 Lights, Camera, Collaboration: Implementation of an eICU Orientation Program

Roberts G, Dewoody S; OhioHealth, OH

Purpose: eICU Care at our hospital opened in 2005. Nurses in the units were offered training classes related to eICU processes and impact on care. Training was not mandatory and was not well attended. Therefore, a structured orientation program was developed. **Description:** An extensive literature search uncovered there is little research available regarding staff buy-in, utilization, and orientation programs to the eICU®. This helped to provide further support for the development of an eICU® orientation program. The orientation program is structured, and provides an introduction to the AACN Synergy model for patient care as it relates to the ICU/eICU Care Team. It is designed to appeal to all types of learners and therefore is comprised of an online self learning module, an interactive case study with a slide presentation, and a tour of the eICU Care Central Operations Room with standard talking points and question and answer session with the eICU Care staff. Although this orientation program was originally implemented as a nursing research study, it has been incorporated into the orientation period for all new nurses that are hired into the units that have eICU Care at OhioHealth. This orientation program is being evaluated in 2 ways: increased satisfaction with eICU Care and increased utilization of eICU Care. The outcomes data collection tools include a nursing satisfaction survey, and a tool for tracking calls into eICU Care from the bedside nurses. **Evaluation and Outcomes:** The eICU Care Orientation program has demonstrated an increase in bedside staff satisfaction with eICU Care as well as increased utilization of eICU Care. Satisfaction has increased as evidenced by the satisfaction survey tool. Utilization of eICU Care has increased as evidenced by increased number of calls to eICU Care requesting assistance and increasing number of physician interactions with the bedside staff. groberts@ohiohealth.com

CS158 Lines and Lungs: Keeping the Bugs Out Using Evidence-Based Practice

Duey D, Andersen M, Dunskis P, McKoy G, Ryan S, Steinmetz P, Weathersby G, Walsh M, Walsh N; Advocate Christ Medical Center, IL

Purpose: To significantly decrease the rate of blood stream infections related to central lines and ventilator-associated pneumonia (VAP) infections in the medical intensive cardiac care unit (MICCU). Per incidence, these infection costs are up to $40,000, increasing length of stay by 7 days. **Description:** An evidence-based, 2-pronged approach was used to improve a MICCU's central line and VAP infection rate. Initially, to decrease central line infection, mandatory standard central line education was provided, which focused on the use of chlorhexidine instead of betadine and an antimicrobial dressing. Removing all betadine from unit stock reinforced chlorhexidine use. Creative education was provided using search and find exercises with pictures of actual central line dressings. Nurses were tested on the errors found in each picture; the testing was repeated at a 6 month interval. Simultaneously, to decrease the VAP rate, education and competencies were created for the care of the intubated patient. Use of specific oral kits and endotracheal tubes (ETT) with subglottic suction was expected and monitored. The head of the bed was consistently elevated to 30° to 45° on all intubated patients and audited by the electronic ICU (eICU). All hospital crash cart supplies were converted to ETT with subglottic suction and chlorhexidine for central line insertion. Sharing infection rates in real time via newletters and meetings reinforced compliance. **Evaluation and Outcomes:** The rate of central line blood stream infection (BSI) dropped from 3.75 in 2004 to 0.98 in 2005, a reduction of 2.77, and further reduced to 0.26 in 2006. Through July 2007 there has been no reported BSI in the MICCU. The VAP infection rate dropped from 3.46 in 2004 to 2.19 in 2005, a reduction of 1.27. Through July 2007 there have been no reported cases of VAP in the MICCU. Deborah.Duey@advocatehealth.com

CS159 Looks Like We Made It! Utilizing Best Practice Bundles to Decrease Catheter Related BSI and VAP Rates in the SICU

Dickinson S, Rickelmann C, Zalewski C, Horner R, LaBeske M, Meldrum C, and Nursing and Medical staff of the SICU; University of Michigan Hospital and Health System

Purpose: Two high-risk but preventable hospital-acquired infections are catheter-related blood stream infections and ventilator-associated pneumonia. Our goal in the SICU was to reduce the rate of preventable infections by applying Keystone ICU/Society of Critical Care Medicine bundles to each initiative. **Description:** In June of 2005, the surgical intensive care unit (SICU) became a closed unit with the Surgical Critical Care Team overseeing care for all surgical patients admitted to the SICU. A standardized SICU admission order sheet was developed. The order set includes the evidenced-based best practice bundle developed by the Society of Critical Care Medicine (SCCM) and Keystone. The utilization of the standard admission order sets, and daily goals sheets for all patients being admitted to the SICU, have helped to ensure that standards of care are optimized. Daily reminders at shift changes were utilized to reinforce the bundle protocols. A Bronchial Aspirate Lavage (BAL) or mini BAL has now become our standard of care for diagnosing VAP's. A standardized line cart is utilized in the SICU for all line insertion or changes to ensure proper technique is followed. **Evaluation and Outcomes:** With the utilization of the bundles, the SICU has successfully reduced and sustained our VAP rates below the CDC National Healthcare Safety Network (NHSN) pooled mean of 5.2. For Catheter related blood stream infection we have successfully sustained a 0% infection rate for the past 18 months. crickelm@umich.edu

CS160 Medication Reconciliation: A Success Story

Coad M, Williamson S; Riverside Regional Medical Center; VA

Purpose: National Patient Safety Goal #8 is to "accurately and completely reconcile medications across the continuum of care." Our Performance Improvement project was to develop a medication reconciliation process that could be used easily and effectively in an acute care hospital. **Description:** A multidisciplinary Performance Improvement (PI) team was formed to design a medication reconciliation process that would work effectively across the continuum of care. Forms for admission, transfer and discharge were created by the team. A physician informatics specialist created a web site on our health system Intranet to access the forms. The discharge process included a new web-based method that combined medication reconciliation with patient education in one step

called "Discharge-O-Matic." The pharmacy department worked with the team to coordinate the implementation of medication reconciliation with current pharmacy practices and a bar code based medication administration system. Education was completed from a multi-disciplinary approach involving nurses, pharmacists and physicians. Education was presented at lectures, meetings, inservices and orientation using computer-based learning modules, powerpoint presentations, flyers, written packets and individual follow-up. **Evaluation and Outcomes:** The initial implementation was received with resistance. The team continued to refine the process and to persevere with education. The "Discharge-O-Matic" process for discharge and patient education was an instant success. It decreased the amount of nursing time spent in preparing patient education on medications and improved compliance with discharge medication reconciliation. Audits demonstrate high compliance with the process. marie.coad@rivhs.com

CS161 Medication Reconciliation: Nurses Make It Happen!

Macapagal R, Strambler M, Kelleher D, Babanto S; The Methodist Hospital, Houston, TX

Purpose: To accurately reconcile medications across the continuum of care is JCAHO's National Patient Safety Goal #8. Hospital-wide audits revealed our CVICU as performing below expectations. A group of 5 nurses on the mentor level accepted the challenge to correct this deficiency. **Description:** The mentors attended a workshop on medication reconciliation that stressed the importance of medication reconciliation as a tool for continuum of care; ensuring the patient's home medications are reordered as appropriate and documenting this activity within 24 hours of admission or transfer. The goal was to reach 100% compliance as set by our institution. The mentors provided 30 to 45 minute one-to-one in-services to more than 100 nurses; poster presentations, and e-mails on how to perform medication reconciliation on admission, change in level of care and discharge on the new hospital charting system. In addition, discharge instructions included patient education on getting them involved in the process by having a current and accurate list of their medications and communicating this list to the next receiving facility. The mentors were available to all shifts and provided assistance and answered questions by the staff. After staff education was completed, the mentors, to monitor progress and the need for further education, performed biweekly audits. Data revealed an improvement from 30% to 67% compliance after in-services were completed. **Evaluation and Outcomes:** The Hospital's Performance Improvement Department performs daily audits on our unit's compliance. It has been a struggle to reach our goal on discharges, but as of date we have reached 100% compliance on admissions and transfers. The mentors continue to follow up our unit's progress and provide resource as needed. Staff accountability on compliance to this goal has significantly improved. RMacapagal@tmhs.org

CS162 Multifaceted Orientation to Foster Reflective Thinking, Metacognition and Critical Thinking in New Graduate Nurses

Thomas T, Walsh R; Renown Regional Medical Center; Reno, NV

Purpose: It has become the norm to hire Graduate nurses (GN) directly into the critical care areas to meet the need for nurses. This vital need provided the Progressive Care Unit (PCU) the opportunity to cultivate reflective thinking, metacognition, and critical thinking in the GN. **Description:** The PCU educators met this challenge by developing a multifaceted orientation. The orientation incorporated, an extensive week long hospital orientation, education on-line, a basic skills labs, an intermediate skills lab, structured classes on: wound/ostomy care, ECG recognition, and a weekly 4 hour interactive class between the educators and the GN's. The weekly classes included clinical debriefing, reviewing standards of care and documentation, cardiac procedures, case studies, care plans and concept maps. Case Studies were based on a patient cared for by the GN during clinical. The GN was guided to answer preset questions and present the case to the group. The educator's role was to facilitate group dialogue, discussing the issues and concerns regarding the case study. The concept maps reviewed the body systems with a focus on conditions that are prevalent in the PCU setting. The developed concept maps integrated contributing factors, signs and symptoms, patient assessment, anticipated doctor orders, nursing interventions and concerns, discharge plan and available resources. **Evaluation and Outcomes:** At the end of orientation the educators, and more importantly the GNs felt that they had the tools and resources to reflectively and critically think about the coming challenges in the PCU. tathomas@renown.org

CS163 College Student Organ Donation Study: Intervention to Increase Awareness and Registration

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Purpose: The demand for transplantable organs has created a critical need for potential organ donors. Our intervention sought to improve reported knowledge deficits and increase numbers of registered donors among college students in our state using a nurse-delivered, patient-centered educational campaign. **Description:** A pilot assessment study (n=60) was conducted to evaluate local campus attitudes toward organ donation using a modified version of the previously validated "Willingness to Communicate Scale," measuring student attitudes toward organ donation. Based on this baseline assessment, college students' current perceptions of organ donation and specific educational needs and desires were identified. The information was used to create a unique educational campaign featuring a family and patient awaiting organ donation, and depicting a multidisciplinary care team providing care over the long, anticipatory period prior to donation. The intervention video demonstrates the need for transplantable organs, features a nurse-facilitated discussion about the facts of organ donation, and gives a succinct presentation of the Carolina Donor Services recommended steps to becoming an organ donor. Each planned campus intervention session (n=50; 10 sessions at each of 5 college campuses) includes the opportunity to complete a donor card on site. Post-intervention questionnaires and an ongoing database of registered students will provide for long-term assessment of the effectiveness of the intervention. **Evaluation and Outcomes:** Our pilot showed lack of knowledge and low scores on willingness to communicate with parents or family regarding organ donation among a majority of students (65%). These variables are known to increase likelihood of donation by over 50%. Showing a patient-centered story of caring may raise awareness, registration rates and ultimately increase donation rates. disena4@aol.com

CS164 The Nose Knows-Measuring NG Tubes in Critical Care

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Purpose: Aspiration from feeding tubes inadvertently migrating back has caused devastating outcomes for patients. The Neuroscience ICU Practice Committee created a solution. The goal was to improve patient safety, educate staff and standardize practice according to revised policies and AACN Practice Alerts. **Description:** After reviewing the literature, patient event data and current guidelines, our practice committee developed a new standard of practice. This included measurement of the nasogastric tube (NGT) in cm, from tip to nare, marking the NGT, and charting with each nursing assessment. When an NGT became dislodged it was recommended that it be x-rayed again to ensure proper placement and replaced if necessary. Education was provided to staff in the form of Power Point presentations, bulletin board information, and individual observation. Recommendations were also sent to the informatics department to add the measurement permanently to the nursing flow sheet. To enforce the change in practice, audits were completed by the quality committee and verbal/written feedback was given to each nurse. Written feedback consisted of giving each nurse either a green or pink slip. Management would present a token of appreciation after 5 green slips were collected. The pink slips offered a gentle reminder to focus on our quality improvement goals. Audits were completed monthly and progress was tracked with a threshold of 90% compliance. Results were disseminated to nursing leadership, placed on our staff bulletin board and reviewed at staff meetings. **Evaluation and Outcomes:** Auditing occurred for approximately 1 year and compliance steadily climbed with the dissemination of the feedback forms. Compliance reached 100% with NGT measurement permanently added to the flow sheet. No NGT-related events were reported in the Neuroscience Division since implementing this quality initiative. The audit tool, feedback and documentation compliance improved patient outcomes and quality care in our neuroscience population. worden.wendy@mayo.edu or matthew.dyer@mayo.edu

CS165 NPO at Midnight: A Practice Based on Tradition or Science

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Purpose: The era of evidence-based practice has afforded clinicians the opportunity to examine the theoretical underpinnings of many traditional practices. One such practice is that of the standard order of "NPO after Midnight" for preoperative and preprocedure patients. **Description:** Critically ill patients are particularly vulnerable to malnutrition during a time when adequate nutrition is of paramount importance. Minimizing preoperative fasting times is a low cost intervention that can decrease postoperative insulin resistance rates. Aspiration risks are increased not by the volume of oral fluids ingested prior to surgery but rather by the type of fluids ingested, the choice of anesthetic agent, and difficult intubation. Carbohydrates leave the stomach more rapidly and protein and much more rapidly than fat which is the slowest to leave the stomach. Thus clear liquids may be taken up until 2 hours before surgery. This in turn results in decreased rates of postoperative nausea and vomiting. In order to reduce aspirations during intubation, at-risk patients for difficult intubation were identified with a green arm band and a green medical record label. A difficult intubation tray was assembled and available in the ICUs as well as a difficult airway team. Postpyloric feeding placement was encouraged. Postpyloric tubes offer the opportunity to both help meet the caloric needs of the critically ill patient and also to reduce ventilator-associated pneumonia rates due to aspiration. **Evaluation and Outcomes:** Outcomes, which are being tracked with implementation of these practice changes, include post-operative aspiration pneumonia rates, infection rates, insulin resistance rates, and patient satisfaction. Today's evidence focused environment, provided a stimulus for a multi-institutional based group to examine traditional practices and make evidence supported changes in order to improve the care of critically ill clients. renee-leasure@ouhsc.edu

CS166 Nurses' Innovative Approach to Weaning Process Prevents Blood Loss

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Purpose: Patients who fail to wean from cardiopulmonary bypass, or who have acute heart failure may require a CentriMag ventricular assist system which needs anticoagulation. Bleeding occurs, or is a likely complication, when the echocardiogram probe is placed to evaluate cardiac function before removal. **Description:** Heparin is most commonly used for anticoagulation in this patient population, at our institution the goal is an ACT of 160 to 180 seconds while the device is in place. During the echocardiogram, the device speed is decreased to a flow of approximately 1 liter per minute, requiring higher levels of anticoagulation (ACT of approximately 200 according to our protocols). After assisting with a few of the transesophageal echocardiograms, the nurses realized that the echocardiogram probe was the source of actual and potential esophageal trauma. Instead of reaching high levels of anticoagulation before the probe was inserted, bedside nurses made the suggestion to insert the probe while the patient was at standard levels of anticoagulation, then deliver a small bolus of heparin to achieve the desired level of anticoagulation. Due to the paucity of literature that is available on the CentriMag system, no guidelines could be reviewed, so after a risk-benefit analysis, the practice was adopted. A protocol for the CentriMag was developed, with this practice included. To ensure that the practice was followed, the intensivists who perform the TEE were included in discussions regarding the anticoagulation methods and probe insertion times. **Evaluation and Outcomes:** After the suggestion was implemented, minimal esophageal bleeding was noted during ensuing echocardiograms. Practice changes were included in the standards of care and protocols for CentriMag patients. Adoption of this sequence of tasks results in safe, preventative care for these patients who cannot afford a severe complication. Minimizing bleeding and transfusions reduces unnecessary risk and cost, and improves patient outcomes. mcgug001@nc.rr.com

CS167 The 1-Minute Message: Providing Widely Applicable, Clinically Relevant Information to Large Numbers of Nurses Daily

Behr D; Exempla Lutheran Hospital; CO

Purpose: Hospitals generate massive amounts of information, and processes change quickly. The stakeholders of these changes want the clinical staff to utilize this information immediately! The 1-minute message (1MM) is a timely method of getting information to the clinical staff daily. **Description:** Two years ago, the Pharmacy Quality Committee was challenged with how to get the information generated from this committee to clinicians, and specifically nurses. We also recognized that most every work group in the hospital was faces this same challenge. Bedside nurses are very busy and their time is valuable. Following a brainstorming session we came up with the idea of a 1MM. The Clinical Managers readily embraced this concept. The 1MM would be printed weekly, and read

aloud twice daily to the staff during report and safety huddles by a charge nurse or team member. The idea was that all staff would hear this message multiple times throughout the week. Use of an egg timer was employed to demonstrate our commitment to be respectful of their time. 1MM criteria must be clinically relevant, widely applicable, and able to be spoken aloud in under a minute. The 1MM is published for distribution via email every Sunday, and kept on the unit afterwards for reference on a dedicated clipboard. **Evaluation and Outcomes:** Clinical staff is able to both perform and speak to 1MM content. We have published over a 130 1MMs since inception. This model of communication has provided access to clinical staff from a variety of departments and work groups, which in the past didn't feel they had the 'ear' of the nurse. Nurses verbalize they feel better informed. The 1MM has been integrated into the culture at Lutheran, and is now a routine part of report and safety huddles. behrd@Exempla.org

CS168 Overcoming the Barriers to Assessing for Domestic Violence in the Emergency Department

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Purpose: Simply asking about abuse can easily identify abuse to individuals who present to emergency departments. However, not all ER nurses are compliant in carrying out this expectation. Multiple initiatives were created to provide a standard of care and appropriate interventions for victims. **Description:** To improve compliance in assessing for domestic violence, staff education was provided. The new process was 3-fold. First, the nurses were asked to screen each patient with 3 questions to assess for domestic violence with poor nursing outcomes. Secondly, universal screening questions were printed on a typed sheet of pink laminated paper and placed in all treatment areas. The nurses were educated to use "scripting" to ask the question: "Can you answer 'yes' to any of these questions?" This method was useful when a spouse or visitor was present and unable to read the questionnaire. Finally, if the triage nurse was unable to address these questions on the computerized triage form, the screening questions automatically prompted the nurse doing the secondary assessment that this information was not obtained. Utilizing the electronic documentation system enabled nursing administration the ability to audit 100% of the patients in the ED in assessing compliance to this standard. **Evaluation and Outcomes:** Nursing compliance in assessing for domestic violence was monitored for 2 years utilizing an electronic documentation system. The new process was initiated in January 2006 and illustrated an increase in nursing compliance in assessing for domestic violence. Data revealed a compliance rating around 12% using preliminary education; however, postintervention compliance rating is holding steady around 85%, which increased compliance significantly. sumsit@med.umich.edu

CS169 Painting a Picture: Implementing Best Practice for Recruitment and Retention

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Purpose: This acute care medicine unit will be transitioning to a new location and managing progressive care patients in the next 12 months. In anticipation of this practice change we focused our energy this year on developing our work environment to be at its best. **Description:** Since 2003, our hospital and unit have participated in the National Database for Nursing Quality Indicators RN Satisfaction Survey. This survey is used to help guide decisions made by nursing leadership. Based on the yearly NDNQI RN Satisfaction Survey Results, the nurse manger and staff developed a plan to enhance their scores, with a focus on recruitment and retention. Strategies implemented included increased staff participation in the management of the unit, using the Healthy Work Environment standards and a shared governance model. They determined their yearly unit competencies and self-scheduling guidelines using IOM recommendations for patient and staff safety. They participated in formal team building activities to raise their RN-RN interaction scores. This year's annual retreat focused on skilled communication and self-care. To monitor, maintain and evaluate the plan, RN staff meet quarterly to review current status of interventions and actions, discussing opportunities for improvement and to stay the course. Staff recruitment strategies include proactive recruitment for future vacancies by engaging with the School of Nursing. **Evaluation and Outcomes:** Benefits seen with the implementation of the strategic plan have been: 1. Turnover at 0% for the past 4 quar-

ters. 2. 50% of the RN staff are certified ANCC Medical-Surgical Nursing Specialty Nurses. 3. Increase in RN-RN interaction score. 4. Implementation of a Shared Governance Model. 5. Staff actively demonstrating inquiry and use of evidence-based practice. ahawkins@mcvh-vcu.edu

CS170 Patient Mobility in the ICU: Transforming Nursing Culture and Tradition

Evans B; University of Rochester Medical Center; Rochester, NY

Purpose: ICU patients are at risk for physical and psychological deconditioning due to illness-induced reduction in mobility. Early intervention was undertaken in our MICU via implementation of a progressive mobility algorithm targeted at forestalling progressive deconditioning and body systems compromise. **Description:** Nursing tradition in our MICU has dictated that our patients rarely get out of bed. A time-sensitive observational study was conducted to determine mobility practices in our MICU. Findings demonstrated that patient positioning and documentation were areas for improvement. A literature search was performed to determine current evidence related to mobility, resulting in development of. a staff educational in-service. The next step was design and testing of an evidence-based mobility algorithm. An expert panel of MICU nurses was convened to offer feedback and to suggest modifications to the mobility algorithm. After several modifications of the algorithm, a pilot ICU mobility program was initiated in February 2007. An extensive staff education plan, based on current evidence, was developed. Content focused on appropriate documentation of patient positioning, as well as on physical assessment parameters such as stable hemodynamics, and pulmonary and neurological indicators. A data collection tool was developed, and weekly audits were performed to determine compliance with patient mobility practices. **Evaluation and Outcomes:** To date, mobility compliance rates have improved from 0% to 84%, sedation days decreased by 43%, and daily sedation interruption increased by 47%. Daily mobilization of patients is now a norm rather than an exception. An evolving culture change provided the opportunity to develop MICU Mobility Champions. A spread initiative has occurred, and standards of care across all of our adult ICUs have been expanded to include increased patient mobility. Barry_Evans@urmc.rochester.edu

CS171 Patient Screening in the ICU for MRSA

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Purpose: MRSA infection is a national problem that is common to many ICUs. Screening was formulated to identify patients who are carriers, to limit the transmission of the organism within the unit and be an indicator for compliance of hand hygiene and isolation techniques. **Description:** On May 2006, a point prevalance survey was conducted in the ICU and it showed 18% MRSA positivity rate. It was decided by the ICU multidisciplinary (MDC) team to initiate screening of all patients (except for known MRSA-positive patients) upon admission. The ICU MDC team members include physicians, nurses, pharmacist, and the infectious disease liaison nurse. Education of staff regarding the new protocol was done. Computer order entry logistics were addressed. Screening was done within 24 hours of ICU admission using a nasal swab culture. Results were obtained and positive patients were placed on contact isolation until discharge. Weekly rescreening (every Monday) of negative patients was also implemented. To promote compliance of obtaining nasal swabs amongst the nursing staff, the leadership team adapted the slogan of MRSA Monday and continued educational reinforcement is done. Quarterly results are reported in the ICU MDC meetings by the Infectious Disease Department and nursing staff is informed during staff meetings. **Evaluation and Outcomes:** Our results mirror the current literature; 85% of patients will be missed if we rely solely on clinical specimens. Hospital isolation days would have been missed thereby increasing potential transmission. Results are still being tallied regarding the rescreening data but early identification of positive patients has made the nurses more mindful of using isolation precautions and hand washing. c1964noel@yahoo.com

CS172 Providing Excellence in End-of-Life Care by Utilizing Two Comfort Care Order Sets

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Purpose: Caring for patients after the decision has been made to stop curative care or life-prolonging care is often called "Comfort Care." This care is by definition preceded by changing treatment goals, which can be

chaotic and disorganized. The inexperience of residents and nurses are also a factor. **Description:** In an effort to provide optimal and consistent end-of-life care, a multidisciplinary team in a large teaching hospital developed 2 end-of life comfort care order sets. The team consisted of advanced practice nurses, physician representatives from palliative care and critical care, a pharmacist and a respiratory therapist. The goal of the order set development was to facilitate symptom management in patients where life-prolonging therapies were no longer indicated. One order set is for patients who are in the ICU and the other set is for patients who are in general care. This poster will provide examples of the 2 order sets and demonstrate the similarities and differences in relation to where they are initiated. **Evaluation and Outcomes:** Introduction of these order sets included more consistent end-of-life care interventions as outlined in the 7 end-of-life care domains with particular emphasis on domain 5: symptom management and comfort care. In addition, there was development of an end-of-life care educational program for internal medicine residents and increased awareness of the role of Palliative Care Service. evenson.laura@mayo.edu

CS173 "PUPPIs (Pressure Ulcer Protocol Prevention Interventions) Prevent Pressure Ulcers," Decreasing Prevalence Rates

Zagari J; UPMC; Pittsburgh, PA

Purpose: Pressure ulcers have a negative impact on health care systems related to increased cost, increased need of skilled intervention and patient pain and suffering. According to the literature, 95% of pressure ulcers can be prevented. In 2006 prevalence rates were steadily increasing. **Description:** After reviewing the prevalence rates, skin care guidelines and evidence-based practice, the pressure ulcer protocol prevention interventions were developed by a multidisciplinary team which utilized the TCAB method. The PUPPI focuses on 2 patient populations: patients with rectal trumpets and patients that are identified as high risk for skin breakdown. All patients with a Braden scale < 16 were considered to be high risk for skin breakdown. There are a total of 5 interventions, thus, making it simple and easy for all staff to consistently follow. In addition, the health unit coordinator orders pillows weekly to ensure there are enough available to turn and position patients. The unit director and skin care representatives provided the inservices within a week. The PUPPIs were implemented beginning February 2007. Skin care representatives collected the data and reviewed with unit director monthly. **Evaluation and Outcomes:** NDNQI quarterly data for 2007 revealed that 63.64% of patients in the Medical Step Down Unit were at high risk for skin breakdown and the prevalence rate was 9.09%. The unit based PUPPIs were instrumental in identifying patients at high risk and providing interventions that would reduce costs, improve patient outcomes and quality care. zagarijl@upmc.edu

CS174 The Rapid Response Team and the Surviving Sepsis Campaign: A Synergistic Approach to Mortality Reduction

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Purpose: Combining a Surviving Sepsis Campaign (SSC) with development of a rapid response team (RRT) to implement a sepsis screening process provided synergism in improving survival. Early sepsis recognition increased, the number of non-ICU codes decreased and overall mortality was reduced dramatically. **Description:** The Institute for Healthcare Improvement has outlined a bundled approach to sepsis, which, when implemented, saves lives. The RRT and the SSC can each effect mortality reduction, but together may provide a synergistic improvement in survival. We initiated them sequentially and observed a dramatically reduced mortality. The RRT, implemented first, provided advanced assessment and intervention in averting codes, prevented unwarranted transfers to the ICU and facilitated early sepsis intervention. The success of the RRT provided a firm launching point for the SSC 18 months later. Twice daily sepsis screening in all patient care areas triggered a sepsis screen notification to the RRT, if warranted. A decision tree/process flow map guided collaboration between the RRT and the nursing units defining significant organ dysfunction and determining the need for RR activation. If the change in patient condition required intervention, the RRT was deployed to further evaluate the patient, communicate with the physician, initiate transport to the ICU and implement the sepsis resuscitation bundle. **Evaluation and Outcomes:** The decision tree for positive sepsis screens provided structure for RRT interventions. Frequency of sepsis in RR activations increased from 5% to 33% with implementation of daily screening. Sepsis recognition increased from 47% to 57% and mortality in

identified septic patients decreased from 51% to 35% over 6 months. Hospital mortality decreased from a 2.59% baseline prior to the RRT to 1.55% in the 2 quarters post implementation of the SSC. TLie4@aol.com

CS175 Rapid Response Teams: Improving Patient Safety and Increasing Staff Collaboration

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Purpose: Studies indicate patients often exhibit signs and symptoms of instability for some period of time prior to cardiac arrest. The rapid response team (RRT) was developed to assist in the early assessment and intervention for patients who appear to be deteriorating before an adverse event. **Description:** An RRT program was implemented after a thorough review of the evidence-based literature. The primary reasons for its development were to enhance patient safety and staff collaboration. The fundamental problem addressed was the failure to rescue patients prior to a cardiac arrest. The RRT is a team of clinicians who bring critical care expertise to the patient's bedside or wherever it is needed. The RRT is composed of a critical care nurse, a respiratory therapist, and a hospitalist physician. A documentation form was developed using specific criteria and the SBAR approach. Education of staff was done using multiple approaches including inservices, a computer-based learning module and flyers. A questionnaire regarding staff satisfaction of the RRT was developed and implemented. **Evaluation and Outcomes:** The RRT was accepted immediately by all of the nursing staff. The staff surveys show an increase in staff satisfaction and increased sense of collaboration between the critical care nurses and the med/surg nurses. The use of the RRT has increased while the incidence of cardiac arrest events on the med/surg units has decreased. The most common reasons for calling the RRT are for respiratory problems and hypoglycemia. shelley.williamson@rivhs.com

CS176 Reclaiming Our Priorities: Using Innovation and Creative Solutions an a Progressive Care Unit

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Purpose: The Abdominal Transplant Progressive Care Unit developed a process that empowered the nursing staff to remove barriers to care, control the environment, and manage patient care. An additional goal was to decrease voluntary nurse turnover, decrease the cost of orientation and retain specialty nurses. **Description:** Following a 2-year period of increased voluntary RN turnover (16.45%) and orientation costs to the unit of approximately $640,000, the nursing staff on this unit was challenged to explore work redesign and creative solutions to increase staff, physician, patient and family satisfaction. Additional goals were to promote staff comfort level with multiple transplant service lines (kidney, pancreas, liver, small bowel, and multi-visceral), decrease nursing staff frustration generated by high acuity workload in low acuity support system, and increase physician confidence through staff development. Recent projects include noise reduction through the scheduling of "Quiet Time", using a "Yacker Tracker" to measure noise levels, and changing telemetry batteries daily to decrease nuisance alarms. Patient discharge planning expanded to include discharge classes, nurse-supervised daily self-medication and a "ring of knowledge" for common transplant medications. As unit problems are identified, the nursing staff begins to "Plan, Do, Study, and Act" to use creative solutions to resolve patient and unit issues. **Evaluation and Outcomes:** Voluntary nurse turnover decreased to 5.9% (2006) and 7.8% (2007) through the redesign of work processes. Orientation costs decreased to approximately $280,000 - a savings of $360,000. This unit continues to be designated as an "innovative unit" where "tests of change" are evaluated. dalesandroka@upmc.edu

CS177 The Rehab Starts Here: Rehabilitation of the High Cervical Spinal Cord Injury Begins in the ICU

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Purpose: To achieve an optimal outcome for the acute high cervical spinal cord injured (HCSCI) patient, it is imperative for staff to work together with a swift, goal-oriented, interdisciplinary team approach. The magnitude of life-altering events experienced is eased when the patient is an active participant in their own healing process. **Description:** While it remains true that the focus, scope and ability of an ICU differs greatly from a rehabilitation unit, for the HCSCI patient it is important to combine forces and work toward common goals. Prompt onset of rehab-focused care plans while in the ICU compels early incorporation of therapies previously delayed until arrival to a rehabilitation unit. At

Harborview Medical Center, we have assembled an experienced, interdisciplinary team who, together with each patient's input, design individualized care plans. Respiratory therapists, physical and occupational therapists, nurses and medical staff work together toward the common goal of optimizing autonomy in the early stages while continuing to provide successful recovery for the acute HCSCI patient. The uniquely specialized ICU and Rehab teams benefit from combining their efforts, allowing aggressive outcome-based therapies to begin at admission. The ICU nurse's involvement is crucial in coordinating ICU-level care while actively promoting rehab-focused goals for the patient, such as breathing with minimal ventilatory support, communicating, increasing mobility, and addressing the mental health of the patient. **Evaluation and Outcomes:** Time spent recovering in ICU is best utilized when it coexists with patient-driven, interdisciplinary team-guided rehabilitation. This allows the patient to reclaim "self," has positive effects on the patient's unique perspective, and yields successful and rewarding outcomes. While nearly impossible to compare one patient's personal experience to another's, when providing an individualized approach for each patient. kfree63@hotmail.com

CS178 RESQ Me! Your Time Is My Brain! Using a Rapid Response Team for Inpatient Stroke Alert

Broughton S, Wright C, Foster B, Hayden M; Exempla Lutheran Medical Center; Wheat Ridge, CO

Purpose: Upon receiving Primary Stroke Center Certification, our community-based hospital needed to meet the Get with the Guidelines-Stroke standards for emergency room patients as well as for the inpatient population. **Description:** The challenge was to meet the standard of "door to CT within 10 minutes." Since inpatients are already in the door, the standard for inpatient strokes is interpreted as time of symptom onset/recognition to CT within 10 minutes. There were perceived and real barriers to meet this standard, including lack of 24/7 in-house neurology attendance, potential delay in physician call back, hospitalists contractual agreement / workload to cover patients not assigned to their service, and lack of medical residents as members of the stroke team. The solution was to have the Rapid Evaluation Squad (RESQ) respond to inpatient stroke alerts. The RESQ RNs are specially trained to assess for stroke symptoms and correct symptoms that may mimic a stroke. If a stroke is suspected, the RESQ RN calls an "inpatient stroke alert" and uses the collaborative order set to order a CT of the head without contrast. As the CT scanner is cleared, the RESQ RN facilitates a "RESQ call to CT within 10 minutes" and transfer to the neurology unit. The primary RN notifies the attending physician to relay Stroke Alert symptoms, patient transfer, and contact information for the radiologist and on-call neurologist. **Evaluation and Outcomes:** Inpatient Stroke Alert data is collected and reviewed monthly. Data is entered into the Outcome Sciences Database. The standard of RESQ call to CT within 10 minutes is consistently met. The RN initiated collaborative order for of the CT head, while awaiting further physician direction saves time and brain. E-mail: broughtons@exempla.org

CS179 The Role of a Critical Care Nurse in the Organization and Management of an Early ICU Mobility Team

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Purpose: The critically ill patient is at risk for immobility-related complications. Time constraints due to increased technology and limits in staffing have lowered the priority and time available for basic mobility. We designed and implemented a new Critical Care Mobility Nurse position. **Description:** Our Early ICU Mobility Protocol focused on early passive range of motion of all joints, and then active therapy when the ICU patient regained consciousness. A Mobility Team, consisting of a Critical Care Mobility RN (CCMN), a Physical Therapist and 2 Nursing Assistants, was created to provide early mobility to ICU patients. The CCMN was responsible for patient screening, enrollment into the project, and patient assessments through the treatment periods. The project was in place 7 days a week during the day shift and patients were treated 3 times per shift. The CCMN assumed many roles: team leader, caregiver, educator, project manager, and patient advocate. As a unique element in critical care nursing, the CCMN's expertise in management of the critically ill, ventilated patient, independent of a traditional bedside assignment, allowed multiple patients to be engaged with the mobility protocol. The CCMN also provided a unique continuity of care that spanned both ICU and outside of the ICU. This continuity of care, not provided by any other

physician group or nursing unit, was a factor not only for direct patient care but also for families as the patient moved from the ICU to other care areas. **Evaluation and Outcomes:** 330 patients were enrolled, with 165 patients assigned to the Protocol group and 165 to the Non-Protocol group upon ICU admission. Both groups were similar in age, sex, acuity and mortality. Compliance to the treatment protocol was high. There were no adverse outcomes. The project demonstrated a significant reduction in both ICU days and hospital days. The delivery of early mobility, managed by an independently functioning RN is safe and effective. cthomps@wfubmc.edu

CS180 Spring Training in the Big Leagues: Making the Most of Your Team

Bryan C, Duncan L, Newman M, McBroom K; Duke University; Durham, NC

Purpose: The fast pace and acuity of progressive care units significantly impact opportunities for staff education and development. Novice nurses need opportunities to acquire unit specific skills and knowledge and also desire constructive relationships with coworkers and integration into unit culture. **Description:** Person Available for Learning (PAL) was a program created to allow the new nurses to enhance the knowledge they acquired in school and orientation. PAL is based on a one-to-one relationship between a novice and experienced nurse. Working together they seek to assist the new nurse in creating a sound knowledge base and achieving assimilation into the unit. They work together to share an informal and ongoing exchange focusing on both education and fun. In addition to being available as an informal resource, the experienced nurse audits charts enabling discussions on documentation requirements and compliance. Monthly meetings occur in order to assess critical thinking skills and priority setting through the use of clinical scenarios. Further discussion points may include diagnoses, clinical and community resources, or any issues that may arise. Personal and professional opportunities to develop the relationship are encouraged. The comfort level of the new graduate with regard to specific diagnoses and patient care was measured prior to starting the program. **Evaluation and Outcomes:** Thus far, we have seen positive outcomes with PAL since its inception several months ago. New nurses achieved a higher degree of proficiency because of the nurturing environment. The program has been well received by both the new and experienced nurses and new nurses feel they are an integral part of the unit and are more committed and dedicated to patients, coworkers and the institution. bryan023@mc.duke.edu

CS181 Staff Nurses and Nurse Practitioners Collaborate: The Texas Two-Step Sepsis Screening Process Saves Time and Lives

Hanna L, Stokes F, Moore L; The Methodist Hospital, Houston, TX

Purpose: The purpose of this patient safety initiative was to decrease the mortality of Surgical Intensive Care Unit (SICU) patients through earlier identification of sepsis by completing a more frequent and effective sepsis screening process. **Description:** Septic shock is the leading cause of multiple organ failure and mortality in non-coronary intensive care units. Unfortunately the rate of sepsis is increasing, and despite tremendous basic and clinical science research efforts its mortality remains high. As bedside nurses and other team members focus on multiple priorities and tasks, early signs of sepsis are often missed and interventions are delayed. In conjunction with the Surviving Sepsis Campaign, our hospital implemented a sepsis screening plan using a standardized tool. This tool included data and assessment parameters which were not readily available or where difficult to abstract from the medical record; therefore, sepsis screening in the SICU was inconsistently performed. Staff frustration led the SICU multidisciplinary team to create a new 2 level screening tool to be completed every 12 hours implemented in May of 2007. The bedside nurse evaluates the patient for systemic inflammatory response syndrome (SIRS) criteria and if positive, a nurse practitioner completes a second level screen to evaluate for a source of infection and the presence of organ dysfunction. When both screens are positive, a physician is contacted for implementation of the sepsis protocol. **Evaluation and Outcomes:** With the new tool, sepsis screening is completed 91% of the time (up from 60%). Nursing time has decreased from 5 minutes per screen to less than 1, and the second level screen provides a more accurate picture for the physician. Sepsis mortality has decreased from 35% (2006) to 24% (up to July 2007). Furthermore, via continued involvement of the bedside nurse, SIRS criteria are better understood and early recognition occurs between screenings. lhanna@tmhs.org

CS182 Strategic Therapeutic Outcomes in the Management and Prevention of Sepsis (STOMP Sepsis)

Schmidt C, Espejo J; St Joseph's Regional Medical Center, Paterson, NJ

Purpose: The STOMP Sepsis goal is to reduce mortality of patients with severe sepsis and septic shock. Evidence-based recommendations from the Surviving Sepsis Campaign were organized into a care bundle to assist clinicians in resuscitation and management of patients with severe sepsis and septic shock. **Description:** After reviewing evidence-based recommendations from the Surviving Sepsis Campaign (SSC), a care bundle with an implementation toolkit was designed by our multidisciplinary STOMP Sepsis Team. The first part of the toolkit is kept on the critical care nurse's clipboard and includes the following tools: STOMP Sepsis guideline, STOMP Sepsis flow chart/algorithm, STOMP Sepsis guideline checklist, and APACHE II scoring guide. The second part of the toolkit is placed in the medical record and includes the following tools: pre-printed physician's orders, guidelines for treatment, and dotrecogin alfa (activated) worksheet and order form. Process changes, such as availability of antibiotics in the Pyxis machine, central insertion kits, creation of a sepsis blood panel, and a nurse-driven glycemic control protocol were rolled out. The care bundle with the toolkit was introduced to the nursing and physician staff throughout the adult care areas of the Medical Center. Education was done by members of the team, and Staff RNs served as unit-based champions. **Evaluation and Outcomes:** Compliance with all aspects of the resuscitation bundle improved from 7% to 25% (SSC benchmark=11% and the management bundle fluctuated from 28% to 37% (SSC benchmark=18%. Most significantly, we have seen a reduction in the mortality rate from 63% to 28% for patients with severe sepsis and septic shock. The toolkit is instrumental to increase compliance of initiating the sepsis bundle to improve quality of care and patient outcomes. KEN_SCHMIDT@att.net

CS183 Therapeutic Hypothermia: A Multidisciplinary Protocol for Neonatal Hypoxic Ischemic Encephalopathy

LaBrecque M, Casey D, O'Reilly D, Soul J, Hansen A; Children's Hospital Boston; MA

Purpose: Two large clinical trials demonstrated that therapeutic hypothermia reduced the risk of death or disability in infants with neonatal hypoxic ischemic encephalopathy (HIE). We developed then implemented a time-sensitive whole body hypothermia protocol in our neonatal ICU as a treatment for HIE. **Description:** HIE occurs at a rate of 1 to 2 per 1,000 term live births and remains an important cause of neurodevelopmental deficits in childhood. Approximately 20 neonates with HIE are admitted to our NICU yearly. Following an evidence-based review of the literature, 2 NICU clinical nurse specialists worked collaboratively with the medical staff to develop a protocol for therapeutic hypothermia that could be initiated within 6 hours of life. The most benefit is seen if initiated prior to the delayed phase of injury in HIE, the neuroprotective effects of cooling decrease over time. Given the time sensitive nature of this treatment, our protocol was developed to optimize identification of potentially eligible patients, expedite transport from referral facilities, complete a 20 minute EEG evaluation, and initiate treatment within 6 hours of life. Staff training included web-based education, equipment demonstration, and multidisciplinary staff meeting presentations. Protocol implementation was facilitated by creation of standardized order sets, resource manuals, protocol checklists and identification of nursing and physician resources. Information pamphlets for referral hospitals and parents of eligible patients were developed and distributed. **Evaluation and Outcomes:** We were successful in developing and implementing a time-sensitive whole body hypothermia protocol in our NICU and community for the treatment for HIE. Prior to this protocol, the single intervention for HIE was supportive care. Timely and safe initiation was achieved for this treatment and ongoing evaluation of the impact of this intervention is in process. michelle.labrecque@childrens.harvard.edu

CS184 Therapeutic Hypothermia After Cardiac Arrest

Heron M, McKenney M; Emerson Hospital; Concord, MA

Purpose: To improve the neurological outcomes and mortality of patients with cardiac arrest who remain comatose after the return of spontaneous circulation with induced hypothermia for 24 hours. **Description:** After reviewing evidence-based practice articles a statement of policy was implemented for successfully resuscitated cardiac arrest comatose patients in order to improve outcomes. Cardiac arrest with

widespread cerebral ischemia can lead to severe neurological impairment. Clinically induced therapeutic hypothermia has been shown to improve the neurological recovery and outcomes after ventricular fibrillation or ventricular tachycardia arrest. The goal of therapeutic hypothermia is to achieve a core temperature of 32°C to 34°C and maintain that level for 24 hours and rewarm the patient slowly to avoid complications. Intensive bedside critical care nursing is needed to administer sedatives, analgesics and neuromuscular blockade agents to achieve moderate to deep sedation levels to promote mechanical ventilation and prevent shivering. Temperature and vital signs are monitored every 30 minutes until target temperature is achieved, then hourly monitoring for the duration of therapy. Continuous monitoring of cardiac arrhythmias, electrolyte imbalances and skin care assessments are done every hour to prevent complications. Emotional support and ongoing education assists family members of patients to understand the process. **Evaluation and Outcomes:** A small group of patients were evaluated after implementation of therapeutic hypothermia. A standard physician order set was approved to implement therapeutic hypothermia and re-warming after cardiac arrest. Based on these outcomes, increased awareness through education and communication were discussed with multidisciplinary team members in order to consider therapeutic hypothermia in all cardiac arrests. mheron@emersonhosp.org

CS185 A Time to Live, A Time to Die: End-of-Life Case Discussions

Babb B, Plouffe D, Jodka P, Stadnicki B, Doubleday N, Lusardi P; Baystate Medical Center, Springfield, MA

Purpose: Prolonging the life-dying process with inappropriate measures is one of the most profoundly disturbing experiences nurses face. While research findings suggest that nurses have a limited role in end-of-life (EOL) care planning, expert nurses frequently question goals of care. **Description:** Our EOL case discussions, a variation on the regional Schwartz Center Rounds, create a forum in which an EOL case creating unease for caregivers would be presented. Quarterly our PCC selects a moving EOL case that has created distress for families, patients, and/or staff in the unit. After posting the time/date of the forum and alerting involved staff, the patient's primary nurse and our intensivist co-present the case for discussion; notes are taken. At the following PCC meeting, we analyze emerging themes from this and previous cases. Through analysis, predominant themes have emerged, such as "How do we deal with families that want everything done despite the fact that the patient is dying? What are the cultural differences of grieving families? How do we deal with a colleague's death in the ICU?" These themes have "demanded" educational/support mechanisms for unit staff, which we have instituted. **Evaluation and Outcomes:** We have had 6 well-attended EOL case discussions. Attendance from both day and night staff has been enthusiastic. With the evolving themes, the PCC has instituted classes for nurses and house staff on end-of-life issues, techniques in communication in EOL situations, information sharing on our "Comfort Guidelines on Withdrawal of Support." Most importantly, this forum has created a safe environment for staff to discuss EOL issues and feelings. betty.babb@bhs.org

CS186 Use of Technology in Improving Pneumonia Core Measures

Lindsay M, DeMarco F; Duke University Hospital, Durham, NC

Purpose: A computerized bed tracking system was used to identify patients who presented to the emergency department with symptoms of suspected pneumonia. The earlier rapid diagnosis would assist with improving compliance of the door to antibiotic timing for pneumonia patients. **Description:** In an attempt to improve door to antibiotic timing, a process was initiated in the triage area for earlier identification. The emergency department utilized a computerized documentation system that included a tracking board. The tracking board was used to flag patients in the waiting room that had signs or symptoms of suspected pneumonia. Those included: fever over 101°F, respiratory rate over 28, heart rate over 110 bpm, cough productive or nonproductive, fevers or chills, and shortness of breath. If the patient presented with one of those complaints, a chief complaint of suspected pneumonia was incorporated into the tracking board and highlighted magenta color to bring attention to this complaint. Magenta prompted the nurses to draw bloodwork, blood cultures, order stat chest x-ray which relayed the complaint to the radiology department, place an intravenous line and notify the physician the patient was suspected pneumonia. A radiologist, who read the x-ray, notified the attending physician of results that were positive for pneumonia. Antibiotics were administered based upon positive x-ray. Additions to the tracking system

included physician labeling the columns with abx/ ordered so the nurse was aware the patient had antibiotics ordered. **Evaluation and Outcomes:** Patient safety committee tracked the results to verify improvement in door to antibiotic timing once this process was initiated. The process changes resulted in a significant improvement. Initial compliance fluctuated between 75% to 86%. The results dramatically improved moving the department to the top quartile at 97%. Staff and physician satisfaction also improved due to improved process design. Mary.Lindsay@Duke.edu

CS187 Using Citrate As an Anticoagulant During Continuous Renal Replacement Therapy (CRRT)

Boswell C; Virginia Commonwealth University Hospital, VA

Purpose: Due to increased incidence of heparin-induced thrombocytopenia, our organization abandoned the use of heparin in CRRT circuits. However, this change resulted in lost treatment time due to filter clotting. A team was formed to develop a protocol to anti-coagulate CRRT circuits using sodium citrate. **Description:** A review of the literature demonstrated that citrate has been used extensively in blood banking and that other organizations had successfully implemented citrate anticoagulation protocols. The team developed a protocol to simultaneously infuse a 4% solution of sodium citrate before the CRRT filter and a calcium chloride solution to the patient. The citrate infusion provides anticoagulation to the CRRT filter. The calcium infusion reverses the anticoagulation effects of citrate in the patient. The protocol was piloted in one ICU. The pilot study revealed that more details were needed to effectively manage the titration of sodium citrate and calcium. The team developed titration tables that were similar in format to other titration tables already in use in the organization. After another pilot period in the initial ICU, an organization-wide policy was developed and approved by the Critical Care Committee and the Critical Care Nursing Practice Council. An education program was developed for the remaining ICUs, including the Pediatric ICU. **Evaluation and Outcomes:** The sodium citrate anticoagulation protocol was successfully implemented in all ICUs except the transplant ICU. Citrate is not used consistently in liver transplant patients because they tend to develop metabolic alkalosis. CRRT filter life has dramatically increased, with many circuits lasting until circuit replacement is required at 72 hours. This has resulted in increased renal replacement treatment time for patients. cboswell@mcvh-vcu.edu

CS188 Using Human Patient Simulators (HPS) to Increase Knowledge and Confidence in Recognition of and Response to ECG Rhythms

Brown D; The University of Akron, College of Nursing; Akron, OH.

Purpose: Novice critical care nurses and nursing students identify ECG recognition and treatment as one of the most difficult aspects of critical care nursing. The proficiency level in this area by the bedside nurse can have a serious effect on the patient's outcomes. **Description:** The setting of a non-threatening, no patient risk lab as a learning environment, makes simulation techniques conducive to learning with lower levels of stress and higher levels of continuity among learners that can not be possible when depending on random clinical experiences among live patients. Clinical scenarios were developed to mimic common patient situations that require quick nursing recognition and response and applied to a HPS in a laboratory setting. Following didactic presentation of specific ECG rhythms and discussion of treatments, these clinical scenarios were played out with participants asked to respond to the HPS as a "real patient". Each week a different group of rhythms were discussed, building in complexity, and ending the final session with a mock code scenario at the end of week 5. Model medications, actual defibrillators, airways, IVs and documentation forms were utilized to make the experience as close to reality as possible. The participants were asked to complete a measurement tool to evaluate their perceived self-confidence and ECG-related knowledge both pre- and post-simulation. **Evaluation and Outcomes:** Mean scores of each item measured showed significant increase from the pre-simulation scores compared to post-simulation scores. This would indicate a significant positive effect among confidence and potentially knowledge levels in relationship to clinical reasoning in conjunction with ECG rhythms. Positive qualitative data was also gathered from participants indicating this method as a desirable teaching tool. dbrown1@uakron.edu

CS189 Using In-House Resources to Decrease Door-to-Balloon Time in STEMI Patients Admitted During Off-Shifts

Rockey W, Smith MA, Hollis S; Exempla St. Joseph Hospital, Denver, CO

Purpose: The goal was to use in-house resources to ensure the opening of the CV lab continued even when external factors kept the team from arriving without delay. **Description:** The cardiac cath lab (CV lab) unit, while working to meet the ACC/AHA guideline of 90 minutes door-to-PCI/balloon time for acute STEMI (ST-elevation myocardial infarction) patients, identified a barrier to meeting this life-saving goal. On-call CV lab staff can encounter a number of external barriers, like weather or traffic, when trying to get to an emergent procedure when the hospital is located in the heart of a major metropolitan area. The plan started with an existing high-level team relationship between the CV lab and the in-patient post-intervention telemetry unit (4S). Each charge nurse on 4S received one-on-one training with CV lab staff to the initial steps of opening and setting up the cath lab for an emergent procedure. A resource book was created to orient the staff as well as to be used later as a step-by-step "how to." This book included a checklist and detailed photos of each step as some staff could be required to do the set-up infrequently. A real-time evaluation tool was created and rapid follow-up on identified issues was completed. **Evaluation and Outcomes:** Data show decreased door-to-balloon time for emergent STEMI patients. Goal of 90 minutes was met an average of 62% before initiation and increased to 81% for the 6 months since initiation. CV lab on-call staff felt great relief with set-up work completed when their arrival to the hospital is delayed. 4S staff felt a bigger part of the lifesaving national goal. Barriers have been identified and solutions have been created. rockeyw@exempla.org

CS190 Utilization of a Pathway-Based Reporting Tool for an Efficient Handoff Communication in a Telemetry Unit

Hayes C, Santos T, Lansberry N; University of Washington Medical Center; WA

Purpose: Underutilization of the clinical pathway and inconsistent communication of patient needs during handoff prompted creation of a pathway-based reporting tool. Goals included improved communication between shifts of patient progress, increased nursing satisfaction and decreased length of stay. **Description:** The written narrative handoff report among nurses in our telemetry unit was inadequate to communicate progress and barriers to discharge for cardiac surgery patients. A staff nurse and cardiac surgery nurse practitioner developed a 2-part reporting tool in April 2006. The reporting tool was designed to reflect the continuum of the cardiac surgery clinical pathway. One page displays patient information such as date of surgery, pertinent medical history, discharge planning needs and barriers, and care norms for cardiac surgery patients. A second page organizes the standard assessments, nursing care, and expected progression of recovery per postop day based on the clinical pathway. Since key assessments and outcomes specific to the postoperative day are marked systematically, the tool streamlines workflow at the beginning of the shift and facilitates handoff at the end of shift. It also has a column for shift-to-shift write-in entry by nurses. The reporting tool facilitates assessment of patient progress and development of the daily plan of care, including referrals to other disciplines. It also aids the float or novice nurse in understanding the postoperative plan of care. **Evaluation and Outcomes:** An informal survey of new nurses, float nurses, and experienced nurses supported that the reporting tool improved communication of patients' needs to other shifts, and increased knowledge of the expected clinical pathway, particularly for new nurses. Average LOS for uncomplicated cardiac surgery patients has improved. chambern@u.washington.edu

CS191 Utilization of Simulation Technology During Mock Code Training in the ICU

Lester D, Jackson C, Masse E; Children's Hospital and Regional Medical Center; Seattle, WA

Purpose: A Code Blue in the ICU is an intense and stressful intervention for all involved. In order to provide the best possible outcomes simulation based education was instituted to challenge and enhance staff member's clinical and decision making skills during realistic patient care scenarios. **Description:** The ICU has 8 training days throughout the year in which all staff are required to attend. Previously one of the stations had been "Mock Code." In the recent years we have had access to a Simulation Infant within our institution and had not offered this benefit to all of our staff. We began by researching the most common emergent situations in our ICU's and developed inclusive scenarios to address learning needs. We met with the simulation technician to develop a plan to move large groups of ICU staff through this training in the most optimal environment.

The bedside was set up in a realistic manner to provide as real a setting as possible. Staff had no prior knowledge of the scenario, were divided into small groups and assigned roles common to their individual role in the ICU. They were provided a brief overview of the baby including the realistic anatomy and clinical functionality and after this point the scenario would begin. Throughout the year all staff in the ICU will have had access to practice emergency treatment of an infant patient. Staff received real time feedback and answers to questions that arose instantaneously. **Evaluation and Outcomes:** At this period in time success has been measured by providing each staff member with an evaluation tool for this particular station. Despite the high intensity of simulation-based training all staff responded to continue to utilize this tool to enhance their comfort in a code situation. Since simulation training was begun staff have verbalized their knowledge pertaining to Code Blue has been enhanced ultimately improving patient care.
deborah.lester@seattlechildrens.org

CS192 A Visit to the Neuro ICU: Development of a Book to Facilitate Visits by Young Children

Hanley J; University of Michigan Medical Center; Ann Arbor, MI
Purpose: A level I neurosurgical ICU often had critically ill patients who were parents. Often, length of stay was prolonged and sometimes resulted in death. A nursing initiative was undertaken to facilitate children's visits to the ICU and improve patient and family satisfaction. **Description:** In conjunction with a more open visitation policy, the question arose as to how to help staff deal with children visiting in the intensive care unit. Staff had fears about how children would react to the ICU environment. Evidence-based practice was reviewed and a book entitled, " A Visit to the Neuro ICU," was written by a staff nurse. This book contains information about what a child visiting the intensive care unit will see, hear, feel and touch when they come to visit a loved one. It provides reassurance for caregivers and children and informs them about what to expect when they come to visit. It also ensures that even though his or her loved one may look different or be unable to talk, they are the same person inside and will be able to hear and enjoy the visit. The goal of the book was to provide caregivers with a framework for age appropriate education. A child life therapist reviewed the book to ensure developmental appropriateness. In-services was performed and a survey was given to staff and families after the book was used to evaluate its effectiveness. **Evaluation and Outcomes:** The survey tool used a Likert scale to measure 5 factors for families and 6 factors for staff to gauge comfort level with the book and if it positively influenced pediatric coping. The outcomes were that the book increased staff comfort level with children visiting in the unit, has been a positive tool for patients and families, and eased fear among children while helping to facilitate coping mechanisms. jmgb@med.umich.edu

CS193 "Virtual" CCU in the Emergency Department for STEMI Patient Care

Benz J; St. Anthony Central Hospital; CO
Purpose: Attention to time delays has been the hallmark of improving care for the ST elevation myocardial infarctions (STEMI) patient care. brief emergency department (ED) times resulted in less patient understanding, less cooperation with the post procedure care and greater denial about the diagnosis. **Description:** We have an active Acute Myocardial Infarction Clinical Effectiveness Team. We developed a subset; a nursing Process Improvement Team of ED and CCU nurses to work on the solutions to our concerns. A list of all patient care interventions to be completed for the STEMI patient was developed and then prioritized. It became clear that the presence of an active CCU nurse caregiver could facilitate outcomes. The STEMI would be paged to CCU nurse, cath lab team and interventional cardiologist simultaneously. The CCU RN could be in the ED almost immediately. The CCU nursing care and ED nursing care had different priorities. The interventions on the patient preparation checklist were divided and performed by the most appropriate nurse. Priorities for the CCU nurse were patient education, expectations following the heart cath/intervention and transport to the cath lab. The ED nurse placed IV catheters, drew labs, completed the assessment, reviewed the physician orders and documented. The checklist will become part of the permanent medical record soon. **Evaluation and Outcomes:** The new "Virtual" CCU in the ED resulted in shorter ED stays, less hand off reports since the CCU nurse was present during care, improved patient education, improved understanding of the care process by the patient and continuity of care. Patients reported to be at ease to see the same nurse. The cath lab was relieved of

"patient pick-up." The cardiologist expressed satisfaction with the completion of all nursing care interventions in the ED. juliebenz@centura.org

CS194 When Do I Take the Pink One? Clarifying Discharge Instructions

Bryan C, Bride W, Duncan L; Duke Hospital; Durham, NC
Purpose: Rapid turnover of patients and detailed discharge teaching can lead to patients having less than desired understanding of discharge instructions. Phone calls to our progressive care unit regarding discharge instructions prompted the need for readily available information. **Description:** In conjunction with unit leadership, a decision was made to purchase copier machines and place them at the front desk in close proximity to the unit clerk. Upon discharge our unit clerk copies the discharge instructions and the papers are placed in a notebook. The notebook is kept in a central location, near the phone and readily available for use by staff when patients or family members call back to our unit with questions. These notebooks are kept updated and the forms removed after 2 weeks. In addition the notebook offers an opportunity to review documentation for compliance. The information is audited on a regular basis for compliance and results are then available for dissemination by the manager and quality improvement. A simple solution has achieved not only the intended outcome but also the opportunity to improve documentation. **Evaluation and Outcomes:** Patients are now efficiently and accurately assisted with clarification on follow-up appointments, signals for action and medications. Having clear-cut information at our fingertips has proven to be especially helpful during nights, weekends and holidays. The discharge notebook enables our staff to reduce potential patient fears, mishaps and confusion as well as promote customer satisfaction. bryan023@mc.duke.edu

CS195 "Yikes! A New Grad in the PACU?" Creating a Healthy Work Environment Through True Collaboration

Roberson A; Virginia Commonwealth University Health Systems; Richmond, VA
Purpose: The postanesthesia care unit (PACU) can be an anxiety-producing environment for a new nursing graduate to orient to and develop initial competencies. Our goal was to develop a collaborative orientation plan with the pediatric and adult intensive care units to support our new graduates' orientation. **Description:** Our immediate assessment of our new graduates' learning needs revealed that since our patient population included the age span between the neonate and the older adult, we would need to illicit support from our pediatric ICU and several adult ICUs, including the medical respiratory, surgical trauma and cardiac surgery units. Our initial discussions with the educators from these units emphasized the impact this collaborative effort would have on the new graduates' orientation and patient outcomes, specifically, optimizing safety. These units provided an in-depth, 100% preceptored orientation program, lasting anywhere from 1 to 5 months. During this orientation period, the new graduate's progress was evaluated and documented through a "safety check" process, which was performed every 2 weeks to determine their readiness to progress on to the next orientation phase. This process included the preceptor team from the ICU and the PACU settings. Upon the new graduate's arrival to the PACU, the new graduate had satisfactorily completed several initial competencies and continued to complete unit-specific competencies that are supported by AACN and ASPAN standards. **Evaluation and Outcomes:** The new graduates successfully completed their initial orientation competencies and were able to demonstrate proficiency as an advanced beginner nurse, as evidenced through their individual evaluation process. These new graduates have progressed on to assume charge nurse responsibilities. Program evaluations revealed additional opportunities for collaborative endeavors with these ICUs to enhance patient transitions from the PACU to the ICUs. Aroberson@mcvh-vcu.edu

CS196 Zap Those VAPS! A PICU's Efforts to Eradicate Ventilator Associated Pneumonias

Derks A, Zalsman M, Wincek J; Helen DeVos Children's Hospital; Grand Rapids, MI
Purpose: In response to IHCI 100,000 Lives Campaign and CDC's standards to prevent nosocomial infections, a PICU adapted adult-based strategies derived from SCCM's Project Impact. Evidence-based strategies were introduced, implemented and evaluated for overall practice consistency and impact. **Description:** As part of a larger health system's initiative

to reduce VAP, the PICU worked with adult-based staff who were implementing strategies based on SCCM's Project Impact. Since the strategies were not specifically designed for the PICU population, the team queried the pediatric literature to develop a pediatric intervention bundle. In addition, the team needed to define pediatric specific clinical criteria to define a VAP in the pediatric setting. The bundle consisted of oral care, no saline lavage, GI prophylaxis, HOB up 30°, and early extubation. We worked with a vendor of oral care kits to obtain a new product designed for safe oral care in the pediatric intubated population. This product greatly enhanced our compliance with the oral care component of the bundle. Baseline data of VAP rates was determined from a 6 month retrospective chart audit. Baseline assessment of bundle compliance was done through observations and staff surveys. The implementation period began with extensive staff education followed by ongoing coaching. Reinforcement of protocol compliance occurred each day during multidisciplinary rounds. VAP rates were tracked and reported monthly. Bundle compliance evaluation occurred through periodic observations. **Evaluation and Outcomes:** The VAP rate baseline was 2.88%/1000 vent days. The VAP rate after 16 months of standardized practice was 1.3%/1000 vent days, well below the national PICU rate of 2.9%. Trauma patients who were intubated in the field represented 80% of the VAPs. Further study of this population is planned. Bundle compliance audits revealed high staff compliance in all 5 areas. alesia.derks@devoschildrens.org

Session B: Wednesday 8 am – Thursday 1 pm
Chapter Posters

CS301 Creating Chapter Diversity: Recruiting and Engaging New Graduate Nurses

Ray-Nichols S, Syphaseut A, Johnston M; High Point Regional Health System, NC

Purpose: New graduate nurses are bombarded with an overwhelming amount of information, new experiences, and expectations. We wanted to provide an oasis in which new nurses could be involved in the journey of bringing AACN's priorities to life. **Description:** We began our journey by reclaiming our priorities. We believe that new nurses are not only a priority, but also a resource of excitement and fresh ideas. We chose to focus our meetings on topics that are applicable to the newly graduated nurse. Topics such as: conflict resolution, skilled communication, meaningful recognition, and caring for the caregiver. These topics are meaningful to the newly graduated nurse with little experience in communicating with physicians or giving report to seasoned nurses. We began our journey by reaching out to nursing schools by inviting them to meetings and teaching a class on nursing professionalism. To promote interest in AACN we gave 2 NTI scholarships. Scholarship recipients were asked to become active members of the community committee serving as co-chairs of the committee. Additionally, we developed a welcoming committee to reach out to making all new members feel more welcome and promote equal footing of new and longer term chapter members. The welcoming committee fosters networking by engaging newly graduated nurses. We feel we are developing new leaders for nursing and AACN. **Evaluation/Outcomes:** We began our journey by reclaiming our priorities. We believe that new nurses are not only a priority, but also a resource of excitement and fresh ideas. We chose to focus our meetings on topics that are applicable to the newly graduated nurse. Topics included conflict resolution, skilled communication, meaningful recognition, and caring for the caregiver. These topics are meaningful to the newly graduated nurse with little experience in communicating. kimbojenkinsjohnsonbrown@msn.com

CS302 Interactive Meeting Notices With Pizzazz!

Jay M; Greater Austin Area Chapter, TX

Purpose: Communication with members and guests is a high priority for achieving increased membership, participation, and satisfaction with attainment of our chapter goals. With the variations in meeting times and places, it is imperative that we communicate in a timely, efficient manner. **Description:** Having tried several methods of notification with various degrees of success (e-mail, flyers, phone calls, postcards), we welcomed a new member's suggestion to try an electronic notification system using software that not only e-mails meeting and program information to everyone on our list, but also encourages their interaction by

e-responding, rsvp-style. They are invited to add their own comments, such as listing guests they plan to bring, their interest in the program topic, etc. Then the ongoing list of responders with their comments is accessible to other members to read as they respond. This builds a sense of community and anticipation of the event, and sparks friendships, greater interest in the chapter, and even shared rides. The whole package is presented in a very colorful, eye-catching format that triggers questions and conversation. The system is cost-effective in both time and dollars, practically maintaining itself. It also provides an accurate expected headcount. **Evaluation/Outcomes:** Since initiating this e-vite system, our attendance and interest in projects of the chapter have increased. The notices are a topic of lively conversation in the units. The whole process has also caught the attention of presenters and sponsors, who want to become involved and gain the noticeable exposure. We've struck a friendly note that's "inviting" in more ways than one! ljay@seton.org

CS303 Merging in the Northwest: How 2 Diverse Chapters Rallied to Become the Mountain to Sound Chapter

Mattox E, Kupchik N, Hutchinson M, Tanzi P, Long D, Lodzinski D; Mountain to Sound Chapter of AACN; WA

Purpose: The Puget Sound and Mount Rainier Chapter of AACN (serving different regions of greater Seattle) merged to become the Mountain to Sound Chapter in July 2007. These 2 chapters, each with diverse structure and culture, successfully came together over a year to create a stronger, more vital chapter. **Description:** Last year, each chapter struggled with obstacles to growth and sustainability. The presidents met and realized the challenges facing each were more similar than different. We shared common goals of offering exceptional local education, maintaining financial solvency, and contributing to our communities. The chapters held joint monthly meetings and offered a CCRN/PCCN review in Fall 2006, a financial success. More importantly, it brought together board members from each chapter and solidified the idea that a formal merger would result in a stronger and more vital group. There was a commitment to honoring the strengths and acknowledging the differences of the other. All decisions were discussed openly. We used formal polls to avoid disenfranchising members. We assessed compatibility by discussing values and visions for the future. Each group felt challenged by the other in a way that encouraged growth. Planning an educational event together built trust. Eventually we were unable to imagine a future without the other. We welcomed new board members and developed projects relying on continued collaboration. Lastly, we applied for the Excellence in Chapter Collaboration Award, which we accepted together at NTI 2007. **Evaluation/Outcomes:** In July 2007, we became the Mountain to Sound Chapter. Kicking off our new journey with a dinner, we welcomed AACN President Dave Hanson and past leaders from both chapters. Perhaps the most telling measure of our integration is that the tables at the dinner part of the meeting were no longer divided by chapter. The leadership positions have been distributed among members from both chapters. emattox@u.washington.edu

CS304 Ties That Bind: Community Service Does a Chapter Good! If We Can Do It, Your Chapter Can Too

Clarkson Y, Morris L, Johnson R, Sturgis G, Nelson M, Sanford A, Hunter J; Oklahoma City Area Chapter of AACN; OK

Purpose: Recent growth within the Oklahoma City Area Chapter of AACN made it essential that we develop a program to unite members and form new relationships. We developed and implemented a community outreach program in merely 1 year. This collaboration among members and local organizations was a success. **Description:** The development of the program began with the chapter forming a position on the Board for the purpose of community relations and development. Through the chapter's efforts we provided needed supplies, education and financial support along with several volunteer hours to a local program for homeless children and their families. We collected over 400 pairs of eyeglasses for the Lion's Club and also helped to provide flu shots to a local college free of charge. Our chapter has found a dynamic way to integrate student nurses and local members into community service. Through these partnerships we continue to seek out opportunities to provide services needed within the Oklahoma City community. This allowed us to promote critical-care nursing, demonstrated stewardship and leadership within our chapter and the Oklahoma City community. We promoted AACN's and our chapter's values through collaboration, mentorship, leadership and innovation in idea. The community outreach program served as a catalyst in our

chapter to form new relationships in our community and has allowed for more involvement from the newer generation of nurses. **Evaluation/Outcomes:** We found these endeavors as achievements in our first year of implementing the project. Through several accomplishments we were featured in the local *OKC Nursing Times* weekly newspaper. We continue to plan and develop more programs that will impact our community and contribute to a healthier tomorrow. Community service has done the Oklahoma City Area Chapter good! yclarkson@okheart.com

Sponsored by: Oklahoma City Area Chapter of AACN

CS305 The Value of the Beacon Award: Our Chapter's Effort to Promote Excellence

Hamilton R, Kupchik N; Mountain to Sound Chapter AACN; Seattle, WA

Purpose: Our goal is to educate critical care and progressive care units in our region about the benefits of the Beacon Award and mentor them through the journey. When faced with nursing shortages, increased workload, mandatory overtime, and managed healthcare, many nurses feel overworked and underpaid. **Description:** Presentations at NTI gave our chapter the insight and drive to promote the Beacon Award. Critical care and progressive care units can strive for this endeavor if given the information and tools. Our chapter started by creating a Beacon Award chair position. We piloted our ideas at a local hospital by giving a presentation to their leadership group. We also established a relationship with other Beacon units across the country to help us through this journey. Six months later, a Beacon Award reception was organized and over 10 area hospitals attended. After this event, numerous requests were received to attend staff meetings and retreats to educate staff nurses about the Beacon Award. Our chapter also supports nurses in certification; we offer CCRN review classes at a discounted price. Our Beacon chairperson has become a liaison and mentor to units applying for the award. **Evaluation/Outcomes:** Since the inception of our chapter Beacon Chair position, 5 critical care units have obtained the Beacon Award. Units that have received the award are serving as mentors to others beginning the journey. Our chapter will continue to educate the community about the Beacon Award because we believe every unit can strive for excellence. rhamilo@comcast.net

CS306 We've Seen Fire and We've Seen Rain—Chapter Program Emergency Preparedness

Stutzer-Treimel K; Chilton Memorial Hospital; NJ

Purpose: During 2007 the Northern New Jersey Chapter experienced 2 separate disruptions of programming that required rapid decision making and collaboration with local hospitals. **Description:** The Chapter partners with local hospitals, using them as sites for most of its programs. In February, a sterno being used to heat food sputtered and the tablecloth began to burn. The Board members immediately pulled the alarm, used the fire extinguisher and evacuated the participants from the room under the direction of the hospital staff. Nursing supervisors located another room and the program was completed. The transition was so smooth that on the evaluations, attendees expressed their thanks to the hospital and Board. Chapter leadership wrote a letter of apology and offered to pay for damages. The hospital declined reimbursement. The chapter will hold a program there in 2008. In April a Nor'easter caused massive flooding. The hotel site of Chapter's 2-day symposium had only 1 access road open and flooding had impacted many of the local nurses. Board members were polled and it was decided to reschedule. Every speaker, participant and vendor was called. Board members divided up the list to make calls, participants offered to call their colleagues and one of the Board who is a CNE asked her administrative assistant to make calls. The support of our hospital partners and cohesiveness of our Board members was critical. **Evaluation/Outcomes:** Partnerships with local hospitals and cohesive membership supports programming. These strong relationships served the membership well when emergencies arose. Now each program setting is evaluated for fire safety and all participants are apprised of fire exits. All Board member cell phone numbers are now part of the chapter information grid so that rapid, inclusive decision making can occur. kstrn@aol.com

Creative Solutions

CS307 Addressing the Nursing Shortage From the Ground Up: An Innovative Approach to Reaching Out to High School Students

Phipps B, Brostoff M; Children's Hospital Boston; MA

Purpose: By the year 2010, it is estimated that the demand for nursing will exceed the supply by 20%, a shortage of 250 000 nurses. In response to this, Children's Hospital Boston (CHB) nurses have developed a program designed to educate high school students about the benefits of a career in nursing. **Description:** The Student Career Opportunity Outreach Program (SCOOP) consists of school visits by CHB nurses, on-site hospital visits by high school students and their teachers as well as a summer internship program. Our curriculum highlights nursing as a professional, dynamic, and challenging career. High school students from a diverse background, in groups of 50, visit our hospital once a month throughout the academic year. This allows students the opportunity to experience what a typical day is like for a registered nurse in an acute care setting. A nursing panel presentation and tours of the hospital units illustrate the varying roles of nurses in the pediatric setting, including our 3 critical care units. Interested students apply for a paid 6-week summer internship program. This gives the students a first-hand look at what a career in pediatric nursing entails. Mentoring, observation and educational opportunities are part of the internship experience. **Evaluation/Outcomes:** SCOOP has helped change the image of nursing among Massachusetts' high school students. To date, 1370 students have visited CHB and 57 have completed the internship. Some of these students have been accepted into nursing programs. Teachers have gained a new appreciation for nursing and are better able to advise their students about nursing. Nurses at CHB gain a tremendous amount of satisfaction working with this community outreach program. betsy.phipps@childrens.harvard.edu

CS308 Artificial Heart Coordinators Unite to Help Patients and Critical Care Nurses

Hallinan W, Martin T; Newark Beth Israel Medical Center, NJ; University of Rochester Medical Center; NY

Purpose: As the proliferation of mechanical circulatory assist or ventricular assist devices continues; the rapidly changing technology, new disease specific Joint Commission standards for LVADs and inconsistencies amongst the VAD community and industry have made being a VAD nurse today a challenge. The purpose of this creative solution was to bring together a small field of highly specialized artificial heart coordinators to be able to influence change and make a difference for nurses and patients. **Description:** Through years of brainstorming and discussions, a group of VAD coordinators have developed a focused organization to support a common mission. The group was formed with the following mission: The International Consortium of Circulatory Assist Clinicians (ICCAC) is a professional mentoring organization of mechanical circulatory assist device clinicians whose mission is to share information, educate and support individuals in this field to achieve optimal outcomes for patients requiring mechanical circulatory support, and to support efforts in the area of device clinical research and development. This network of clinicians have helped nurses and patients on many levels, resources for education and skills testing have been able to be shared amongst centers or coordinators helping coordinators with the first VAD end-of-life experience or coordinators helping patients find VAD centers local to where they want to travel around the world. Membership is open to all staff that work with ventricular assist technology. **Evaluation/Outcomes:** For its first year of active organization the ICCAC has already proven to be a powerful resource for hospitals that perform ventricular assist. It has helped with centers undergoing LVAD Joint Commission certification as well as uniting nurses and clinicians to provide resources for best practices. The ICCAC is working toward an international meeting in the spring of 2008 that will accompany a common conference. William_Hallinan@urmc.rochester.edu

CS309 Assessing the Impact of Hand Hygiene and Infection Prevention Measures in the Surgical Intensive Care Unit

Browning M, Tully MJ, Lough A, Salomon J, Franker L, Bruinsma S; Rush University Medical Center; Chicago, IL

Purpose: Hand hygiene and infection prevention measures are components of best practice for all intensive care units. Improving hand hygiene compliance and stricter adherence to infection prevention measures will aide in decreasing ventilator-associated pneumonia (VAP) and blood stream infections (BSIs). **Description:** After reviewing data from hand hygiene audits, VAP, BSI rates, and urinary tract infections new initiatives were started. Visual reminders were used to reinforce hand hygiene in the SICU such as signs, posters and the use of screen saver signs on computers in the unit. Pictures were taken of staff adhering to

best practices and were added to the computer screen savers. An e-mail "thought of the week" was sent out to all staff reinforcing hand hygiene and infection prevention techniques featuring a staff member. In addition, a poster board was used to reinforce the guidelines for central line insertion including hand hygiene, the use of full barrier precautions, and use of chlorhexadine skin prep. Staff nurses also conducted audits of hand hygiene compliance rates on fellow staff, in addition to the hand hygiene observations made routinely by infection control. **Evaluation/Outcomes:** Rates of compliance to hand hygiene improved by 20% and infection prevention measures demonstrated a variable increase as a result of this multifaceted initiative. This project was also viewed as "fun" by staff as they enjoyed seeing who would be "featured" in e-mail reminders of best practices and on the computer screen savers. These measures are being continued to determine long-term impact on promoting infection prevention. melissa_browning@rush.edu

CS310 At Arm's Length: ICU Quick Reference Cards

Corliss G, Brochu C; Dartmouth Hitchcock Medical Center; Lebanon, NH

Purpose: The ICU has had a large influx of new graduate nurses and nurses without ICU experience. The goal of this project was to decrease the stress on new RNs by providing them readily available reference tools to use during critical patient events. **Description:** The nursing climate today requires a high percentage of nurses without critical care experience to be hired into critical care. A vast amount of information must be acquired during the orientation process to function safely and efficiently at the bedside. Through observation of nurses during stressful clinical situations in the simulation lab and at the bedside, the educators noticed an inordinate amount of time being spent looking up information on vasoactive drips and reading hemodynamic waveforms. We created Quick Reference Cards that are small enough to be attached to their mandatory ID tags.The most frequently used card is the IV Drip Reference Sheet. It lists drugs by generic and trade name, the usual dose range, whether the drug is weight based, whether it is mcg, mg or units, and whether the rate is per minute or hour. During a crisis at the bedside, the nurse is able to take this information from the card that is immediately available on their name tag, and program a drug calculating pump without having to look for a reference book or sheet elsewhere. Additional quick reference cards have been developed on arrhythmia identification,room set up and hemodynamic monitoring (ECG correlates and normal values). **Evaluation/Outcomes:** Nurses are visibly less stressed during a crisis and use these reference cards on a daily basis. Errors in IV pump programming have decreased. Experienced nurses ask for the reference cards as well! Due to the popularity of these cards, they are provided for all new staff, regardless of experience. Other critical care units have expressed an interest in using the quick reference cards and copies are available from our ICU Web site. Gene.G.Corliss@Hitchcock.org; Claudette.J.Brochu@Hitchcock.org

CS311 Bridging the Gap: The Implementation of a Critical Care Development Program

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Purpose: Designed through the combined efforts of the Respiratory Care, ICU, CICU and NCC educators, our Critical Care Development Program seeks to bridge the gap between the novice and proficient critical care nurse through a rolling twelve week program of courses. **Description:** We have a well-established Critical Care Fellowship Program but have been lacking critical care classes for the new orientee not within the fellowship. To meet the needs of the critical care orientee, 12 courses were chosen that would be beneficial to the new orientee in the coronary care, intensive care and neurologic critical care units. Topics include mechanical ventilation, hemodynamics, sepsis, 12-lead EKG interpretation, acute renal failure and a comprehensive neurologic review, among others. One course is offered every Thursday, using a rolling calendar concept that allows an orientee to join in the group any time during their orientation. In addition to 6 unit-based educators there are 3 staff nurses who help facilitate the didactic learning. This program allows the educator to individualize the new staff member's orientation on the basis of their learning needs. For example, a more experienced nurse may wish to review ARDS and will attend only this class, while a novice critical care nurse may choose to attend all courses. The program is designated as a development program and not an orientation program because it also has been used by

nurses already employed in the critical care units. **Evaluation/Outcomes:** At the conclusion of the program, each participant completes an informal evaluation. Although we are in the process of collecting quantitative data, the overall response has been very positive. The collaboration and expertise among the unit-based educators is reflected in the success of the novice critical care nurse's orientation. jsell@ohiohealth.com

CS312 Bridging the Gap Between the Novice and Expert Nurse: The Development of a Mentoring Program

Wolak ES, McCann MF, Madigan CK; The University of North Carolina Hospitals; NC

Purpose: Nursing relies on experienced staff to educate the novice. Working alongside experts, novice nurses can learn in a supportive and educationally sound environment. However, this framework lacks consistency as the growing nursing shortage has made effective orientation and mentoring challenging. **Description:** A critical analysis of our institution's orientation and critical care education process suggests that although novice staff functions with a sufficient skill set, there is limited time and exposure that fosters critical thinking and professional development. Review of the literature supports this appraisal. Research demonstrates that despite adequate skill acquisition, novice staff often feel isolated and ill-equipped for professional advancement initiatives. In response to assessment findings and supporting research, a structured mentoring program was developed. This program focuses on the mentoring relationship beyond initial orientation. Using our institution's professional ladder, clinical experts are paired with new graduate nurses following completion of their orientation program. These individuals meet no less than once a month for the first year, where they discuss case presentations and attend conferences with a focus on peer support. The pairings also meet with management frequently to assess progression of the relationship. **Evaluation/Outcomes:** In 2002, the American Association of Colleges of Nursing recommended the establishment of mentoring networks to ensure successful transition into the professional work environment. Indeed, mentoring serves to create a climate of support and promotes nursing excellence. The outlined program provides a foundation and framework that may be used to facilitate and enhance the orientation, teaching, and development of novice critical care nurses. ewolak@unch.unc.edu

CS313 Caring Practices: Family Presence During Resuscitation in the PICU

Hagan L; Sinai Hospital, Baltimore; MD

Purpose: The literature clearly demonstrates that families want to be present during the resuscitation of a loved one. Family members have reported that there was a decrease in anxiety in knowing that everything was done and that if the loved one died there was a sense of closure. **Description:** The Clinical Practice Guidelines for Support of the Family in the Patient-Centered Intensive Care Unit recommend that institutions develop a process to allow the presence of family members during resuscitation of a loved one. During resuscitation in the PICU, parents often choose not to leave their child's bedside or ask to be present if they have not been at the bedside when the child deteriorated. Consistent with the PICU's philosophy of family-centered care, parents are supported in this request. There has not always been a liaison available to stay with the parents, however, a member of the nursing staff, social work, or child life will answer any questions that may arise during the process. A member of the team who is available will provide support during the resuscitation and stay with the parents. If the child dies, parents are able to be with their child immediately and are comforted by the staff who participated in the resuscitation. Parents have never interfered with resuscitation attempts not has the resuscitation been prolonged because of family presence. All members of the PICU team support the presence of parents during resuscitation. This was reinforced following a recent sudden death of a child in the PICU. **Evaluation/Outcomes:** Parents have reported to staff that they feel everything was done for their child, which has provided some comfort during the grief process. Based on this feedback, this practice continues in the PICU. An evidence-based guideline highlighting the important role of the nurse in orchestrating death is currently under development based on actual experiences. lhagan@lifebridgehealth.org

CS314 CCRN Recruitment: Cheaper By the Dozen—Creating a Learning Enviroment Within the ICU

Vosburg J; Morristown Memorial Hospital; NJ

Purpose: Inspired by our Beacon Award application, I wanted to increase CCRN certification within our unit. I found concerns among the staff regarding study time and cost. My goal was to create a plan that would offset these concerns. **Description:** I visited the AACN Web site and found that a discount was offered if 10 or more people registered together. This information was posted in the breakroom along with a promise to study as a group. Fourteen nurses signed up for the exam. We registered as a group and set up weekly study sessions with our clinical nurse specialist and our ICU intensivist. We studied from the sample of test bank questions offered through AACN. The atmosphere within the ICU evolved into a daily learning experience. If an interesting case arrived on the unit, we flocked to the bedside. Everyone was inspired to learn in a relaxed encouraging environment. **Evaluation/Outcomes:** After 3 months of collaborative preparation, 11 of our nurses sat for the CCRN exam. Everyone received their certification! A second group is now following our example and preparing for the certification exam.
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CS315 Challenges in Obtaining Consent for Research: Experience in a Diverse, Busy Trauma Center

Whitmire G; Harborview Medical Center; Seattle, WA

Purpose: To describe issues faced in obtaining consent for our research study in a 12-bed trauma ICU at Harborview Medical Center in the Pacific Northwest. **Description:** Evidence-based practice has become the rule rather then the exception in the ever-changing world of nursing and medicine. Positive outcomes are linked with certain practices that have been proven to be beneficial, so after extensive literature review we noted a lack of evidence to support our current fever reducing methods for trauma patients in the ICU. We created a simple 3-arm study: fan with acetaminophen; ambient blanket with acetaminophen; and acetaminophen alone. Even though the study itself was simple and every intervention done with patients was standard practice, obtaining consent proved to be our biggest challenge. Following our IRB approval and guidelines, consent to use data was obtained after the patient had received the fever-reducing interventions. Because of our unique population, the numerous obstacles that we encountered proved quite interesting. We serve clientele who are ethnically diverse, multicultural, multilingual, and frequently non–English speaking; they are often homeless or not legal residents of this country. We enrolled patients from remote, rural communities as well as numerous patients without resident status fearful of anyone outside their community. **Evaluation/Outcomes:** Flexibility was essential as well as persistence and creativity. The process was aided by the use of interpreter services. We learned to state our purpose immediately. It was essential to be concise, use lay terms, ask if information was understood, assure that patients would be safe, and above all ensure patient confidentiality. A nonthreatening manner and immediate identification helped to ease fears. These approaches proved successful. gwhit@u.washington.edu

CS316 Clinical Situation Inquiry (CSI: Boston)

Packard SJ, Kucharski K; Children's Hospital Boston; MA

Purpose: To implement a system of follow up for incident reports filed in the neonatal intensive care unit that focuses on patient safety, quality, communication, and practice changes at the point of care. **Description:** Six unit-based leaders were selected as SERS (Safety Event Reporting Systems) administrators. The leaders were selected on the basis of their expert skills in communication, clinical judgment, clinical inquiry, and systems thinking and their ability to work closely with the nurse manager regarding follow-up. These leaders developed systems for reporting meaningful data to staff, eliciting their feedback and implementing practice changes approved by the unit-based Performance Improvement Committee. **Evaluation/Outcomes:** SERS administrators conduct a daily follow-up of SERS reports with direct feedback to staff in SBAR format, monthly review of SERS reports by NICU safety committee including a discussion of strategies to improve patient safety, highlight good catches (near misses), identify case presentations for review at monthly staff and leadership meetings, and recognize and reward individuals who contribute to a culture of excellence.
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CS317 Collaboration, Evidence, and Cultural Shift

Meeker C; Lehigh Valley Hospital; Allentown, PA

Purpose: The interdisciplinary team of a nationally recognized cardiac surgery program is challenged to further improve the patient experience. Championed by senior management, the open-heart unit team was charged with evaluating practices, reducing length of stay, and implementing improvements through collaboration, engagement of staff, and review of best evidence. **Description:** A collaborative team comprising clinical unit leaders, a cardiothoracic surgeon, pharmacist, rehabilitation therapist, nurse practitioner, respiratory therapist, anesthesiologist, and case manager identified key areas on which to focus efforts. Processes identified to be most amenable to improvement were analgesia administration, ventilation times, mobility, and chest tube removal. Staff-driven work groups implemented evidence-based changes in practice that reduced ventilation times and length of stay. Evidence supported change from morphine to fentanyl and supplemental use of toradol for postoperative pain control with minimal sedation and respiratory depression, thus improving patient mobility. Evidence also supported that chest tube removal within 24 hours does not increase pleural effusion but does promote greater comfort and improved ability to ambulate. Through intensive, global education and engagement of staff in practice changes, clinical leaders became strong catalysts for reduced length of stay (LOS). Network culture is a compilation of attitudes, values, and beliefs that when carefully identified and addressed enhance rather than impede project success. **Evaluation/Outcomes:** The percentage of patients extubated within the target time of 8 hours has increased from 30% to 70% since practice changes have been implemented. Overall LOS in the open-heart unit has decreased to1.4 days. Patient satisfaction measured by Press Ganey as "likelihood of recommending hospital" increased from 94.7 to 95.4.
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CS318 Collaboration Promotes Consistent Administration of Prophylactic Antibiotics for Cardiac Device Implantation

Phillips L, Blalock V, Greenfield R, Tcheng J, Waresak M; Duke University Health System; NC

Purpose: Infection is a serious complication of cardiac device implantation resulting in costly antibiotics therapy, device explantation and reimplantation. Our electrophysiology (EP) procedural staff sought to confirm timely antibiotic administration before pacemaker/defibrillator implantation. **Description:** To prevent this serious complication the EP staff initiated a performance improvement (PI) project to determine if the current methods of administering antibiotics impacted the patient infection outcome. Data collection forms were developed that included antibiotic identification, infusion completion time and time of first incision. Sedation nurses recorded this information on all device implantations adding comments to identify barriers preventing timely pre-procedural antibiotic infusion. Fourteen months of data collection confirmed that antibiotic infusion was completed before the incision in only 60% to 85% of this patient population. Recognizing the potential impact late administration of antibiotics could have on infection, the EP staff collaborated with the EP pharmacist and medical director to identify opportunities for improvement. The collaborative result included changes in the computerized ordering system and continued data collection to determine the relationship between the EP device infection rate and prophylactic antibiotic administration. **Evaluation/Outcomes:** The Institute for Healthcare Improvement identifies the reduction in surgical complications as a goal in its 5 Million Lives Campaign. This project brought about collaboration among many agents that resulted in changing a system process to improve patient care. Our revised collaborative efforts now include weight-adjusted dosages ordered at standardized times and result in timely and consistent administration of antibiotics.
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CS319 Collaboration: The Focus of Your Heart

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Purpose: The interdisciplinary team of a nationally recognized cardiac surgery program is challenged to further enhance the patient experience. Championed by senior management, the team was charged with evaluating practices, reducing length of stay, and implementing improvements that include collaborative rounds. **Description:** Collaborative rounds are conducted for all post cardiac surgery patients during their stay in the open heart unit and transitional open-heart unit. Interdisciplinary participants include a nurse practitioner, primary nurse, pharmacist, a physical and occupational therapist, dietician, case manager, and cardiac rehabilitation and pastoral care staff with support from the unit director, patient care specialist, and coordinator. Consistent with our patient-centered care model, patients and family members are actively

engaged in the process. Information is presented in layman's terms to facilitate involvement in decision making. Collaborative rounding promotes effective communication, consistent care, resolution of issues, and an optimal patient care experience. **Evaluation/Outcomes:** Press Ganey scores demonstrate significant improvement since implementation of collaborative rounds. Overall nursing score increased from 88.6 in October 2005 to 93 in May 2006. Other areas demonstrating improvement of at least 2 percentage points include "staff working together to care for you," "staff included me in decisions re: treatment," and "nurses kept you informed." Interdisciplinary rounds exemplify collaborative processes that positively impact length of stay and cost. cinmeeks@msn.com

CS320 Conquering the CCRN Exam With Confidence

Roberts K, Watson C, Papianou K; The Children's Hospital of Philadelphia; PA

Purpose: To increase the number of pediatric intensive care unit (PICU) nurses who sit for the pediatric CCRN exam (CCRN-P) after attending the Pediatric Critical Care Review Course (PCCRC). **Description:** Nurses in our PICU have historically been reluctant to sit for the CCRN-P. Two of the most frequent barriers cited by staff were a lack of knowledge about the exam and a lack of confidence in their ability to pass the exam. The PCCRC was created in 2001 to address these barriers. The PCCRC was targeted primarily at PICU nurses but was also open to other nurses within the institution. The PCCRC was well received with evaluation scores of 4.29 on a 1-5 scale. Attendees who went on to take the CCRN-P took the test an average of 1.05 times (range 1-2) and had a pass rate of 96%. Despite this, only 39% of those who attended the PCCRC went on to sit for the CCRN-P. A number of strategies were employed to improve this. In 2006, the format of the course was changed to include an increased emphasis on test-taking strategies. All speakers were asked to include case studies and/or sample test questions within their lectures. Each day concluded with a 45-minute practice question session. The course coordinators also solicited support from the PICU clinical managers to include a certification-related goal in the yearly evaluations of all staff who meet CCRN-P eligibility requirements. Two unit-based certification fairs were held in 2006. **Evaluation/Outcomes:** 14 PICU nurses attended the PCCRC in 2006. 10/14 (71%) took the CCRN-P within a year of attending the course. Those 10 nurses sat for the exam an average of 1.2 times (range 1-3). 9/10 (90%) passed the exam. The PCCRC also provided professional development opportunities for experienced PICU nurses who wished to improve their speaking abilities and has been a forum to build relationships with pediatric critical care nurses at other institutions. robertsk@email.chop.edu

CS321 Creating a Healthy Work Environment: Improving Staff Communications in a Fast-Growing Pediatric Intensive Care Unit

Lyons A, Whiting J, Holahan K; Children's Hospital; Boston, MA

Purpose: To create a healthy work environment for all staff in a rapidly growing, fast paced, pediatric intensive care unit (PICU). **Description:** Over the past 2 years the PICU staff at Children's Hospital, Boston has doubled its staff and beds. Effective communication among all staff members is imperative in a growing unit to ensure a healthy work environment for all. As the unit grew, so did staff concerns; how do we communicate and interact with such a large and diverse team? The PICU nursing leadership committee noted that there were stress fractures in staff communications as we continued to grow. With the intent to improve communication and decrease staff stress, the leadership group held mandatory staff retreats at which 4-hour blocks of time were set aside to concentrate on building on our communication skills. During this time, staff expressed ideas of what the ideal work environment would look and feel like through brainstorming exercises. The ideas were compiled and drawn into a healthy work environment pledge. The pledge dealt with such things as tolerance, education, mentoring, staff diversity, respect for all team members, and open communication. The pledge was displayed in the staff lounge and staff members were asked to sign it if they were willing to commit to working as a team and creating a healthy work environment. **Evaluation/Outcomes:** The pledge was accepted and signed by staff. Each staff member who signed the pledge committed to work toward the goals that the contract outlined in their everyday practice. The staff as a whole has striven toward creating a healthy work environment through collaboration, respect for all staff members, and realizing that communication is the key to success in a rapidly growing and fast-paced pediatric intensive care unit.
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CS322 Crew Resource Management: What Do Airline Pilots Know About Critical Care?

Ryan K, Mericle J, Frush K, Alton M, Meliones J; Duke University Hospital; Durham, NC

Purpose: Communication between teams significantly affects patient care and safety. The PCCU is an area of extreme vulnerability as patients are very complex, exhibit a greater vulnerability to human error due to high acuity, and require more frequent interventions. The airline industry has used crew resource management techniques to reduce errors and improve team dynamics. **Description:** With the guidance of pilots who specialize in crew resource management, we adapted many of these same techniques in the pediatric critical care unit (PCCU). Initial training included 3-hour sessions with a total of 120 multidisciplinary team members. The initiatives that were instituted include critical language (eg, "I need clarity"), standardized communication using SBAR (situation, background, assessment, and recommendations) format, several briefings and huddles before and after rounds, standardized data sets for communication, and a "sterile cockpit" model. Techniques used in the aviation industry are translatable to medicine but require "personalization" to each institution's specific culture and challenges. A structured approach to team training results in significant improvements in team dynamics. **Evaluation/Outcomes:** Team training is essential not only for safe patient care, but also for team culture. Surveys demonstrated improvement in how the staff perceived teamwork (67% to 87%, $P = .01$), the use of briefings (63% to 84%, $P = .01$) and knowing the proper safety channels (67% to 87%, $P = .007$). Independent evaluations of staff performance showed an increase in overall teamwork by 72% ($P < .001$) and leadership perception 75% ($P = .001$). kristi.ryan@duke.edu

CS324 Critical Care Internships and Fellowships: Customizing the Approach to Specialty Orientation

Ramson K, Fisk J, McKeon S, Moser A; St. Luke's Hospital and Health Network; Bethlehem, PA

Purpose: We developed the GN internship and fellowship programs as part of our orientation redesign. We wanted a structured program to supplement the Essentials in Critical Care Orientation (ECCO) with "hands on" workshops, professional development topics and formal feedback sessions. **Description:** We scheduled the ECCO program with 7 workshops in both the internship and fellowship programs. These workshops include dysrhythmia interpretation, cardiovascular and hemodynamics (intra-aortic balloon pump, cardiovascular surgery, pacing and Svo$_2$ monitoring), pulmonary (ventilators, chest tube management, tracheostomies), renal (CVVH, bladder pressures, abdominal compartment syndrome), neurology/neurosurgery (ventriculostomies, ICP monitoring, drains, organ donation, professional memberships and professional issues (healthy workplace, team building, emotional intelligence), evidence based initiatives, national patient safety goals, and care bundles. Each intern also provides a case presentation for the staff/preceptors and management at the completion of their internship/fellowship. The workshops not only afforded the opportunity for hands on learning but also the opportunity to interface with an educator. Additionally, Blackboard access was obtained, MBTI screenings were incorporated and evaluation tools were developed to assist the preceptor to track progress and effectively communicate clinical issues to the clinical educator and/or the manager. **Evaluation/Outcomes:** BKAT scores were used before the program and after the program at 6 months, 1 year and 2 years. We used this data to monitor improvement in knowledge base and direct adjustments to clinical experiences and didactic learning. For example, from our pilot group results we added the EKG component of ECCO and added 4 hours of dysrhythmia interpretation class. Successful integration of the graduate nurse into critical care practice was experienced throughout our division. ramsonK@slhn.org

CS325 Professional Practice Council's Implementation of Practice Excellence for the Elimination of CLABSI

Furtado D; William Backus Hospital; Norwich, CT

Purpose: The goal of eliminating catheter-related blood stream infections within the critical care unit is one of the visions of practice excellence being brought forth and more importantly, operationalized by the Critical Care Practice Council. **Description:** A conjoined effort generated by the nursing leadership and the practice counsel created an opportunity to use evidence-based practice in order to eliminate CLABSI and improve patient outcomes. Together, both groups created the goals to educate and

evaluate the critical care registered nurses' knowledge in relationship to the management of central catheters and the associated risks factors for blood stream infection. The framework for the strategies was adopted from the IHI initiative. Open discussion and brain storming sessions unlocked the potential for application of the evidence-based practice (EBP). Meetings occurred monthly or as needed when questions or concerns became a major obstruction for progress. The epidemiology nurse and other INS experts were consulted to evaluate and review policy and procedure, technique and equipment. **Evaluation/Outcomes:** Communication has been enhanced through the use of new bulletin boards, one-to-one teaching methods, more frequent meetings and hospital publication write-ups. Educational competencies specific to CLABSI were added to the annual critical care competency package. The competency requirement prompted the development of an audit tool and test which serves to evaluate cognitive recall and skill set. This clinical initiative assisted in bridging the gap between evidence-based research and its application within the critical care arena and it promoted collegial conversation. debfurtado@cox.net

CS326 CSI (Clinical Science Investigation) Toolkit: An Evidence-Based Practice Resource for Bedside Nurses

Glaudi J, Datri D, Lacoste B, Jones N; East Jefferson General Hospital; LA

Purpose: This presentation will describe a toolkit designed to engage bedside nurses in applying evidence to practice. The Clinical Science Investigator's Toolkit serves as a step-by step workbook to guide implementation of the evidence-based practice model developed by our community hospital. **Description:** Our Magnet-designated community hospital has a strong commitment to evidence-based practice (EBP). With a research committee and a formalized EBP model, we have effectively demonstrated research utilization. However, during our most recent Magnet redesignation visit, the surveyors expressed concern that many staff nurses could not clearly articulate their involvement in EBP initiatives. The doctorally prepared nurse researcher employed by the hospital presented an introduction to EBP for clinicians throughout the organization. Staff nurses were encouraged to initiate unit-based clinical inquiry projects. What was missing was a practical tool to guide the staff nurse in the process of changing or affirming current practice on the basis of evidence. The Clinical Science Investigator's Toolkit was developed as a step-by-step guide to applying our EBP model. It is intended for use by nurses with varied educational preparation and serves to link the nurse with the appropriate experts and resources. It provides practical tips for consulting the nurse researcher, advanced practice nurse, librarian, or leaders during the investigation. It also serves as a template for systematic documentation so that the investigation can be shared. **Evaluation/Outcomes:** Bedside nurses identified remaining barriers to participation in EBP; and research critique and basic statistics classes were offered in response to their feedback. Staff nurses have successfully used the toolkit and continue to provide valuable input for revisions. This resource has been effective in supporting bedside nurse participation in EBP initiatives throughout our organization. jglaudi@ejgh.org

CS327 CVP to Go! Facilitating Early Goal-Directed Therapy in Severe Sepsis

Lucafo C, Jackson S; Elliot Hospital; NH

Purpose: Central venous pressure (CVP) is a critical assessment in early goal-directed therapy for patients with sepsis. This type of specialized monitoring does not need to wait for an ICU admission. A system was developed to rapidly deploy CVP equipment and ICU personnel to the emergency department (ED). **Description:** CVP monitoring is used to guide fluid resuscitation in patients with severe sepsis. The ED does not have the experience or equipment to monitor CVP. Rather than undertake a costly education series and equipment acquisition, the ICU provides CVP monitoring equipment and personnel to the ED for patients with severe sepsis. A kit was assembled with all of the necessary equipment for CVP monitoring and placed in a centrally located area of the ICU. The bedside monitors in the ED were reconfigured to accept invasive pressure modules. The ED uses a cart for central catheter insertion created to facilitate compliance with reducing catheter-related blood stream infections. The ED physician notifies the ICU of a potential patient with sepsis. The intensivist arrives in the ED and the ICU nurse is called to bring the CVP monitoring kit when the central catheter is inserted. Once the central catheter is inserted, the ICU nurse sets up the CVP monitoring and collaborates with the physician(s) and ED nurses on fluid resuscitation goals and treatments until the patient can be transferred to the ICU. **Evalua-**

tion/Outcomes: The CVP monitoring kit has proven to be an effective way to provide early goal-directed therapy to patients with sepsis in the ED. Use of staff expertise in pressure monitoring coupled with the availablility of equipment has assisted both departments in managing the fluid resuscitation needs of patients with severe sepsis. Additionally, hand off communication between the ED and ICU is enhanced through early collaboration on treatment goals. clucafo@elliot-hs.org

CS328 Demystifying the Clinical Ladder in the PICU

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Purpose: Nurses are hired into the PICU as level I. With professional growth, nurses can then apply to level II. The PICU-based recruitment and retention committee (RRC) recognized that the clinical ladder was poorly understood. In response, the RRC created a poster outlining the process. **Description:** The clinical ladder consists of staff nurse levels I, II, and III. In the past 2 years, the PICU has expanded from 18 to 29 beds and doubled its staff. The RRC was created to address issues and obstacles that affect retaining the growing PICU staff, as well as help in recruitment efforts. One goal the RRC established is to increase the number of staff promotions. Level I staff felt deterred in advancing up the clinical ladder because of the ambiguity of the process and requirements. In response to this feedback, committee members collaborated to make a poster outlining the steps for applying for promotion to level II. The poster includes information on criteria to determine if one is ready for promotion using the 8 dimensions of the Synergy Model, and an outline of what is needed for his/her portfolio. Items that make up the portfolio include a statement of practice, a clinical exemplar, and 2 letters of recommendation. The poster is prominently displayed in the staff break room with names of resource people included. **Evaluation/Outcomes:** Currently 65% of the PICU staff are level I. With the recent growth in staff, it is anticipated that in the next 2 years, the number of applicants for promotion to level II will increase significantly. To assess the poster's effectiveness, the RRC will monitor the number of promotions and survey staff. dennis.doherty@childrens.harvard.edu

CS329 Designing a Protocol to Eliminate Environmental Contamination by *Clostridium difficile* and Multidrug-Resistant Organisms

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Purpose: Preventing hospital-associated infections with *Clostridium difficile* and multidrug-resistant organisms (MDROs) is crucial for ICUs. This project's goal was to reduce incidence of health care–associated infection by designing a protocol to eliminate environmental contamination in the cardiac care unit (CCU). **Description:** *C difficile* and MDROs—eg, methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant enterococci (VRE)—easily contaminate health care environments, survive for months on dry surfaces, and are difficult to eradicate with quaternary compound solution. Environment-to-person and person-to-person cross-contamination occur as a result. Hospital epidemiology and environmental services (EVS) departments collaborated on this project. Evidence-based interventions included the following: (1) EVS staff disinfected bedrails and high-touch bedside surfaces with 10% hypochlorite solution daily; (2) staff and visitors washed hands with soap and water when in contact with patients infected with *C difficile,* whereas alcohol-based hand rub was used for all other patients; (3) spore precaution signs reminding staff to wash hands with soap and water were posted by contact precaution signs and alcohol-based hand rub dispensers in rooms of patients infected with *C difficile*; (4) contact precaution was started for suspected and confirmed cases; (5) *C difficile* and MDRO education tools were developed to instruct hospital staff; and (6) a flagging system was created to identify patients infected with MDROs. **Evaluation/Outcomes:** Before interventions, baseline nosocomial infection rates of MRSA, VRE and *C difficile* in the CCU were 0.84, 0.28 and 0.85 per 1000 patient days, respectively. Postintervention year-to-date infection rates of MRSA, VRE and *C difficile* have been reduced to 0, 0 and 0.56, respectively. These were reductions of 100%, 100% and 39%, respectively. Hospital epidemiology continues to monitor trends in nosocomial infections of *C difficile* and MDROs. mayriley@gmail.com

CS330 Developing a Culture of Collaboration and Evidence-Based Medicine Through a Multidisciplinary Journal Club

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Purpose: The establishment of a strong collaborative multidisciplinary intensive care unit (ICU) team is critical to a healthy work environ-

ment. For this reason, our surgical ICU established a journal club in order to foster respect, trust, and effective communication between members of the health care team. **Description:** In 2004, our National Database for Nursing Quality Indicators (NDNQI) magnet survey revealed poor scores in the area of nurse-physician interactions. In 2006, our ICU implemented an intensivist program focused on establishing a multidisciplinary team. Subsequently, our patient volume and acuity has increased significantly. To meet these increasing demands, 25 additional nurses have been hired. Assimilating this many faces into a highly functioning collaborative team was of the highest priority. For this reason, we implemented a nurse-driven ICU journal club which meets quarterly. The meeting is held at area restaurants in hopes of decreasing professional barriers often found in the workplace. Landmark evidence-based articles which form the basis of many of our clinical protocols are reviewed and subsequently implemented into practice. Two unit nurses present the article, followed by open discussion. Journal club participants include staff nurses, mid-level practitioners, medical students, resident and attending physicians, pharmacists, nutritionists, respiratory therapists, physical therapists, chaplains, social workers, and unit researchers. Eligible participants receive contact hours. **Evaluation/Outcomes:** Following implementation of the ICU journal club, our 2006 NDNQI survey demonstrated a 7% improvement in nurse-physician interaction satisfaction. Our ICU nursing staff rates the journal club as a good experience which is reflected by its excellent attendance. Additional surveys have shown satisfaction among all team members. Not only does the journal club foster a healthy work environment, it emphasizes evidence-based medicine at the bedside. b_miguez@hotmail.com

CS331 Developing a Transition Program for New Nurses in Critical Care

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Purpose: Transitioning new nurses into critical care to meet high levels of demand for critical care nurses is a serious challenge. The critical care nurse intern/resident program fosters relationships by focusing on the socialization, communication, professional role development and critical thinking skills. **Description:** After a through search of the literature a new approach was developed for transitioning new nurses into critical care practice in response to insufficient numbers of critical care nurses. The overall goal is the development of advanced skills, critical thinking and decision making, while providing the necessary socialization into this unique role for the new nurse. It is a multifaceted educational program that blends learning critical care practice at the bedside with an experienced critical care nurse "coach," with a knowledge based curriculum essential for critical care competencies. It begins while the participant is in nursing school as an intern and continues post graduation and licensure as a resident. Participants work as critical care nurse interns with a specially selected experienced critical care nurse coach who has received education on the role of coach, teaching strategies, mentoring skills and communication. The intern works with the coach at the bedside and then spends the remaining time with a critical care clinical nurse specialist in a dynamic learning environment. Following graduation from their nursing program and successfully passing the licensing examination, the newly licensed nurses become critical care nurse residents. **Evaluation/Outcomes:** The outcomes include skill proficiency, as well as enculturation in critical care practice by introducing them to the role of the critical care nurse within the intensive environment of the critical care unit team. In addition, an opportunity to learn skills related to critical care that builds upon the knowledge base provided in their nursing program is accomplished. Formative and summative assessments were conducted using journaling, focus group discussion and program satisfaction tools for the participants and the coaches. nancy.bittner@regiscollege.edu

CS332 Developing an RN Dysphagia Screening Program for Stroke Patients

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Purpose: To provide stroke patients a more timely swallow screening, and to address the JCAHO primary stroke center requirement, we developed a bedside RN swallow screening program to identify those patients at greatest risk for dysphagia and aspiration. **Description:** In collaboration with SLP, we developed an RN swallow screening policy with flow-chart style algorithm that shifts the responsibility for this initial (pass-fail) assessment to the bedside RNs. A multidisciplinary group (RN, MD, and SLP) met to review the evidence, clarify our current process,

identify what altering the process would involve, and to plan the staff education. A 30-minute educational video was created to train 100 nurses. Physician order sets were altered and physician education was addressed. Collaboration with the information technology department occurred to create an electronic medical record (EMR) field where the nurses could document the screen as a "pass" or a "fail." **Evaluation/Outcomes:** 65% of RNs completed the video training. Documentation compliance has increased from 70% to 90%. Documentation in the designated swallow screen field is 67%, and 23% is being addressed via progress notes. Future education will reinforce the EMR swallow screen field as the primary site for documentation, maintaining compliance for dysphagia screening at >85%, and education to address the 10% of patients who were not screened. KJohnson@queens.org

CS333 The Development and Implementation of a Blood Administration Team (BAT)

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Purpose: To build on an existing system encouraging rapid mobilization of important resources in an organized fashion during emergency situations. The BAT was created to ensure that patients receive the correct blood products in a safe and efficient manner during bleeding crises on patient units. **Description:** The idea of using a BAT followed an incident when the wrong patient's blood was administered during a bleeding crisis. Root cause analysis confirmed there was lack of manpower, organization, and knowledge related to management of emergency bleeding situations. A multidisciplinary group determined these challenges could be addressed by: (1) increasing nursing support (providing a nurse from a designated ICU, one from the critical care resource float, and a nurse aide to act as runner to obtain blood products); (2) sending a rapid infusion device to the crisis; (3) facilitating access to uncrossmatched blood by installing ICU blood refrigerators and improving signage to the blood bank; and (4) providing a hematologist's expertise via phone. Criteria for initiating the BAT (uncontrolled bleeding, need for uncrossmatched blood, more than 2 units of blood to be infused at one time, and/or need for the rapid infuser) were based on preexisting "code" data and previous experiences. Anyone caring for the patient may initiate the BAT by calling the hospital emergency number, triggering an overhead call and pages to appropriate personnel. Following staff education, implementation was piloted in the ICUs initially and quickly spread house-wide. **Evaluation/Outcomes:** Over 19-months, the BAT was called 37 times (30% outside ICUs). One-third were for suspected internal bleeding and 56% for active or uncontrolled bleeding. Nurse response was documented 86% of the time and hematologist 62%. Follow-up documentation also demonstrated increasing rapid infuser and ICU refrigerator use with minimal delays in obtaining blood. During the 19 months, there have been no errors in blood administration or adverse events. shearndp@upmc.edu

CS334 The Development of Nursing-Sensitive Indicators to Assess the Implementation of Intensive Care Unit Protocols

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Purpose: Intensive care unit (ICU) protocols are commonly used as a means to optimize care; however, little is known about the effectiveness of nursing implementation. We established nursing-sensitive indicators to measure nursing staff performance as a component of overall protocol compliance. **Description:** In our 31-bed surgical ICU, various evidence-based clinical protocols have been implemented to standardize and prompt care in differing clinical situations including electrolyte replacement, hyperglycemia management, and sepsis screening. Overall protocol efficacy varied, suggesting improvement in some outcomes and little effect in others. Our ICU's multidisciplinary guidelines team identified knowledge gaps and barriers to protocol implementation by bedside nurses. The team identified nursing-sensitive indicators for the aforementioned protocols. "Time to order" and "Opportunities replaced" were identified as the indicators for the Electrolyte Replacement Protocol; "Normal blood glucose (80-120 mg/dL)" was the indicator for the Hyperglycemia Management Protocol; and "Sepsis screen compliance" was the indicator for the Sepsis Screening Protocol. Data were obtained using medical chart audits and clinician survey data to identify gaps to effective protocol compliance and to generate strategies for improvement. **Evaluation/Outcomes:** Electrolyte replacement time to order decreased by 36 minutes, while opportunities replaced increased from 70% to 79%. Normal blood glucose levels improved from 33% to 42%. Sepsis screen

compliance improved from 60% to 91%. Action plans identified for compliance improvement included nursing education, protocol rewording, and process changes. Ongoing measurement of nursing-sensitive indicators is a key component in evaluating ICU protocol compliance. ygao@tmhs.org

CS335 The Development of the Atrial Fibrillation Self-Care Plan: A Tool to Guide Self-Monitoring for Complications

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Purpose: Atrial fibrillation (AF) is linked to complications of stroke and cardiomyopathy. Patients with AF must (1) recognize the risk for complications, (2) monitor for signs and symptoms that herald complications, and (3) take appropriate action to prevent complications. The Self-care Plan was created to aid self-monitoring and action planning for complications. **Description:** Research conducted by the authors revealed that, after discharge, patients hospitalized with recently detected AF did not recognize their risk for stroke, were unable to identify signs and symptoms of stroke, did not monitor for uncontrolled heart rate, and could not identify signs or symptoms requiring emergency treatment. Patients and nurses identified that barriers such as short hospital stay, altered cognitive processing related to sedation for procedures and stress related to an unexpected hospitalization impaired patients' ability to process the self-monitoring information in the current 32-page educational resource. A multidisciplinary team met to create a concise 1-page guide, the *Atrial Fibrillation Self-care Plan*, to clearly communicate information about the signs and symptoms of stroke, aid patients in monitoring of signs and symptoms for expected and unexpected outcomes of AF and its treatment, and provide clear directions for actions to take when indications of complications are detected. An individualized treatment plan, target heart rate, specific purpose of medications, and recommended lifestyle modifications are written in each patient's plan. Signs and symptoms of stroke are highlighted. **Evaluation/Outcomes:** The Self-care Plan was piloted on a cardiac progressive care unit to evaluate nurse and patient satisfaction before implementing it hospital-wide. Patient's reported that the Self-care Plan provided them with a clear action plan, was easy to read, and was preferred over the current educational resource. Patients were able to state actions to take for specific symptoms or situations. mccabe.pamela2@mayo.edu

CS336 Did You Know? A Solution to Enhance the Knowledge of Nurses

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Purpose: Nurses take an oath to become life long learners and this commitment never fades. An innovative solution to increase the knowledge of nurses and assist them in remembering some facts and trivia related to practice was developed using a Rolodex to store such information in a convenient location. **Description:** The Rolodex, titled "Did You Know?" was placed in the central nursing station of the pediatric intensive care unit (PICU). After compiling useful information and helpful hints to include in the reference tool, the data was printed on self-adhesive mailing labels and adhered to Rolodex cards. This information was gleaned from articles in nursing journals, from doctors during teaching rounds, from hospital policy and procedure forms and from the concurrent sessions attended by staff members at the National Teaching Institute (NTI). To continue updating the Rolodex with new advances in healthcare, information is added as needed, and a notice is posted on the education board alerting staff to "check for new information". **Evaluation/Outcomes:** The usefulness of "Did You Know?" was rated by staff nurses using a short questionnaire. The forms returned indicated an enthusiastic response to the project and nurses return to it often to retrieve important information and practice updates. The ultimate goal of this project is to involve nurses in evidence-based practice and to stimulate learning and research in the PICU. ags1013@bellsouth.net

CS337 Don't Eat Your Young, Mentor Them–Retention Grant Project

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Purpose: California State University Fullerton (CSUF), Department of Nursing partnered with Hoag Hospital and another local hospital and received a grant to improve nurse retention. Do mentor-mentee teams improve retention, nurse and patient satisfaction and selected nurse-sensitive patient outcomes? **Description:** A program was instituted to increase nurse support by other nurses, through establishing mentor teams, a Workforce Environment Governance Board, and other key strategies, targeting cultural competencies, improved communication and conflict skills, and patient safety issues. The goals of the project were to develop and improve the workforce environment and nurse retention, improve patient outcomes and improve cultural diversity competency. Mentors and Mentees received formal education together to learn their roles and enhance these multiple skills. They were taught strategies on how to discuss important information with each other and with leadership, as well as techniques in the shared decision making process for patient care. A web site was created to improve communication and foster support for these front line nurses. Profiles of mentors, along with video clip interviews, assist the mentee in choosing their mentor. The web site served also encouraged regular communication with e-mail access. **Evaluation/Outcomes:** Nurse turnover dropped 10% from year 1 to 2 of the grant. Nurse vacancies were reduced by 50% of the last year's rate. Between year 1 and 2, falls decreased by 50%, while pressure ulcers decreased by 20%. Use of restraints dropped from 20.7% to 4.4%. Mentors indicated they had 3-6 informal mentees along with their formal ones. Since the cost of replacing one RN is approximately $100 000, retaining nurses added $1 400 000 to the bottom line. mhewett@hoaghospital.org

CS338 Dr Phil: A Strategy for Easing Moral Distress—Ethics Rounds in the MICU

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Purpose: To describe the evolution of monthly ethics rounds on the MICU to attempt to relieve the moral distress that accompanies caring for patients that have little hope for meaningful recovery but in which the family insists that everything be done. **Description:** Nurses and physicians are faced daily with the frustration of providing aggressive care to patients when hope of meaningful recovery is perceived as minimal. There is often a conflict about what interventions are being done or should be offered and what the family wants or expects to offered based on their beliefs. This conflict can lead to moral distress in the caregivers. In an attempt to understand the ethical issues and resolve the cognitive dissonance that arises from these situations, we established monthly ethics rounds on the MICU. The nurse manager in collaboration with the charge nurse and staff choose the patient or patients to be presented. The rounds are open to nurses, physicians, medical students, nursing assistants, respiratory therapists and other caregivers that are interested and available at the lunchtime session. The physician chair of the hospital ethics committee listens to the presentation of the case, asks questions to clarify what the issues are and then leads the discussion about what the underlying issues may be. In the process of questioning wherein the conflict lies, he teaches about the different principles and rules of ethics as they apply to the cases being discussed. **Evaluation/Outcomes:** While the care of the patient may not change and the issues may not be resolved, the caregivers that have participated in the rounds have expressed that the discussion and learning that has occurred has allowed them to see the problem from a different perspective and has decreased the negative emotion attached to caring for patients in futile situations. spurn001@mc.duke.edu

CS339 Educational Passports: An Innovative Strategy for Staff Education

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Purpose: The medical intensive care (MICU) and coronary intensive care units (CICU) were challenged to move to a new building and learn new equipment in 2006. The staff development specialist (SDS) needed to develop an innovative strategy to educate the staff in both units and obtain > 90% compliance. **Description:** Each week education was dedicated to a new piece of equipment where traditionally, 4 weeks of education would be provided. New equipment for both units included overhead lifts, Hill-Rom SpO2RT beds, Get-Well Network and new call bell system. In addition, the MICU needed education on new Philip's monitors. Because the MICU was traveling to a new home, the idea for a "Passport to 3E", (the new unit location) was born. Each staff member was issued a passport that listed each inservice and date. After the staff member completed an inservice, a different sticker to "stamp" the passport was issued and a sign in-sheet was initialed. Rewards for completion included guided tours of the new unit. Staff was enthusiastic and looked forward to each new "stamp." Due to the overwhelming success, the passport idea was carried over to the education needs of the CICU staff a month later. By the

time of the move, the MICU achieved >90% compliance with the overhead lift, Phillips bedside monitor and Hill-Rom SpO2RT bed inservices. The CICU achieved >90% compliance with the overhead lift and Get Well network inservices. Both units had 76% or less compliance with the call bell system, MICU with the Get Well Network and CICU with the SpO2RT bed. **Evaluation/Outcomes:** Lessons learned included not only the importance of having education directly in the unit but of making it fun. Low compliance to the Get Well Network and call bell inservice was ascribed to the inability of the staff to leave the existing units and go to the new unit to see the equipment. Once an educator develops an innovative idea for one unit, it can transcend and become a successful strategy for education in other arenas. ldechant@christianacare.org

CS340 Effect of an Evidence-Based Guideline for Central Venous Catheter Care on Catheter-Related Bloodstream Infections

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Purpose: According to baseline data, catheter-related blood stream infections (CRBSIs) increased in frequency in the medical intensive care unit. The rate peaked at 10 infections per 1000 catheter days. Research supports the use of evidence-based guidelines for central venous catheter care to reduce CRBSIs. **Description:** After an extensive review of the literature and consultation with physicians and nurses, an evidence-based (EB) guideline for care of central venous catheters (CVCs) was developed and implemented. The guideline required (1) meticulous handwashing before handling CVCs; (2) daily inspection of the catheter insertion site and the integrity of the dressing; (3) cleaning hubs and ports; (4) ensuring that proper intravenous catheters, tubing, and/or filters are used and are changed per the recommendations of the Centers for Disease Control and Prevention; (5) caring for the catheter through proper dressing change, skin preparation, and keeping the catheter away from body fluids; and (6) empowering nurses to promote maximal sterile barrier protection as they assist physicians in inserting CVCs. Education and skills competency checks ensured that all nurses were knowledgeable and competent in EB practices for care of CVCs. A system was created to ensure that supplies were available during catheter insertions. Nurses received scripted coaching about how to talk with physicians and colleagues to facilitate EB practices. Three outcomes were measured (nurses' knowledge, nurses' practices, and CRBSIs rates) both before and after intervention. **Evaluation/Outcomes:** The guideline for care of CVCs was developed, implemented, and found effective in increasing nurses' knowledge and practices for catheter care and in reducing rates of CRBSIs. After the intervention, nurses' knowledge increased from 55% to 77% ($P = .001$) and practice compliance increased from ≤30% to ≥90%. Rates of CRBSIs decreased from 7.5 to 2.9 per 1000 catheter days in one unit and from 10.4 to 0 per 1000 catheter days in another unit. Obiagan@mednet.ucla.edu

CS341 The Emergency Nursing Internship: An Interactive and Innovative Model

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Purpose: The hospital Emergency Department has become the major diagnostic and resuscitation site of the American Health Care System. According to the CDC, from 1994 to 2004, ED visits rose 18 percent from 93 million to 110 million while the number of 24 hour Emergency Department's declined by 12 percent. **Description:** The Emergency Nursing Internship Program at Jackson Health System was developed by the ED Nurse Educators across the multi hospital system. Participants vary in levels of nursing experience ranging from new graduate nurses to nurses without ED experience. The program begins with hospital and general nursing orientation and is followed by a comprehensive 12 week orientation to emergency nursing which includes 2 days of classroom instruction and 2 days of clinical experience each week. Prerequisite courses for all program participants include arrhythmia recognition, pain management, disaster awareness and moderate sedation. Students are given a CD at the start of the program which contains the course syllabus, class schedule, PowerPoint lectures, relevant research based articles and helpful emergency nursing links. Teaching modalities include instructor lead lecture, computer based learning, self study assignments, simulation lab activities and case study presentations. Group activities and learning games foster active learning and engage the participants while facilitating critical thinking skills, team building and self-confidence. Multi-disciplinary guest speakers also add variety and serve as subject matter experts that deliver timely information. **Evaluation/Outcomes:** The Emergency Nurs-

ing Internship has created much interest given the demand for emergency trained nurses. Jackson Health System seeks to sustain the formal program that offers the clinical experience and didactic information needed for successful transition to specialty nursing practice. The ED nursing directors and managers appreciate the routine evaluations as performance reports also include motivation, participation and attendance which offer an employee profile or sampling of anticipated behavioral issues. cclaffey@um-jmh.org

CS342 Empowering Nurses Through a Nurse-Directed Blood Glucose Protocol in the Cardiac Surgery Intensive Care Unit

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Purpose: Maintaining glucose levels below 120 mg/dL and preventing hypoglycemia is imperative for improved healing and long-term survival in postoperative cardiac surgery patients. Identifying previously undiagnosed diabetic patients preoperatively allows for initiation of effective glucose management. **Description:** Need for the implementation of a glucose protocol was identified after a random sample of postoperative blood glucoses were collected. This data revealed poor glucose control in both diabetic and non-diabetic patients. There was not an existing hospital protocol permitting nurses to autonomously initiate insulin therapy. Means to identify undiagnosed patients and management of patients after removal of insulin drip were not standardized. A nurse-directed protocol was written for the simultaneous initiation of an insulin infusion and 10% Dextrose solution. Following successful initiation of this protocol, a second protocol was developed to transition patients from continuous intravenous insulin to intermittent subcutaneous insulin management based on the patient's glycolosated hemoglobin levels (Hgb A_{1C}). Hgb A_{1C} was incorporated into preoperative orders for all patients, which helped identify previously unassigned or poorly managed patients with diabetes. Collaborative efforts with the OR team to initiate the protocol intraoperatively resulted in earlier glucose control. Collaboration with the cardiac surgery step down unit ensured consistency in implementing the protocol outside of the ICU. **Evaluation/Outcomes:** As a result of this protocol implementation, nurses consistently evaluate every postoperative cardiac surgery patient for the need for insulin drip therapy. Follow up data collection reveals a successful decrease in both hyper and hypoglycemic events. Continuous reevaluation through data collection and staff education ensures the safety of the protocol implementation. An evidence-based, nurse driven insulin protocol empowers critical care nurses to autonomously make decisions that result in improved patient care. icunurselinda@hotmail.com

CS343 Engage, Empower, and Enhance: Using Human Patient Simulation With Baccalaureate Nursing Students

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Purpose: Simulation technology can provide students opportunities to gain practical skills and increase critical thinking in a safe, realistic environment. This project is to prove that human patient simulation (HPS) will improve baccalaureate nursing students' ability to critically think and gain knowledge over traditional teaching strategies. **Description:** We believe that clinical learning is essential to nursing education knowledge and critical thinking skills, both of which are essential to function in today's ever changing healthcare environment. The students felt under- prepared in psychomotor skills and in responding to critical situations. Different strategies for meeting critical thinking needs were explored. HPS was found to offer the best educational opportunity. Using evidenced based research, 2 pediatric critical care patient simulations were designed and implemented with 16 baccalaureate nursing students. Knowles theory of adult learning was used in the educational process. Students were given a pretest before the simulation. The students were randomly divided in 2 groups, 4 participated in the simulation with "sim baby" while 4 observed. When the simulation was completed a debriefing educational session occurred. Students were then given a post test. **Evaluation/Outcomes:** Posttest scores showed an increase in knowledge. During debriefing sessions students verbalized an improvement in critical thinking skills and that it brought classroom learning together with clinical practicum. Future goals would be to expand simulations with nursing students and new graduates; thereby increasing the preparedness of nurses in critical situations. Additional research could also examine whether students who took part in HPS scenarios had improved NCLEX scores. annaellensharp@yahoo.com

CS344 Enhancing Communication and Collegial Relationships Between the Intensive Care Unit and the Emergency Department

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Purpose: The staff of our intensive care unit (ICU) and emergency department (ED) identified that communication of patient information at time of transfer was inadequate and collegial relationships were strained. We initiated ICU/ED rounds as a forum to discuss cases and promote better communication and staff relationships. **Description:** Clear communication and appreciation of others point of view are keys in the promotion of collegial relationships. The leadership groups of the ICU and ED at Children's Hospital Boston initiated a forum to improve communication between the units during patient transfer. Another goal of this forum is to encourage discussion about their respective practice and thus promote a better understanding of the other unit's practices. The forum is presented in a nursing rounds format. A patient is chosen based on suggestions from staff and/or issues that the case raises. ED nurses who cared for the patient present the case from their perspective. The ICU staff present the ICU course. Time is allotted for discussion of the case after it is presented. As part of this initiative a report sheet was created in order to ensure the necessary information is passed on during report. We have also planned for new staff to shadow a nurse on the respective units. **Evaluation/ Outcomes:** Initial feedback from staff on both units has been positive. The report document was instituted in July. Initial feedback has been encouraging. Our current plan is to alternate hosting these round monthly. A formal evaluation of the program is being planned. Through this initiative we hope to improve communication between the units, to provide staff with a better understanding of the other unit's operation, and thus promote a more collegial relationship between the staff.
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CS345 An Evidence-Based Project to Improve Weaning From Mechanical Ventilation

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Purpose: Decreasing the length of time a patient requires mechanical ventilation improves ICU length of stay (LOS) and lessens the patient's risk for complications. Our ventilator LOS was higher than desired. We needed a systematic method to safely improve our ventilator LOS. **Description:** The Nurse Practice Council of the 3 ICUs worked with respiratory therapy and the medical staff to develop an evidence-based approach to improve our ventilator weaning practices. A review of the literature demonstrated a level A recommendation (highest level) that weaning protocols designed for non-physician healthcare providers should be developed. Our PICO question was: "In patients assisted with mechanical ventilation, does initiation of an evidence-based weaning protocol driven by the bedside healthcare provider, compared to the usual care of MD-dependent individual weaning orders, decrease ventilator LOS without increasing reintubation rates?" A knowledge gap analysis revealed that only 39% of our nurses were aware that our hospital already had a ventilator weaning protocol. Less than 49% thought that protocol patients would wean faster. The team conducted a vigorous campaign to educate and raise awareness among our staff. The theme of the campaign was, "Be a Weanie." All mechanically ventilated patients would be screened daily for readiness to wean during multidisciplinary rounds. We would embed assessment of weaning readiness as standard practice in ventilator care. **Evaluation/Outcomes:** After 4 months, 83% of our vented patients were being weaned using our protocol. The percentage of acute patients being successfully weaned had increased by 15%. Readiness to wean was assessed daily over 80% of the time. Daily assessment of weaning readiness and use of the weaning protocol have been successfully integrated into our care culture, resulting in sustainable practice changes.
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CS346 Evolution of the Discharge Coordinator Role in the Neonatal Intensive Care Unit

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Purpose: In 2006, the neonatal ICU at Children's Hospital Boston's recognized the increasing medical complexity of infants being discharged home. To optimize family-centered-care and a safe effective discharge process, the role of discharge coordinator was created. **Description:** The discharge coordinator allowed 1 person to serve as the primary contact for all families and professional staff. Working with the primary care team, the responsibilities of this registered nurse functioning at an expert level include the organization and/or creation of individualized discharge teaching materials. These include information about a neonate's diagnosis, their discharge medication (including side effects) and ongoing therapies. Tracking tools were implemented for documentation of all family education. This led to improved continuity in family teaching and implementation of care. Inpatient interviews with each family allowed for better patient advocacy and improved staff-family communication. Follow-up phone calls are initiated 48-72 hours after discharge and are focused to evaluate each family's comfort level at home and their discharge experience. Staff were surveyed anonymously before the initiation of the discharge coordinator role and will be resurveyed at the 1-year anniversary of the role. **Evaluation/Outcomes:** Postdischarge family phone interviews indicate that parents feel better prepared to care for their infant after NICU discharge. Discharge CPR tracking also indicates improved compliance. The discharge coordinator role has been successfully incorporated into our model of care delivery.
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CS347 Following the Shared Governance Path on Our Journey Toward the Beacon Award

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Purpose: Shared governance (SG) is a professional practice model that supports a healthy work environment and achievement of the Beacon Award. **Description:** The initial steps of our Beacon journey seemed overwhelming. We had completed the initial assessment using AACN's Beacon audit tool. At this point, it was clear that while there were some things we were right on target with, there were several things we needed to enhance. It was at this point we recognized the need to use our SG practice model to move us along on our journey. SG, a professional practice model, is based on the fundamental principals of partnership, equality, and ownership, which create an empowering framework that supports an interdisciplinary design for the Beacon journey. Our shared governance structure consists of several nursing staff–led councils: quality, practice, research, and patient/family support. The areas of the Beacon assessment which we did not meet criteria for were given to the appropriate SG council. The quality council addressed our self-extubation rate and pressure ulcer rate. The practice council worked with the journal club and research council to integrate evidence-based practice into practice standards such as pain assessment, temperature measurement, bowel management, and central catheter management. The social and moral committee developed a plan to encourage staff to take the CCRN exam. **Evaluation/Outcomes:** The councils were able to achieve the following outcomes: decrease the self-extubation rate from 10 to 7, the pressure ulcer rate from 2.0 to 1.2, and develop evidence-based practice standards. Our percentage of CCRN certified nurses improved from 39% to 47%. Through the collaborative efforts of the councils our ICU has achieved the Beacon Award for 2 consecutive years. Michele.DeFilippis@atlantichealth.org

CS348 From Palliative Care Principles to Practice: Improving the Active Dying Process for Intensive Care Unit Patients

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Purpose: Nurses in our ICU identified that good palliative care principles and practices were not being used and collaboration among clinicians was suboptimal. Our goal was to develop, implement, and evaluate guidelines to both standardize procedures and educate clinicians about palliative care. **Description:** The "Guidelines for Withdrawal of Life-Sustaining Treatments" included a preprinted order set and an education/reference guide developed by a 9-member interdisciplinary ICU committee. During phase 1, our committee conducted literature searches, met frequently, and developed and refined the guidelines. We used evidence-based research and consulted with our hospital's palliative care cervice as well as our intensivists during the development of these guidelines. ICU nurses, physicians, and respiratory care practitioners were then oriented to their use, and the guidelines were implemented. During phase 2, approximately half of our ICU nurses (n = 51) completed a survey of their preguidelines experiences with our unit's withdrawal of life-sustaining practices and palliative care education as a baseline for comparison. Nine months later, during phase 3, approximately one-third of our ICU nurses (n = 43) completed a postguidelines survey of the unit's withdrawal of life-sustaining practices and palliative care education needs. **Evaluation/ Outcomes:** We found that between phases 2 and 3: (1) completeness of

withdrawal of life-sustaining orders increased, (2) need for physician consultation due to confusing orders decreased, (3) pharmacy delays decreased, and (4) nurses were more satisfied with the palliative care education. The guidelines are now institutionalized in our 3 other adult ICUs and they have been shared with ELNEC and other hospitals across the United States. Schustich@aol.com

CS349 Glucose Management Protocol Development: A Successful Collaborative Effort

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Purpose: A multidisciplinary initiative was undertaken to create a glucose management protocol including a computer software program that calculates continuous intravenous (IV) insulin doses. **Description:** High blood glucose (BG) increases patients' vulnerability to hospital-acquired infections, volume depletion, poor tissue healing and a prolonged hospital stay. Several large prospective clinical trials have shown that tight control of BG levels with IV insulin infusion reduces morbidity and mortality and improves outcomes in the intensive care unit (ICU) setting. To reduce complications, it is important to maintain BG in a tight range without compromising patient safety by lowering glucose levels to a hypoglycemic state. The multidisciplinary team worked to develop and implement a nurse-driven standardized IV insulin protocol for the ICUs that used an IV insulin dose calculator software application, EndoTool, with the goal of tight glucose control. The team developed comprehensive order templates that guide the provider through a step-by-step process of specified protocol orders. Data collection tools and methods to track the effectiveness of the protocol and the algorithms used by EndTool were developed. EndTool algorithms are dynamic and "learn" the unique responses of the patient and calculate initiation and maintenance IV insulin infusion rates based on the patient's response to previous insulin doses. **Evaluation/Outcomes:** Postimplementation data were measured against preimplementation data, including average BG reading, average BG within 4 hours of therapy, and average peak BG. Data from patients on an insulin drip in July 2006 were compared with data from patients on an insulin drip in March 2007. The average BG decreased from 137 to 127, average BG 4 hours after initiation decreased from 182 to 126 and the average peak BG decreased from 255 to 219. Melinda.davis@va.gov

CS350 Glycemic Control in the Hospitalized Patient: An Advanced Practice Nurse (APN) Evidence-Based Practice Project

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Purpose: Inpatient glycemic control is associated with decreased mortality, morbidity, and length of stay. It was determined that APNs address glycemic control within their populations. In collaboration with a clinical pharmacist, the group began an online diabetes management Pharm D course. **Description:** The online course inspired the APN group. They conducted a literature review, evaluating the impact of hyperglycemia across inpatient populations. Evidence-based practice guidelines from the American Diabetes Association and the American College of Endocrinology were reviewed. A research consultant helped the APNs refine their project purpose: to evaluate the extent of hyperglycemia in the hospitalized patient. The hospital's senior research analyst will link blood sugars and patient population data to establish baseline analyses. Numerous interventions are being implemented: A pilot diabetic ketoacidosis order set to decrease variation in the treatment; reduced glycemic control range for the intensive care unit; and a pilot basal-mealtime-correction insulin protocol with the hospitalist group. Pharmacists have been asked to join the education sessions to partner/collaborate with APNs. Additional education will need to be done for various nursing units/physician groups to move the target range for non-ICU patients to 90-130 mg/dL in accordance with the American Diabetic Association and American College of Endocrinology. **Evaluation/Outcomes:** The desired outcome is improved hyperglycemia management during the hospital stay. Additional outcomes may include decreased morbidity, mortality and length of stay, as well as increased patient satisfaction. mhodges@shp-dayton.org

CS351 The Good Oxygen, the Bad Brain, and the Ugly Hypoxia

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Purpose: Brain tissue oxygenation monitoring ($PbtO_2$) is standard in patients with traumatic brain injury and has recently been applied to stroke patients. Our neuroscience team decided to pursue a trial of the $PbtO_2$ equipment to aid in the early detection of cerebral hypoxia in stroke patients. **Description:** A multidisciplinary team including staff nurses, advanced practice nurses, clinical pharmacists and a neurointensivist reviewed the literature and developed a pilot protocol to evaluate the usefulness of $PbtO_2$ monitoring in the hemorrhagic stroke patient. The literature review demonstrated that trending the differences between brain tissue oxygen supply and demand, may detect ischemia and guide interventions in the management of stroke. Trial equipment (Licox brain tissue oxygen monitoring system) was acquired and the nurses and physicians were trained on the use of the system. A protocol was developed to guide patient treatment and improve neurological outcomes. The protocol included criteria to initiate the $PbtO_2$ system, location of bolt placement, goal of monitoring, management of cerebral hypoxia, ICP and CPP, nursing monitoring and catheter management. $PbtO_2$ catheters were placed on 6 SAH and ICH patients. When the system was placed appropriately, the neuroscience team observed that the monitoring indicated cerebral ischemia and hypoperfusion before clinical signs and symptoms were apparent. Early interventions were then made based on monitoring. **Evaluation/Outcomes:** During the pilot phase, 6 patients received $PbtO_2$ monitoring. Summary of the patients and a case study will be provided. Nursing and medical interventions were titrated to $PbtO_2$ on all 6 patients. As a result of the pilot, the decision was made to purchase the equipment and offer this monitoring to all hemorrhagic stroke patients. SReize@sleh.com

CS352 Got Rhythm? Teaching the Net Generation

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Purpose: ECG rhythm identification is a skill needed by critical care and progressive care nurses to deliver optimal care to patients. Traditional teaching paradigms are not valued by the Net Generation. Rather the Net generation prefers teamwork and peer interactions. An alternative ECG teaching method was developed. **Description:** The Net Generation or Millennials, born in the 1980s, have unique characteristics that differentiate them from other generations. These unique characteristics are challenging to the traditional classroom teaching structure. Additional characteristics include their fascination with new technologies, their need for group activity, their emphasis on extracurricular activities, and their focus on grades. They want to immediately engage in the learning process with interactive, engaging web-like environments that allow learners to interact with the instructor, other learners, or with the content. Learning is a social activity. Having identified a need to provide alternative teaching for ECG rhythm identification, a Rhythm Jeopardy game was created. Topics included: Begins with an "A", Begins with "V", Blocking the Path, To Pace or Not to Pace, etc. Bulleted information, copies of rhythm strips, or defining characteristics of ECGs provided the clues. Teams of 2 were chosen, allowing only one cardiac nurse per team. Additionally as signaling devices were not available, others were chosen to be a "signal spotter," a timer, and scorekeepers. Otherwise standard Jeopardy rules applied. The game debuted at an annual Nursing Education Day, providing an additional enhancement day with multiple learning topics. **Evaluation/Outcomes:** Net Generation characteristics include experiential and engaging learning, interactivity and collaboration, and immediacy and connectivity. Learners become active participants in the learning process. Rhythm Jeopardy was shared positively, meeting the learning needs of all 60 participants in Nursing Education Day. Evaluations and recommendations included having the Jeopardy game made available to all nurses as a downtime activity on the hospital nursing internet. tleonard416@optonline.net

CS353 Got Stroke? Remembering the Basics

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Purpose: To ensure the best outcomes of stroke patients, it is vital that certain standards are met. The performance improvement stroke team identified that tPA vital signs and use of stroke scales were not always completed in a timely manner. Visual cues were developed as reminders to best practice. **Description:** To address this problem, we developed several tools that remind nurses when vital signs and stroke scales need to be performed. Before implementation, staff was inserviced on the standards of care for acute stroke patients. Memory aides such as

mnemonics and catchy phrases were posted throughout the neuroscience ICU and on patient clipboards. Daily documentation audits were performed to determine compliance and identify further educational needs. Results of the audits were presented to the performance improvement team. **Evaluation/Outcomes:** Before implementation, completion of tPA vital signs and stroke scales was 32%. Following education and use of the memory aids, compliance rates reached 69% in the first month and 92% in the second month. Nursing staff like the visual cues and state that thecues are instrumental in helping them provide best practice for stroke patients. jmb0662@bjc.org

CS354 Grass Roots Initiation of a National Certification Program Initiative: Peer to Peer Motivation

Linder C; Integris Baptist Medical Center; Edmond, OK

Purpose: Despite an organizational development of a National Certification Exam Fee Assistance Program and an Annual National Certification Bonus Program, the neonatal intensive care unit remained at 19%—6% below the national average. **Description:** Staff was surveyed and the primary inhibitor of participation in a certification program was the lack of personal time, process confusion, and lack of resources. A peer to peer program was developed to motivate and encourage participation in a national certification program. The development began with a colorful poster presentation announcing the nurse lead initiative, and identifying the certification coordinator and committee. Interested participants were asked to contact the coordinator for supplies and information. A 1-on-1 process was developed to distribute the NICU certification packet. Each full color packet included an application for examination by the certifying body, a fact and information sheet, a 3-month study guide for preparation, and documents needed for accessing exam fee assistance and bonus. The packet also includes a practice exam and practice test questions. Each participant was able to access a core curriculum text from the unit library. A detailed process map poster was then developed and posted. At each stage in the certification process, the poster was updated in order to reflect goal achievement and keep each participant on track. **Evaluation/Outcomes:** At completion of this initiative, our goal of increasing our percentage of eligible nurses who are nationally certified was reached. The first year of our certification program yielded a unit increase of certified nurses by 35%. Our unit total of eligible certified neonatal nurses is now calculated at 54%, well above the national average. carie.linder@integris-health.com

Sponsored by: Neonatal Quality Initiative Network, Inc

CS355 Healthy Skin: Engaging the Team to Improve Hospital-Acquired Pressure Ulcers

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Purpose: Hospital-acquired pressure ulcers are serious clinical complications that increase length of stay and increase cost. The surgical PCU developed a comprehensive multidisciplinary training program to decrease the incidence of hospital-acquired pressure ulcers. **Description:** The previous treatment plan for hospital-acquired pressure ulcers was reviewed and modified according to the current evidence-based practice. The multidisciplinary program consisted of educational and training materials with a self-test exam and AuditTools. The wound liaisons developed and conducted biweekly unit skin audits. These audits revealed a variety of problems and inconsistencies in clinical practice. Problems included incomplete skin assessments on patient's admission, insufficient quality variance report (QVR) documentation, lack of image note and measurements of pressure ulcers, and incomplete Braden scoring, description of pressure ulcers, plan of care, treatment, and evaluation. One-on-one education was provided to RNs and support staff in managing and documenting pressure ulcer. A Pressure Ulcer Algorithm Tool was developed to demonstrate step by step wound management and documentation. Poster boards in the unit are accessible, showing pictures and actual skin products. A baby picture posted in the patient's room served as a visual reminder to the staff that the patient is at risk or has skin issues. Staff motivation, recognition, and certification are initiated, thereby improving patients' quality of care. **Evaluation/Outcomes:** From spring 2005 through summer 2006, the prevalence percentage ranged from 2.56% to 5.71%. Based on our skin survey, after implementing our team approach interventions, the prevalence of hospital-acquired pressure ulcers decreased to 0.0% from fall 2006 through summer 2007. The staff annual evaluations and audits confirm that the staff has positively adopted and incorporated the skin program into daily practice. Teri.Armour-Burton@sharp.com

CS356 The Heart Owner's Manual: The Patient's Personal Guide to a Healthier Heart

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Purpose: At a cost of more than $258 million in 2006, heart disease was the leading cause of death in the US. In an effort to help patients better manage their health care by effecting long-term life-style changes, the Oklahoma Heart Hospital task force developed an individualized teaching guide. **Description:** Recognizing that stress related to hospitalization, altered family dynamics, severity of illness, increased median age of our patient population, language barriers, complexity of coexisting medical conditions and short length of hospital stay proportionally affect the patient's ability to be an active participant in their health care management, our team developed the *Heart Owner's Manual.* The manual is divided into sections that include printed educational materials on personalized procedures, a guide how to access educational videos on the medical media delivery system, any requested materials, pharmacy printouts for meds ordered during the hospital stay and upon discharge, a section for weight and vital signs documentation, and a section to write questions for the health care team. During hospitalization, the patient's nurse educates the patient on the use of the manual during the hospital stay as well as after discharge. The patient has an individualized teaching and medical plan of care to assist in the development of healthy lifestyle changes upon discharge. Cross sections of discharged patients were surveyed to determine the effectiveness of the teaching manual. **Evaluation/Outcomes:** Early survey responses are favorable. Patients reported that the introduction of the *Heart Owner's Manual* decreased stress levels during hospital stay and resulted in more compliance in healthy lifestyle changes after discharge. Patients felt more informed and took a more active role in their health care management. The *Heart Owner's Manual* was instrumental in helping the patients manage their own health. andreasanford@cox.net

Sponsored by: Oklahoma Heart Hospital

CS357 High 5 Program: Staff Recognition for Exceeding Expectations

McCann MF, Harden JM, Madigan CK, Rankin TM, Griffin V; The University of North Carolina Hospitals; NC

Purpose: Strategies to foster a positive work environment is of utmost importance. The literature supports the impact that meaningful recognition has on staff satisfaction and retention. To consistently retain a satisfied work force, efforts must be made to acknowledge the contributions of each team member. **Description:** The Heart Center Nursing Leadership Team designed a program to ensure formal staff recognition. The group strives for consistency and a sense of teamwork in their practice model. It has been in the spirit of this philosophy that the High Five Staff Recognition Program was conceptualized and implemented. The program recognizes all members of the interdisciplinary team. This successful project enables patients, families, and other care providers to recognize employees for "exceeding their expectations". This is done by filling out a "High 5" card delineating the person to be recognized, the reason for the acknowledgment, and the name of the person submitting the compliment. Individual team members are recognized for demonstration of dedication to outstanding patient care, teamwork, and overall excellence. Each unit designates a highly visible common area where completed recognition cards are displayed. The board identifies the unit and encourages staff and visitors to offer feedback. In addition, there are smaller versions of this board in each patient's room where patients and families are able to access "High 5" note cards. **Evaluation/Outcomes:** Implementation of this program allows employees to be recognized for their contributions by patients, families, and coworkers. Staff members have commented that the cards make them feel appreciated and remind them that they make a significant difference in patients' care. "High 5" cards encourage employees to go above and beyond for every patient and family, promote formal recognition, and positively impact employee satisfaction. mmccann@unch.unc.edu

CS358 Homegrown: The 3 Cs For Clinical Education—Crafting, Clay, and Creativity

Walsh R, Thomas T; Renown Regional Medical Center; Reno, NV

Purpose: The healthcare industry has mandated fiscal responsibility and constraint throughout the spectrum. The need to be creative with limited resources and finances has had a noticeable effect on the clinical education department. **Description:** Most hospitals are growing to meet

the needs of their growing and aging communities. Many hospitals across the United States are expanding services to meet these needs. But with expansion, financial responsibility is a primary focus. To meet the educational needs of a growing staff, 2 clinical nurse educators (CNE) in a progressive care unit (PCU) created learning tools to solidify skills. The result was home-grown educational tools to help reinforce practice: A pair of legs made out of nylons and batting was created to educate on arterial and venous sheath removal, diapers soaked with water and inserted with straws was used to demonstrate IV insertion technique, gelatin with straws was used to illustrate venous anatomy with an ultrasound guiding device, and a miniature doll with a clay telemetry pack was used to demonstrate lead placement. These were some of the ways the CNEs creatively conquered the inflated prices of models, mannequins and simulators. **Evaluation/Outcomes:** The staff was effectively educated on various procedures and techniques with the use of the crafted tools. It also has the effect of reminding the staff that fiscal responsibility affects all employees. Last, it has inspired peers to delve into their creative depths to address educational needs. rwalsh@renown.org

CS359 Honoring Those Who Gave the Gift of Life

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Purpose: One type of hero not often recognized is the family who makes the difficult decision to donate a loved one's organs, while the loss is so new and the grief so strong. A collaborative initiative was undertaken to honor patients who become organ donors and recognize their families—the heroes. **Description:** ICU nurses very often develop close relationships with patients and families. So, when a patient dies and becomes an organ donor, it can be emotionally difficult for the nurse. After 2 young boys lost a brother and a father in a single day, the ICU nurses involved in their care realized that honoring families who made the difficult decision to donate life might help provide closure for families and nurses. A large tree mural was designed for a busy hospital hallway. To maintain confidentiality, a brief invitational letter was sent to donor families asking their permission to place their loved one's name on this Tree of Life and inviting them to come to a special ceremony. During the ceremony each family in attendance placed a brass leaf engraved with their loved one's name on the mural. Many, who could not attend, responded to the letter with grateful words and gave their permission to have their loved one's name placed on the tree. Symbolic balloons lined the hallway; 28 white balloons represented the organ donors, and 104 green balloons stood for the number of people who benefited from their gifts. At a reception following the celebration, donor families received a Texas Mountain Laurel to plant in memory of their loved one. **Evaluation/Outcomes:** The Tree of Life is a visual reminder of the real people behind the gift of life at our hospital. The celebration gives families the opportunity to honor their loved ones by sharing their memories. More than 31 families were present and the event was well attended by hospital staff. Several family members have since returned to see "their" leaf. The celebration has now become an annual event to be held during National Donate Life Month. Charles.Reed@uhs-sa.com, jsainz@txorgansharing.org

CS360 Hot Brain? Cool Treatment! Guidelines for Fever Management of Stroke Patients

Styron S, Agudelo A, Angeles E, Livesay S, Mokracek M, Reize S. St. Lukes Episcopal Hospital; Houston TX

Purpose: Literature shows that fever contributes to morbidity/mortality and increased length of stay in neuro ICU patients. Fever control and the use of hypothermia to manage elevated ICP refractory to medical therapy is critically important. We had no standard of care to treat such patients in our ICU. **Description:** An interdisciplinary team of nurses, advanced practice nurses, clinical pharmacists and a neurointensivist formed a team to review the literature. The review revealed strikingly persistent and persuasive evidence demonstrating that moderate hyperthermia during or after brain ischemia or trauma markedly exacerbates neuronal injury. Articles were disseminated and inservices held for staff to increase awareness and education. Clinical practice guidelines (CPGs) were drafted to direct the treatment of fever in hemorrhagic and ischemic stroke patients and to induce hypothermia in patients with elevated ICP refractory to medical management (CPG and case study application will be shared). Standard treatments include scheduled administration of acetaminophen, room cooling, application of cooling devices, as well as astute attention to skin care and shiver control. Exter-

nal and internal fever control technology was piloted by the staff. The Medivance Arctic Sun was used for external cooling and the Innercool Celcius system for internal cooling. **Evaluation/Outcomes:** Based on the success of the pilot, a change in nursing practice was observed in our NICU. Aggressive fever management has become the standard of care for our stroke patients. Program success was dependent on the active nursing involvement in the implementation of the CPG. As a result of the project, the nursing staff is involved in ongoing technology design to improve external cooling in conjunction with a major temperature management company. sstyron@sleh.com

CS361 How Can I Help You? Brochure Outlines the Role of the Clinical Nurse Specialist for Staff

Brames N, Burns J; Barnes-Jewish Hospital; MO

Purpose: The clinical nurse specialist (CNS) role is not clearly understood by staff. As a result, many nurses do not realize the value of a CNS and how they can help them in their daily practice. A brochure outlining the many roles of the CNS was developed. **Description:** The CNS role is not clearly understood by staff. As a result, many nurses do not realize the value of a CNS and how they can help them in their daily practice. A brochure outlining the many roles of the CNS was developed. **Evaluation/Outcomes:** The brochure brought the CNS role to the forefront. Staff members stated they did not realize the CNS was available to help them in so many different ways. The CNS group that used the brochures found that they were called more frequently to assist with complex patient issues, to help with unfamiliar procedures, and to provide education at the bedside. The CNS felt she provided mentorship to nurses of all levels in a more meaningful way. nebrames@charter.net

CS362 How Sweet Are You? A Journey to Tighter Glycemic Control

Minch C, Baisden S, Wood C, Woodham M, Thompson C; Grant Medical Center; Columbus, OH

Purpose: The Grant Medical Center's Critical Care Workteam was charged with developing and implementing a new critical care insulin infusion protocol to achieve glycemic control per evidence-based standards. **Description:** Multiple research studies have shown that tighter glycemic control in the critically ill patient population can decrease mortality. Only 60% of critically ill patients were achieving an average daily glucose of <150 mg/dL, with the time to goal being greater than 24 hours using the critical care hyperglycemic protocol (subcutaneous insulin) and the critical care insulin infusion protocol. The Critical Care Workteam collaborated with the multidisciplinary Critical Care Clinical Process Improvement Team, endocrinology, pharmacy, critical care outcomes manager, and unit managers to develop the new critical care insulin infusion protocol. A 4-week trial of the new critical care insulin infusion protocol was conducted in the CCU. CCU staff received education about the protocol and trial through unit meetings, at the annual Critical Care Skills Day, and posted notices. Physicians were updated by memo. The insulin infusion protocol was revised on the basis of staff feedback and trial results. **Evaluation/Outcomes:** Over 70% of patients achieved an average daily glucose <150 mg/dL with the new insulin infusion protocol versus 60% with the previous protocols. In addition, target blood glucose level was achieved within 6 hours with the new insulin infusion protocol versus greater than 24 hours with the previous protocols. cminch3@yahoo.com

CS363 I Finally Got the Schedule That I Wanted: Initiating a Self-Scheduling Committee in a Progressive Care Unit

Niemchak S, Canipe K, Frazier R; Duke University Hospital; Durham, NC

Purpose: Our MICU step-down/pulmonary/renal unit schedules had historically been done by the nurse manager. As the unit developed the goal of creating a healthy work environment, a few staff members offered to take on the responsibility for creating and maintaining the monthly schedule. **Description:** After reviewing both the shared governance model and AACN's healthy work environment initiative, a detailed plan was developed. The new committee, comprising 5 voluntary staff members, worked together creating monthly schedules and guidelines. Included in the overall plan was the willingness by the committee members to devote a substantial amount of time to this undertaking. Issues such as staff refusing to work holidays or rotating shifts were addressed. Guidelines were posted that were specific to our unit's unique needs, and the committee was held accountable to the management team. Staff has access to committee members to address questions or concerns regarding

the schedule. Monthly meetings with management and staff were held to provide updates and show the growth and progress that the scheduling committee was making. Preferences and guidelines are considered when making scheduling decisions; this creates a healthy, open discussion regarding scheduling changes, processes, and issues. **Evaluation/ Outcomes:** When our nurses were surveyed this summer by the National Database of Nursing Quality Indicators an overwhelming majority were very satisfied with their schedule compared with the previous year. Job satisfaction with unit scheduling was one of the top 4 highest scores for the unit. Finally, our turnover was reduced from 19% for fiscal year 2006 to 12% for fiscal year 2007. niemc001@mc.duke.edu

CS364 "I Know My Patient!" Overcoming Challenges for Using 2 Patient Identifiers in the Intensive Care Unit

Brami M, Sustaita M, Adesanya Y; The Methodist Hospital; TX

Purpose: Despite the focus on the use of 2 patient identifiers, some intensive care unit (ICU) nurses skip steps. After multiple interactions in a 12-hour shift, they declare "I know my patients!". Following a study on misidentified laboratory specimens in our ICU, we focused on improving this. **Description:** Misidentified laboratory specimens pose a serious threat to patient safety secondary to misdiagnoses and/or medical mismanagement. Our surgical ICU misidentified laboratory specimen rate was persistently high (4.3 incidents/1000 patient days) despite several attempts to remedy the problem. In 2007, our staff participated in a Six Sigma process in collaboration with the laboratory and operations improvement in hopes of identifying weak links in the process. After addressing system processes such as label printer location and order entry delays, we identified the lack of the use of 2 patient identifiers for every specimen collection as the key problem. Our action plan included sharing details of actual events, retraining in the specimen collection process, communicating performance expectations, and immediate 1-on-1 counseling sessions as needed. Practice changes included labeling specimens at the bedside only. **Evaluation/Outcomes:** In the specimen collection process, we identified a disconnect between the patient's identification band, sample, and label. Once all other factors were eliminated, we focused on the 2 patient identifiers. So far, our misidentified specimen rate has decreased 66% through the end of the 3rd quarter 2007. At this pace, we will achieve our goal of 0% misidentified laboratory specimens for the 4th quarter. mbrami@tmhs.org

CS365 The Impact of a 24-Hour, Multidisciplinary Rounding Model in a Surgical Intensive Care Unit

Daly M, Benoit G, Gray B; Vanderbilt University Medical Center; TN

Purpose: Surgical ICU patient populations are at risk for receiving delayed, ineffective care due to inadequate daily goal planning and team cohesiveness. Our challenge was to design a model that would improve daily goal planning and team cohesiveness while increasing patient and staff satisfaction. **Description:** A 24-hour, multidisciplinary rounding model was developed and implemented in April 2006. The rounding model involved a surgical, critical care attending physician, fellow resident, midlevel resident, intern resident, registered nurse, respiratory therapist, clinical pharmacist, and nutritionist. Rounds occurred in the morning, afternoon, and evening. The entire multidisciplinary team participated on morning rounds. Daily, multidisciplinary goals were identified for the patient using a detailed rounding algorithm and a hand-written tool to facilitate communication and team cohesiveness. The fellow residents rounded in the afternoon to review and update the patients' daily goals. The fellow resident, midlevel resident, intern resident, registered nurse, charge nurse, and respiratory therapist participated in evening rounds to review and update the patients' daily goals. **Evaluation/ Outcomes:** The 24-hour, multidisciplinary rounding model improved patient and staff satisfaction. The overall quality of care increased from the 60th to the 70th percentile and the overall teamwork between physician, nurses, and other staff increased from the 45th to the 95th percentile in the annual patient satisfaction survey. All items related to teamwork, communication, or staff respect increased from the previous annual staff satisfaction survey. michael.daly@vanderbilt.edu

CS366 Implementation of a Carotid Stent Program With a Progressive Care Unit As Primary Recovery Site

Smith MA, Huth-Thompson C, Kinsella M; Exempla St Joseph Hospital; Denver, CO

Purpose: To ensure appropriate placement and monitoring of patients after a carotid artery stent (CAS) procedure, including use of a validated stroke scale and adequate hemodynamic support. **Description:** Most patients receiving carotid stents recover in an ICU. Patients from 120 to 150 interventional procedures per month recover in our interventional telemetry unit (PCU). We believed we could successfully handle patients receiving carotid stents. Our challenge was to identify and meet unique requirements for CAS patients while ensuring consistency of care regardless of hemodynamic status and location. Education for all staff (ICU, CVL, and PCU) included information on carotid anatomy, indications for CAS, and use of the modified National Institute of Health Stroke Scale, with mandatory joint evaluation at every handoff of care. Additionally, PCU staff received training on titrating dopamine to a maximum of 8 µg/kg per minute. Telemetry (PCU) staffing level was adapted for more intensive recovery (initially a 3:1 nurse: patient ratio, which we modify to 4:1 depending on the patient's status). Vital signs with stroke scale are monitored every 15 minutes 8 times, every 30 minutes twice, and every hour 4 times, then every 4 hours. **Evaluation/Outcomes:** 35 CAS cases were completed between March 2005 and January 2007. Eleven required pressor support after the procedure, 5 with neosynephrine recovered in the ICU and 7 received dopamine in our PCU. Two patients treated with dopamine were transferred to the ICU for increased vasopressor support. Only 2 embolic events were identified by PCU staff after the procedure but did not require transfer to ICU. About 80% of patients receiving CAS recovered safely and successfully in PCU. smithma@exempla.org

CS367 Implementing a Best Practice Model for Traumatic Brain Injury Management

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Purpose: Traumatic brain injury (TBI) is a leading cause of trauma-related morbidity and mortality. Nurses' role in improving outcomes relates directly to their ability to limit secondary brain injury. Our institution implemented a best practice model using evidence-based guidelines for TBI management. **Description:** Our institution developed a collaborative approach to improving outcomes in the TBI population by implementing a best practice model with the support of the Adam Williams Initiative. The Adam Williams Initiative is a philanthropic foundation endorsed by the Brain Trauma Foundation (BTF), the American Association of Neurological Surgeons (AANS), and the National Foundation for Trauma Care (NFTC). The initiative provides training and equipment to trauma centers for the treatment of severe traumatic brain injuries. The interdisciplinary team consisted of advanced practice nurses, trauma surgeons, neurosurgeons, pulmonary intensivists, and respiratory care practitioners. Participating in this initiative gave us an opportunity to assess our current level of performance and then provided the momentum to develop a higher standard of practice. Our long term goals are to decrease mortality, improve functional outcomes, and avoid progression to a persistent vegetative state. Short-term goals were to empower the bedside nurse to evaluate and intervene without delay, thereby limiting clinical deterioration. The collaborative approach improved consistency in practice previously hindered by the variability of individual physician preference. **Evaluation/Outcomes:** The immediate results of this collaborative effort were the creation of a standardized order set and the development of an algorithm to assist the bedside nurse in assessment and interventions. Six months after this practice change, our institution began submitting data to the BTF national database for tracking processes and outcomes in the TBI population. Benchmark data will be used for ongoing evaluation and improvement. christopher.walker@sharp.com

CS368 Improving Training Program for Maintaining Competency With VAD Devices

Soltis L, Blue L, Clark PL, Ellis M, Farley T. Duke University Hospital; Durham, NC

Purpose: Maintaining staff clinical competence of various devices used in the cardiothoracic surgical intensive care unit presented some unique challenges. Facing turnover/retention challenges, orienting new staff, and providing adequate training for all staff on new equipment was daunting. **Description:** Our particular task at hand was addressing our VAD program educational needs and determining what would be the best program for training staff. Our VAD program had grown tremendously, and in August 2006, we only had approximately 25% of our ICU and stepdown staff trained on all of the various VAD devices that were implanted at our facility. Previously we offered 1 class each month for training, rotating through the different devices. Some nurses had all of the devices,

others had only 1 or 2 of the VADs. This became increasingly challenging when determining staffing needs and making shift assignments, because of staffing limitations. We put a task force together to look at how to improve our VAD training program. We implemented a 2-day, intensive training session that covered all of the devices that we currently used, implementing workstations to cover dressing changes, competency check offs, troubleshooting, and case studies/clinical scenarios. These classes were offered quarterly to both the ICU and the step-down staff. Ten months after implementing this new program, we were able to train over 100 nurses on all of the VAD devices. **Evaluation/Outcomes:** Feedback from the attendees was tremendous. After implementing this program, we now have over 85% of our staff trained on all of the VADs and have incorporated the new training program into the orientation education plan for the first year of employment in the cardiothoracic surgery service. We also extended our classes to the Life Flight staff as well to facilitate their training needs for this patient population. Lisa.Soltis@Duke.edu

CS369 An Initiative to Diminish the Occurrence of Pressure Ulcers in Pediatric Cardiac Surgery Patients

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Purpose: Pediatric cardiac patients are vulnerable to pressure ulcers because of decreased oxygen saturation and limited cardiac output. The focus of this project was to identify patients at increased risk for pressure ulcer development and to institute nursing interventions to maintain tissue integrity. **Description:** Pediatric cardiac nurses from the preoperative clinic, operating room, cardiac intensive care unit (CICU), and step-down unit developed guidelines for pressure ulcer prevention in cardiac surgery patients. Preoperative risk assessment included patient age and placement on growth curve, anticipated length of surgery, and degree of pre-existing cyanosis. Intraoperative guidelines involved documentation of skin assessments before and after the procedure to detect potential areas of concern, application of transparent film dressings over bony prominences to decrease friction effects, the use of gel padding for protection to common problem areas such as occiput, heels, and elbows, and the placement of an air mattress overlay for pressure redistribution on the postoperative bed. CICU staff were taught about pressure ulcer development and prevention strategies. Clinical nurse specialists from the CICU underwent comprehensive training in skin assessment, pressure ulcer prevention, pressure ulcer staging guidelines, documentation, and wound care. Communication of skin concerns and continuation of interventions followed the patient through transfer to the step-down unit. **Evaluation/Outcomes:** Quarterly skin integrity data is collected by using the Braden Q pediatric risk assessment tool on CICU patients. Incident reports are filed on all alterations in patient skin integrity to detect trends and ensure follow-up. The need for a standardized approach to all skin issues was realized including identification, notification, documentation, treatment and follow-up across the continuum.
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CS370 An Innovative Approach to Patient Safety

Solek W; Vanderbilt University Medical Center; TN

Purpose: The surgical intensive care unit at VUMC is one of the most progressive units in the medical center. In 2006 more than 1700 procedures were performed at the bedside. With all the procedures being performed in the unit, the need was seen for a new nursing role to ensure patients' safety. **Description:** The number and types of procedures being performed in the SICU became overwhelming. The need was seen to ensure that patients' safety was maintained during the procedures. As a result, the procedure nurse role was developed. When the role was developed, the procedure nurses were educated in a variety of techniques in order to assist the physicians and to ensure proper technique was being followed. The different types of procedures they assist with vary on a daily basis, and some of them include placement of central catheters, performing bronchoscopic examinations, performing tracheostomies, complex wound care requiring deep sedation, and many others. They were educated and trained to understand the different policies of each procedure, the supplies needed for the procedure and any medications they would need for the procedure and how those medications would affect the patient. Patient safety was a major factor in the implementation of the position. These nurses have a good working knowledge of what is involved for each procedure and the complications that may arise. They are able to instruct and educate novice physicians and staff about the different policies and protocols of the procedures. They also work with many different committees to develop new policies and techniques all in an effort to ensure patient safety and positive outcomes. **Evaluation/Outcomes:** As a result of this new role, more procedures are done in the SICU than ever before. Patient safety is maintained and the number of procedural errors on the unit is virtually nonexistent. The satisfaction of patients, families, physicians, and staff has all increased with the implementation of this role. All of this has led to positive patient outcomes. These specially trained nurses have been invaluable to the unit and our patients' well-being. wendy.m.solek@vanderbilt.edu

CS371 Interdisciplinary Development of an Electronic Critical Care Information System (ECCIS)

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Purpose: Henry Ford Health System identified the need to improve consistent and thorough documentation as a strategy to improve effectiveness of communication among caregivers. **Description:** The Henry Ford Health System currently has 267 adult and 40 NICU beds spread across 5 campuses. A focus group from nursing, physicians, pharmacy, respiratory and IT developed a software request for a proposal identifying the minimum functionality requirements. The group determined the need to have a software platform with the ability to customize to match current and desired workflow to facilitate integration of evidence-based practice and enhancement of communication between caregivers. The application displays all caregivers documentation in addition to direct access to practice policies and guidelines, clinical alerts and assessment fields that populate the flow sheet once specific clinical criteria are identified. Bedside monitors, mechanical ventilators, routine laboratory results and the hospital information system (HIS) will interface with the system. The display of patient name and MRN within the flow sheet will occur via the HIS interface, which will improve accuracy of patient identification. The key to the short- and long-term success of the project will be ownership of the development of the database directly by clinicians along with the collaboration for functionality enhancements with the vendor. **Evaluation/Outcomes:** At the time of the submission of the creative solution abstract, the initial rollout of the application is scheduled for October 2007. The completion of integration testing has validated that consolidating nursing, respiratory therapy, and physician documentation into 1 record has improved communication between caregivers.
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CS372 Introducing Dexmedetomidine: Use of a New Sedating Agent in the Pediatric ICU

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Purpose: One of the most challenging issues facing PICU nurses is providing effective sedation to critically ill children while minimizing its untoward effects, such as cardiorespiratory depression. An initiative was undertaken to explore the use of dexmedetomidine as an alternative sedative in the PICU. **Description:** Dexmedetomidine (Dex), an alpha-2 agonist, is a novel sedative with analgesic and anxiolytic properties. It has a number of potential advantages as a sedative in the PICU, including respiratory stability, a predictable hemodynamic profile, and easy patient arousability. A multidisciplinary group reviewed the literature, and concluded that Dex would be a safe and effective agent in the PICU. This group developed a clinical practice guideline (CPG) for the use of Dex in the PICU. The CPG describes the target patient populations, which include patients requiring mechanical ventilation in whom dosage requirements for conventional sedating agents are escalating, and/or rapid emergence from sedation would be beneficial. The CPG details critical components of medication administration including the use of sedation behavioral scoring to guide dosage titration, expected dosage range, administration guidelines, side effects, adverse reactions, contraindications, and indications for discontinuation. After the PICU staff was inserviced on the CPG, Dex use was initiated in the PICU. Monitoring data has been collected for each patient who receives Dex in the PICU. PICU physicians and pharmacy staff periodically analyze this data. **Evaluation/Outcomes:** To date, dexmedetomidine has been used on more than 30 PICU patients, (ages 3 months-18 years), with a variety of medical/surgical diagnoses. Dex has been most commonly used as a supplemental infusion in patients also receiving morphine and midazolam infusions. A small percentage of patients have had Dex discontinued for adverse effects. Dexmedetomidine is an effective alternative sedative for PICU

patients, with an acceptable safety profile. beth.mcdermott@childrens
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CS373 Is Your Patient in the Zone??? If Not, Consider Automated Prone!!

McCauley S; Lehigh Valley Hospital and Health Network; PA

Purpose: Prone position maximizes therapeutic effects for critical care patients, but use is limited, as it is labor intensive and associated with potential risks to patient and caregiver. This poster describes an automated proning therapy system used in a academic, community, Magnet hospital. **Description:** Prone positioning improves expiratory lung volume and ventilation, facilitates drainage of pulmonary secretions, decreases pleural pressure, and restores ventilation to the dorsal lung regions. Manual placement of a critically ill patient in the prone position requires a minimum of 4 care providers, who are challenged to manipulate equipment, tubes, and catheters. Critical care nurses led an interdisciplinary team in investigating a product and developing protocols for initiating and maintaining automated prone therapy. A sample of 10 critical care patients who met criteria set by the investigating team were used in the trial of the automated prone therapy system. Strict adherence to criteria were maintained, including acute pulmonary injury, confirmation of adult respiratory distress syndrome (ARDS) through serial arterial blood gas draws and chest films, and close monitoring by nursing staff. Nurses were instrumental in promoting the proper use of automated prone therapy within the critical care unit through staff education. **Evaluation/Outcomes:** Early initiation of automated prone therapy for critically ill patients with ARDS has resulted in reduced incidence of ventilator-associated pneumonia and nosocomial pressure ulcers. Automated prone therapy enables safe positioning of critically ill patients, while minimizing risk to the patient and caregivers. Critical care nurses can use this program to implement safe, automated prone therapy in their own institution. Susan.McCauley@lvh.com

CS374 It's a Marathon, Not a Sprint: Sustaining VAP Rates in the Long Run

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Purpose: A change in culture to sustain low ventilator-associated pneumonia (VAP) rates requires consistent monitoring, education, reevaluation of processes and the literature, and active engagement of staff. **Description:** A project to decrease VAP rates was started in July 2002 by a multidisciplinary team. First initiatives included hand-washing technique, oral care, head of bed (HOB) elevation, daily breathing trials, and development of a ventilator bundle. To encourage staff to elevate the HOB, large red arrows were placed on the bed at 30 degrees where they could be easily seen. Free drink cards were motivating reminders of the importance of compliance. The next phase included sedation minimization, small bore tube feeding, and ventilator heaters. The acronym GO WHAP VAP (gastrointestinal prophylaxis, oral care, wean the patient, hand hygiene, aspiration precautions, prevent contamination) was created as another reminder. Small targets and goals were created. For example, if the HOB was elevated for all patients for 1 week, a staff party with pizza or other treats was held to celebrate. Other strategies included standardized weaning protocols, subglottic endotracheal tubes, empiric antibiotic use, and continuous lateral rotation. Drawings for prizes were held to recognize when staff used appropriate sedation minimization. The evidence base for practice is continually evaluated, as the current processes are monitored and evaluated through ventilator bundles and VAP rates. **Evaluation/Outcomes:** Through persistence, perseverance, and creative staff involvement, VAP rates have decreased from 7.61/1000 ventilator days (FY03) to 0.32/1000 ventilator days (FY07). A zero incidence rate has been sustained for the last 10 months. We continue to evaluate and add new strategies to maintain our momentum, which has been integral to our success in changing the culture for quality patient care of ventilated patients. kinderl@ohiohealth.com

CS375 It's My Turn: Rotational Therapy in the ICU

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Purpose: A nursing initiative began to introduce research at the bedside, link research with practice, and enhance delivery of care to the respiratory compromised patient. Patients with indicators of poor gas exchange were identified and rotational therapy techniques initiated to reduce ventilator days. **Description:** After evidence-based practice was reviewed, a replication study commenced. The CNS, clinical educator, and permanent charge nurses joined to review literature and write an IRB application to look at degrees of rotation, time spent in rotation, P/F ratio, and outcomes of rotational therapy. Guidelines for rotational therapy and an audit tool were developed. Nursing staff was educated on the research process, current review of literature, principles of immobility, benefits of rotational therapy, and guidelines for proper bed usage. Each day the charge nurses collected and reviewed audit tool data. At daily interdisciplinary rounds, the charge nurse reinforced rotational therapy techniques. The clinical educator and charge nurses analyzed data after a 6-month period and disseminated results to unit governance leadership and staff. The results generated discussion on enhancements to the rotational therapy process. **Evaluation/Outcomes:** Preliminary data showed a 30% increase in P/F ratio, and a 2-day decrease in ventilator days. Staff became comfortable with the rotational therapy process, placing patients on the beds earlier, and troubleshooting issues with patient tolerance of therapy. The research process was carried out by sharing data and findings with staff at unit shared governance meetings, within the hospital, and at local conferences. Lynn.Klassman@advocatehealth.com

CS376 Joint Theater Trauma System: Saving Lives on the Battlefield

Smith K; U.S. Army Institute of Surgical Research; San Antonio, TX

Purpose: Approximately 600 trauma victims per month are currently cared for in Iraq. With a limited health care system, it was clearly identified that an organized trauma system was needed in order to effectively care for that volume of traumatically injured military and civilian casualties. **Description:** American regional trauma systems designed to reduce morbidity and mortality from injury were developed in the mid 1960s. Celso et al (2005) determined that at least a 15% reduction in mortality is gained from the presence of a community trauma system. Strategic casualty analysis coupled with key leadership observations in theater and personal experience in a stateside regional trauma system paved the way to link battlefield trauma care with the establishment of a "Joint Theater Trauma System (JTTS)." The JTTS was established in December 2004 to ensure that the right patient got to the right place at the right time for the right care. The implementation of the JTTS involved establishing a theater trauma registry, clinical practice guidelines, and clear lines of communication between the casualties' point of injury through the healthcare continuum. **Evaluation/Outcomes:** Measurement criteria involve more than 108 data points for every casualty. Data points include outcome criteria for mechanism of injury, preventive measures, resuscitation techniques, as well as morbidity and mortality information. Results of JTTS implementation include a 25% reduction in mortality. Improved trauma care is realized through seamless collaborative care, resuscitation guidelines, and controlled transport of the casualty. kimberly.k.smith@amedd.army.mil

CS377 Learning at Your Fingertips: New Directions for Accessible Critical Care Education—A Canadian Perspective

Goldsworthy S, Graham L, Robinson J, Campkin M; Durham College; Oshawa, Ontario, Canada

Purpose: The goal of this new and innovative critical care nursing e-learning program is to increase accessibility of critical care education to all nurses across the province of Ontario. This program is designed to assist in recruiting new critical care nurses and assist in retaining experienced nurses. **Description:** This new Critical Care E-learning program was launched in September 2007 in Ontario, Canada. It was funded through the Ministry of Health and Long Term Care in Ontario. The Critical Care E-learning Program at Durham College consists of 3 components: 6 online courses, a 39-hour simulation course, and a preceptored practicum in a critical care unit. The program is designed for learners to progress at their own pace wherever they have access to the Internet. Upon successful completion of the program, the nurse will receive a level 2 or level 3 critical care certificate. Each student in the program will have a PDA to bring with them to the simulation lab and the practicum setting. The PDA provides the nurse with 3 digital book resources to be used at the bedside. By increasing access to critical care education, this initiative enhances the retention of critical care nurses and increases the number of nurses with specialized knowledge. This in turn, builds capacity to prepare for future growth demand and surges in the need for critical care services. The program has been developed to reflect the new standards for critical care nursing in Ontario. **Evaluation/Outcomes:** The program is being evaluated throughout each step of the program. A pilot study was

conducted before the program's launch in September 2007. Variables such as student satisfaction, self-efficacy, and academic success will be examined. PDA and simulation skills will also be studied in relation to the nurses' transition into the critical care work setting. sandra.goldsworthy@dc-uoit.ca

CS378 Level I Cardiac Care Program: Save That Heart Muscle

Kuphal K, Habrat S, Schlund A; Aspirus Wausau Hospital; WI

Purpose: Aspirus Hospital implemented the level I cardiac program in 2007 with the intended goal to provide rapid reperfusion for all patients with acute myocardial infarction transferred from outlying facilities. Knowing "time is muscle," the aim is rapid diagnosis, transfer, and reperfusion within 30 minutes. **Description:** The level I cardiac program is a collaborative initiative that encompasses regional EMT and emergency services, as well as our physicians and various hospital staff members. The process includes (1) a standardized protocol for treatment of acute coronary syndromes (ACS), (2) convenient 1-call referral phone number identified as "888," (3) coordination of transportation, (4) group page notifying involved members of the arrival of patient (code "222"), (5) cardiologist greeting patient upon arrival at emergency department, (6) direct transfer to catheterization lab, (7) simultaneous min-registration, history and physical, informed consent, and patient preparation, (8) intervention to open vessel within 30 minutes of arrival, and (9) immediate follow-up with family in waiting room. **Evaluation/Outcomes:** The level I cardiac program has processed 62 patients. Of the transfer patients with evolving AMI, the door to reperfusion is 29.5 minutes, well within our initial goal of 30 minutes or less. kuphal@sbcglobal.net

CS379 Life in the Fast Lane: The Impact of Initiating Protocols on Staffing

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Purpose: In 2006, the SICU instituted protocols for tight glycemic control and screening/isolation for vancomycin-resistant entercoccus and methycillin-resistant *Staphylococcus aureus* for patients entering the SICU. A nursing initiative was put forward to quantify the workload associated with these strict protocols. **Description:** A literature review showed that while protocols are crucial to improving patient safety, they can also be time consuming, leading to inadequate staffing and frustration. In order to ensure adequate staffing levels for the SICU to carry out these patient safety protocols, a time study was conducted. Data were collected for 1 month to determine and quantify the extra time required of nursing staff to care for isolated versus nonisolated patients who were on the tight glycemic protocol. The following indicators were measured: traffic in and out of the room (number of personnel used), gowning and gloving for each entry into a patient's room, and the measurement and treatment of glucose values based on the protocol. Other data collected included the average number of chemsticks per month and the personnel needed just to adhere to the protocol. The data were presented to the nursing administrators and a request for an increase in hours per patient day (HPPD) was made. **Evaluation/Outcomes:** The study showed that each isolation patient requires 302.8 hours annually for gowning/gloving. It takes an additional 184 hours/patient to administer chemsticks (based on 1 chemstick every 2 hours). For every 7 patients in isolation, an additional full-time equivalent is needed for the time required to perform the gowning/gloving and glycemic protocol. As a result, the HPPD have been increased to partially reflect the additional workload. crickelm@umich.edu

CS380 IV Catheter Change Policy to Decrease Risk of Catheter-Associated Blood Stream Infections (CA-BSI) in a CICU, a NICU, and a PICU

Bugbee J, Wilson A, Ridling D, Merrill K, Hawk H, Jackson C, Jones S, Kirkland K, Lester D, Ruddy M, Yalon L; Children's Hospital and Regional Medical Center; Seattle, WA

Purpose: Literature demonstrates that surfaces in ICUs are colonized with numerous organisms. IV tubing changes may pose a risk for contamination as lines are prepared on these surfaces. In our work toward eliminating CA-BSI, we have developed a standardized approach for performing all catheter changes. **Description:** To accomplish this, we developed a policy to minimize contamination of IV tubing. A sterile field is created by covering a clean surface with a sterile drape. Tubing, connectors, caps, and all components required for the IV catheter change are placed on this sterile field. Clean gloves are donned and tubing is con-

nected as necessary before priming fluids. The distal end of the tubing is secured to the drape while being primed. To prepare the nursing staff for implementation of this policy, posters were developed, and content was added to a mandatory education day. Through this change in policy, the staff acknowledged an increased awareness of aseptic technique while changing catheters. In addition to the policy change, Seattle Children's has taken part in numerous tactics to reduce our CA-BSI. These included eliminating the use of continuous infusions through injection ports, introduction of antibiotic impregnated central catheters, 10-second alcohol scrubs before accessing catheters, ensuring dressings are changed every 7 days or when soiled, and others. Seattle Children's also took part in the CHCA and NACHRI collaborative as a means of addressing the problem of CA BSI not only in our hospital but nationwide. **Evaluation/Outcomes:** After the introduction of many practice changes, including this one, we have observed a reduction in all 3 ICUs. The CICU from 10-0 CA BSI per 1000 catheter-days, the NICU from 6 to 3.5 CA BSI per 1000 catheter-days and the PICU from 8 to 2.4 infections per 1000 catheter days. The change in procedure has not only produced a decrease in CA-BSI but also made nurses more cognoscente of infection risks during catheter changes. jennifer.bugbee@seattlechildrens.org

CS381 Long-Term Care in the ICU: Can Primary Nursing Really Work?

Farlow V, Brangle R, Pack B; Duke University Health System; NC

Purpose: Advances in medicine and technology result in high-risk patients staying longer in the ICU. This growing population is sometimes categorized as the "chronic" or "long-term" patient. Our ICU recognized the special needs of this group and the necessity to implement a plan to meet them. **Description:** Advances in treatment and pharmacotherapy for complications such as cardiac arrest, sepsis, shock, and multisystem failure have resulted in increased patient survival. Yet, the same medical research that makes it possible for this population to survive complex illnesses, results in ICU admissions of week to months. Recognizing the need to meet the distinctly specialized needs for this growing ICU population, a group of staff nurses identified themselves as "primary care" nurses with a focus on the complex, long-term patient. The goals were to promote comprehensive understanding of this patient population, become skilled in the ability to coordinate care, foresee and prevent complications and enhance discharge planning. This unique position as an integral member of the health care team and a key patient advocate in the illness to wellness continuum allowed them to improve communication among the consult teams and offer valuable insights for use in the multidisciplinary plan of care. Additionally, they examined the macroscopic view, beneficial to both patient and healthcare system. For example, daily lab testing and x-rays, vital to acute care patients, may be both uncomfortable and unnecessary for chronically ill patients. **Evaluation/Outcomes:** Communication in the group is well established, resulting in a positive collegial relationship that anticipates patient needs, enhances discharge planning, and prepares the family for future of the patient. Staff members who enjoy working with this population allow others to care for the more acute patients resulting in improved staff moral. Consistent care and improved knowledge of patient needs prove that primary nursing still works! vivian.farlow@duke.edu

CS382 Maintaining Competency in Cardiovascular Surgery Using High-Fidelity Simulation

Maxwell M, Kreeger A; Exempla Good Samaritan Medical Center; Lafayette, CO

Purpose: To increase skills and competency when caring for cardiovascular surgery patients during the immediate postoperative phase. **Description:** In May 2007, EGSMC opened a cardiovascular surgery program. During the program ramp-up phase, a core group of ICU staff were trained; all have previous CV surgery experience. The initial training included skills competency check-off and day-in-the-life scenarios. At the conclusion of these events, staff requested a more "real-life" training process. Using high-fidelity simulation, we were able to simulate a patient admitted direct from surgery after coronary artery bypass grafting. This patient soon became hemodynamically unstable due to thoracic bleeding. With the high-fidelity simulator, we were able to simulate an increase in thoracic bleeding from the chest tubes; as well as all the hemodynamic consequences that would arise with the thoracic bleeding (ie, low blood pressure and cardiac output). Each simulation group paired 2 nurses from the ICU CV team and the scenario ran for approximately 45 to 60 minutes.

In the prebrief, nurses were instructed to care for this simulated patient just like a real patient, including drawing blood for labs, giving medications or blood products, calling the physician, interacting with the family, and all of the required documentation. **Evaluation/Outcomes:** Staff were initially apprehensive; however, once the scenario began all participants became engaged in the event and the patient "came to life." Debrief sessions were held with each scenario. Any identified issues became teaching and learning opportunities. In conclusion, staff demonstrated competency with CV skills, greater critical thinking capability and in doing so stated that they felt more confident in caring for CV surgery patients. Maxwellm@exempla.org or Kreegera@exempla.org

CS383 A Medical Intensive Care Unit's Success Story
McCabe P, Garner B, Conley L; Washington Hospital Center; Washington, DC

Purpose: The goal of the comprehensive quality improvement program is to continuously improve the care provided to patients. Over the past years, we have addressed mechanical ventilation, weaning, mortality, nosocomial blood-stream infections and ventilator-associated pneumonia.) **Description:** Our creative solutions included several multidisciplinary protocols for extubation, sedation, and long-term weaning. We also implemented a daily goal sheet and a cart for central catheter insertion with the use of a multidisciplinary procedure. All solutions were developed by members of the quality improvement program. Implementation included team educations sessions, champions for each protocol, staff accountability, and one to one education as needed. The educational sessions provided education to all health care team members at the same time, allowing everyone to be a part of the teaching/learning process. Champions were on the unit daily. Each champion reinforced the information provided at the learning sessions, answered questions, and assisted the staff as needed. Each protocol and process has been tested and revised several times. Each revision was made to improve the care provided to the patients. The staff and the champions continue to evaluate and revise unit processes and protocols to improve patient care. **Evaluation/Outcomes:** Outcomes included an increase in the number of patients receiving mechanical ventilation from 125 to 190, decrease in the mean length of stay (LOS) with mechanical ventilation from 8.7 days to 4.9 days, decrease in the percentage of patients with a mean LOS with mechanical ventilation greater than 14 days from 21.3% to 7.5%, decrease in reintubations from 10.2% to 4.8%, and a decrease in nosocomial primary blood stream infections per 1000 catheter days from 18 to 0. Data same quarter multiyear. patricia.mccabe@medstar.net

CS384 Memorial Service in the Adult Critical Care Setting
Cuypers D, Delaporta L; Brigham and Women's Hospital; Boston, MA

Purpose: A large portion of MICU patients succumb to critical illness, abruptly breaking bonds that are formed between staff, patients, and their families. A memorial service was created to support families and create an opportunity for closure. For staff, this is an arena to grieve for patients. **Description:** While searching for evidence-based practice in palliative care to apply in our critical care setting, we met with a chaplain who conducted memorial services for an outpatient palliative care practice in a tertiary hospital. After years of witnessing patients dying with family members at their bedside, we felt a memorial service would be a simple but powerful healing event for families and staff. In September 2006, we organized the first MICU Remembrance Service. We invited families of patients who died in our unit between July 2005 to 2006. The service was non-denominational with readings and music performed by staff. We involved family members by creating a "white rose ceremony" in which each family member would place a rose in a vase symbolizing their loved one. At this time they had an opportunity to share a memory. Afterwards a reception was held in a separate area to encourage conversations between families and staff. **Evaluation/Outcomes:** The memorial service proved to be a powerful experience on many fronts. What was discovered is that closure outside the 'crisis' state is important for families. Having a final moment with those that were there 'at the end' to reflect on the person lost and thank those that provided the sacred space necessary to say goodbye was moving for all. Data was collected through surveys mailed to families. About 270 people have attended 3 services. DCuypers@partners.org

CS385 MET to the Rescue!! Overcoming Stagnant Outcomes Through Expansion and Education
Bogert S, Ferrell C, Alvarez T, Norman V; St Joseph Hospital; Orange, CA

Purpose: A medical emergency team (MET), a rapid response team, was developed in 2004. MET outcomes progressively improved Code Blue and mortality statistics. MET calls plateaued in 2006. To continue growth and improve processes, we identified potential contributing factors to the stall. **Description:** We expanded our MET Committee and formalized respondent application criteria. We conducted a survey of medical/surgical nurses to assess knowledge and attitudes toward MET. Questions on MET purpose, guidelines, perception, attitudes and overall experiences were included. The results validated medical/surgical nurse discomfort with critical care nurse attitude, leading us to implement needed team education and a change in culture surrounding MET team activities. MET committee members started "Adopt a Department." Each member provided resources to his/her assigned area, including quarterly MET/Code data. Revised documentation efficiently captures and reviews processes, incorporating early signs of sepsis into MET baseline assessment. We began our "Save a Life Campaign," educating with posters, having MET members available to teach, and encouraging collaboration between MET and medical/surgical nurses. The campaign involved raffle events with great prizes. In keeping with our theme, staff who activate a MET call receive lifesaver pins "I Saved a Life" and thank you notes. **Evaluation/Outcomes:** Med-surg and critical care partnerships and true collaboration resulted. Nurses are proud to be MET respondents and part of the team's growth. The adopted departments welcome MET liaisons and resources. The "Save a Life Campaign" was a hit; lifesaver pins are coveted. More importantly, mortality has decreased from a high of 1.8 (late 2006) to as low as 1.0 in less than a year. MET calls are up, and out-of-unit Code Blues are decreasing. Soudi.Bogert@stjoe.org

CS386 Moving Day: Creating a Guide to Smooth the Ride
Nugteren L; Mercy Hospital; Coon Rapids, MN

Purpose: The process of transferring out of the intensive care unit can provoke anxiety for both patients and family members. Patient statements and low scores on the patient-family satisfaction survey prompted the ICU council to take action. A transfer brochure was created to provide general transfer information to patients and their families. **Description:** Common transfer questions and concerns were identified by bedside nurses. A color, trifold brochure was created to guide patients and families through the transfer process specifically addressing these typical concerns. The brochure guides patients and families from the time transfer orders are written through the actual process of moving the patient and his or her belongings to a new room. Written to encompass a variety of patient outcomes, the brochure is appropriate for both patients expecting a full recovery and those entering hospice cares. As transfers are not always immediate, one section describes "overflow status" when patients continue to stay in their intensive care unit room awaiting bed availability on a step-down or medical-surgical unit. A brochure is offered by the primary nurse at the time transfer orders are received. The transfer brochure encourages patients and their families to approach the primary nurse if any specific questions about the transfer need clarification. The brochure was presented to the staff via poster presentation and the staff newsletter. **Evaluation/Outcomes:** Patients, families, and nurses have found the transfer brochure to be informative and easy to use. Before implementation of the brochure, only 35% of returned patient-family satisfaction surveys reported having excellent information about the patient's transfer. This score increased to 41% during the first quarter of using the transfer brochure. Scores for excellent emotional preparedness for the transfer also increased from 28% to 40%. laura.nugteren@allina.com

CS387 A Multidisciplinary Certified Primary Stroke Center: From Bedside to the Community
Oberman K, Flaherty C, Coke L; Rush University Medical Center; Chicago, IL

Purpose: Stroke is a multifaceted disease process requiring a comprehensive approach. Providing a holistic, multidisciplinary approach from the onset of 911 through mainstreaming to the community is a primary goal. We offer a unique, extensive continuum of care ranging from prevention through onset of symptoms to optimal rehabilitation. **Description:** Our program includes the following unique components: (1) Extensive community education in partnership with churches, apartment building residents, and medical center outreach programs focusing on prevention, risk factor screening, and symptom recognition with action steps; (2) Peer-led monthly survivor and caregiver support groups driven by the identified needs of the participants; (3) Screening all

patients for dysphagia by the primary nurse upon medical center admission by using a tool developed for the stroke center by the Department of Communication Disorders with positive screens receiving a formal speech therapist evaluation; (4) Multidisciplinary evaluation by physical therapy, occupational therapy, and rehabilitation medicine with individualized treatment plans; (5) Individualized education plan for patients based on identified risk factors; and (6) Development and use of a comprehensive, center-specific patient satisfaction tool to evaluate all program components. **Evaluation/Outcomes:** Patient satisfaction scores show 88% overall satisfaction with program components consistently revised on the basis of results. Satisfaction with education components ranged from 81% to 84%. Compliance is based on standardized care using current evidence-based standards and clinical practice guidelines. Nurse screening compliance for dysphagia before oral intake is 82 % of all patients; above the national average of 76%. karen_m_oberman@rush.edu

CS388 Nasal Swabs Lead to Methicillin Resistant *Staphylococcus aureus* Reduction in a Surgical Intensive Care Unit

Boleski G, Lake D, Sullivan J, Horst HM; Henry Ford Hospital Hospital; Detroit, MI

Purpose: A 40-bed SICU began a pilot project aimed at reducing MRSA infections. This project involved obtaining nasal swabs on all patients admitted to the SICU in addition to weekly cultures and a re-emphasis on hand hygiene. The goal was to prevent conversion to positive MRSA cultures after admission. **Description:** In collaboration with the infection control department, education was provided to the nursing and medical staff of the SICU regarding the project. Clerical staff was also involved with the education because they were responsible for placing an education handout in each admission packet as well as printing the MRSA culture tags for the RN. A script was provided to the RN staff so that they could explain the purpose of the project and the nasal swabbing procedure to patients and families. Beginning in April 2007, all patients received a nasal swab upon admission to the SICU. The infection control RN was responsible for informing the SICU charge nurse of all patients with positive MRSA swabs, and these patients were then placed in isolation. Weekly follow-up nasal swabs were obtained every Wednesday for those patients who were not colonized with MRSA upon admission. Random audits of hand hygiene were also completed. **Evaluation/Outcomes:** Studies in the literature based on interventional projects have proposed 5 per 1000 patient days as benchmark data for MRSA conversion; our baseline conversion rate was 7 per 1000 patient days. Results from the pilot show the MRSA conversion rate is 2.76 per 1000 patient days. Based on these results, this project will continue in the SICU and be expanded to the medical and neurosurgical intensive care units. gbolesk1@hfhs.org

CS389 A New Nursing Role: The Critical Care Safety Nurse

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Purpose: A large emphasis has been placed on the reduction of errors and injuries to patients. Many other service industries have a well-established safety officer role, and is often required by the Occupational Safety and Health Administration. In an effort be comprehensive, Strong Memorial Hospital looked at the entire spectrum of critical care, including patients, staff, and the environment and generated a creative solution called the critical care safety nurse. **Description:** A nurse was selected from the critical care leadership to pilot the role. The selected nurse required experience, organizational skills, critical thinking, and the ability to be a motivator of change. The role of the nurse was to oversee and implement projects on 3 areas: patient, staff and the environment. The patient safety projects included Safety Rounds, Care Standardization, Implementing IHI and Joint Commission initiatives, and Data Monitoring. Staff safety projects included: Lifting and Back Injury education, evaluation and usage of Personal Protective Equipment, and organizing Critical Incident Debriefing sessions. Environmental safety projects included fire safety assessments and education review, reducing patient monitor alarm fatigue, night shift fatigue reduction, and equipment safety review. These projects were developed to be real-time projects that used retrospective data review. The emphasis was to promote a critical care bedside environment where patient and staff safety were a minute by minute priority. Daily staff education, scenario training, Web-based utilities, and the active presence of the safety nurse during high-risk events like procedures and resuscitations were implemented. **Evaluation/Outcomes:** The critical care safety nurse pilot is nearing the end of its first

year. A retrospective review of events and auditing of comparable critical care units without a safety nurse will reveal its value to patient care. The estimated work load of a critical care safety nurse working with 50 beds and 100 staff does exceed 40 hours a week, making justification of the role critical to creating its value. William_Hallinan@urmc.rochester.edu

CS390 Nurse-Driven Implementation of the Daily Goals

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Purpose: A daily goals tool (DGT) was creatively developed and driven by nursing to address the comprehensive needs of the patient. The goal was to improve communication between nurses and physicians in the surgical intensive care unit (SICU), enhance patient safety, and improve patient outcomes by developing a multidisciplinary communication tool. **Description:** In an effort to improve communication, foster multidisciplinary collaboration, and enhance patient safety, nurses in the surgical intensive care unit at Lutheran General Hospital customized a DGT and a DGT reference (DGTR). Use of these tools facilitated a comprehensive daily review of 12 major categories of care. The DGT identified several key question prompts below each category of care. A challenge recognized during development of the DGT was the diversity of patients cared for in the SICU. The DGT had to be adapted to address the multiple needs of the various patient populations such as surgical cardiovascular, multiple blunt trauma, neurotrauma, neurosurgical, abdominal, vascular, and other surgical patients. The DGTR contained the same 12 categories, was aligned with the DGT, but contained additional question prompts to assist with an all-inclusive review. Nursing chose the key prompts on the DGT because they incorporated evidence-based practices, protocol-driven care, and elements that were considered easily overlooked. The DGT incorporated 7 days of use on a single paper and the DGTR was laminated for continued reference. Both tools were placed on individual nurse clipboards. **Evaluation/Outcomes:** Baseline data obtained from January through December 2005, before the implementation of the worksheet, was compared with data collected from January through December 2006, after implementation of the worksheet. Six quality indicators were measured and all demonstrated significant improvement. In addition to improved quality indicators, nursing discovered that the tools were very useful education pieces. alystom@charter.net

CS391 Nurse Orientation: The Road to Competence

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Purpose: Competency is essential to quality patient care outcomes. Checklists alone fail to link skill performance of the new nurse with critical thinking skills, interpersonal skills, and delivery of quality patient care. Measuring the new nurse's entry level competency is a must in any orientation program. **Description:** A 56-universal bed CCU was selected to pilot a competency-based orientation program. Competency was defined as 3 interacting spheres: critical thinking, technical skills, and interpersonal skills. A scorecard was developed with descriptions of key clinical performance indicators, allowing a visual analysis of the orientee's progression from observation to independent functioning. A Bloom's Taxonomy Wheel was constructed to facilitate the setting and writing of goals and the evaluation of outcomes in the anecdotal notes. Revisions were made on the basis of feedback from the unit's preceptor council. **Evaluation/Outcomes:** CCU preceptors have evaluated the scorecard as very easy to use, identifying the crucial indicators of an orientees competence, and providing a good measure of orientee progress. The scorecard has also been a predictor of the orientee's competence before being on their own as shown in the unit's mentoring program. The "scorecard" concept has been presented to the critical care leadership council and is being trialed in several other units. rfleischman@aultman.com

CS392 Nurse Practitioners (NPs) Implement a Staff Nurse–Driven Protocol for Chest Tube and Pacing Wire Removal

Backer T, Pritchett B; Exempla St. Joseph Hospital; CO

Purpose: This abstract outlines 1 urban community teaching hospital's experience with NPs implementing a model for training telemetry staff nurses to remove safely cardiac surgery chest tubes (CT) and temporary epicardial pacing wires (PW). **Description:** To date, there is not a universally accepted protocol that outlines who can remove CTs and PWs or the appropriate timing for the removal of CT and PW. The NPs train specific telemetry nurses on CT and PW removal and oversee the following process for these nurses to be qualified on CT and PW removal: reviewing compiled literature on CT and PW removal, passing a written

exam, observing an NP or cardiac surgeon remove a CT and PW, completing a minimum of 3 CT and PW removals, and meeting specific documented knowledge and performance indicators. The NPs conduct annual evaluations to ensure the competency of the telemetry nurses on CT and PW removal. The NPs also train the telemetry nurses on standardized patient postoperative orders that are necessary before removing CT and PW. The NPs' training helps decrease the complications from CT (e.g, pneumothorax, bleeding, and retained CT) and PW (eg, cardiac tamponade, dysrhythmias, and retained PW) removal. **Evaluation/Outcomes:** For this teaching hospital's patient population from 2005 through June 2007, there have been 1048 surgical patients, 17 of whom required CT placement for pneumothorax and 1 of whom had a complication from PW removal. The data suggest that the RN staff has become more competent and proactive in safely removing CTs and PWs. backert@exempla.org

CS393 Opening New PICU Beds Requires a Multifaceted Strategic Plan

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Purpose: To describe how we designed and implemented a strategic plan to increase the hiring of pediatric critical care nurses. In 2006, we moved into a new PICU and expanded our capacity from 18 to 29 beds. Finding qualified staff nurses to open these new PICU beds was imperative. **Description:** First, we formed an interdisciplinary working committee that included the nurse manager, PICU staff nurses, and nursing recruitment staff. We then developed an integrated plan of print advertising, direct marketing, interactive solutions, and special events. The first layer of our strategic approach was a themed web page called "A Success Story in Progress:Critical Care." The site included program information, virtual tours, and patient and nurse stories (narrative and video). Next, we developed a print ad campaign for local newspapers, specialty nursing publications, and nursing-related Web sites. We then held community-based and on-site events to support the interest generated by the new advertising campaign. Our grand finale event "PICU A Year of Firsts" celebrated our first year in our new PICU. Staff nurses participated at all levels within our strategic plan; specifically, nurse recruitment and candidate interviews. We also offered financial incentives to staff nurses who recruited colleagues for interviews. We rewarded them with $1000 if their new recruit was offered and accepted a nursing position. Since the inception of our strategic recruitment plan, we have successfully hired 36 nurses and have retained 89% of them. **Evaluation/Outcomes:** Creative recruitment techniques that are strategically aligned can be successful in hiring hard-to-find PICU nurses. Involving staff nurses in the recruitment process was particularly beneficial. Aimee.Lyons@childrens.harvard.edu

CS394 Organ Donation: It Takes a Community

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Purpose: It takes a community to achieve national goals developed by the Organ Donation and Transplant Breakthrough Collaborative (ODTBC). The goals include a conversion rate > 75%, donation after cardiac death > 10%, organs transplanted/donor 3.75, appropriate requestors 100%, and cardiac referrals 100%. **Description:** By educating and including our entire hospital community, we were able to improve all of our ODTBC goals. We used all our resources both in and out of the hospital to make these improvements. Changes were developed, tested, and implemented using the rapid cycle improvement change model, Plan–Do–Study–Act (PDSA). Each PDSA included hospital communities. Examples of out PDSAs are listed below. PDSA–Lab, P- decrease turn around time for lab tests (lab, physicians, nurses, clerks, graphic, quality, administration, organ procurement organization (OPO) members), S – implemented the use of a bright pink sticker to be placed on the outside of the bag containing the labs, S – lab turn around decreased, A – implement in all ICUs. PDSA – community, P – work with our local government leaders to educate public, D – public education occurs via commission on donation and transplantation (church, public events, schools, businesses, physician, nurses, staff, OPO, etc), S – increased public awareness, A – create a similar initiative in other communities. Other PDSAs include patient death checklist, organ donor management, trigger cards, donation after cardiac death, orientation, hospital communication and a hospital champions' program). **Evaluation/Outcomes:** Outcomes from this project are measured jointly with our OPO. Each case is reviewed and learned from. Each hospital department involved in the case is made aware of the outcomes.

We have improved on all our goals and received 2 medals of honor from the Health and Human Services Department. Conversion rate increased from 34 to 78%, cardiac referrals increased from 68% to 92%, and appropriate requestor rate is at 91%. patricia.mccabe@medstar.net

CS395 Organizational Commitment to Heart Failure Program Yields Specialty Certification

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Purpose: In the U.S, Heart Failure (HF) is the No. 1 admission and readmission diagnosis for Medicare patients. HF certification from The Joint Commission indicates compliance with consensus-based national standards, use of evidence-based care guidelines, and an ongoing approach to performance improvement activities. **Description:** The heart failure program at SAH was implemented to improve and standardize care to patients admitted with HF via evidence-based practice. The multidisciplinary HF team improved the patient-identification process, and developed order sets and an interdisciplinary care guideline based on published standards of care for HF patients from ACC/AHA and HFSA. Patient teaching materials and documentation were standardized, and several educational offerings were provided to staff to raise awareness of the need to standardize and evidence-base HF care. The addition of a dedicated HF coordinator in December 2006 allowed more rigorous data abstraction, reporting, and analysis of the hospitalized HF population and the processes of care. A standardized methodology for teaching HF patients was developed, as well as a 1-page patient education tool. The order sets and interdisciplinary care guideline were updated, and staff/physician education was expanded and accelerated. 100% chart review was implemented, along with submission to AHA's Get With The Guidelines—Heart Failure (GWTG-HF) database, and monthly reports are provided to all HF stakeholders. **Evaluation/Outcomes:** In August 2007, St Anthony Hospitals was awarded Specialty Certification in HF by The Joint Commission, and was recognized as a Center of Excellence for Heart Failure care. In fall 2007, both St Anthony sites were awarded the Bronze Performance Achievement award from GWTG-HF. Organizational commitment to the HF program resulted in improved processes of care for hospitalized HF patients and recognition as a community leader in HF care. annpete5164@comcast.net

CS396 PCU With PT Makes This a Safer Place for You and Me

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Purpose: A large number of patients in the PCU are at risk for falls. In an effort to prevent injury to patients and employees, the PCU multidisciplinary practice council developed communication magnets to provide information about patient mobility and activity levels to all care providers. **Description:** A healthy work environment includes measures to keep staff and patients safe from injury. The physical therapy department introduced the PCU practice council to the stoplight system used on the rehabilitation unit to alert all team members to the activity and mobility status of patients. The practice council modified the system for the PCU environment by creating communication magnets. The magnets, color coded and uniquely shaped symbols, are placed at the entry of each patient's room. They alert care providers to the level of assistance the patient needs in transferring or getting up out of bed. Use of this system allows all members of the health care team to be aware of patient activity levels and the number of personnel required to assist in moving. Nurses perform the initial assessment of mobility and fall risk and assign the appropriate activity level magnet to the patient room door. If physical therapists are seeing the patient, they notify nursing if the activity level improves or declines. Each shift, nurses receive notification to update the magnets to reflect the patients' current activity level status. The use of the magnets provide all levels of staff the necessary information to facilitate injury free safe patient handling. **Evaluation/Outcomes:** Employee surveys before and after implementation demonstrate increased effectiveness of communication among care givers. Quality data show a decrease in employee neck and back injuries. Patient falls have not decreased, but longer term evaluation is ongoing. margamca@baylorhealth.edu

CS397 Play It Safe: Use Proper Ergonomics to Protect Patients and Staff

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Purpose: Intensive care patients are at a high acuity level. Their mobility is severely compromised by the debilitating effects of their condi-

tion and the deliberate and unintended sedating effects of pharmacotherapy. Consequently, they rely on passive repositioning and transfer by caregivers. **Description:** An improperly executed patient move jeopardizes patient and caregiver safety. Hospital risk management data for fiscal years 2004 to 2006 revealed an increasing incidence of staff reported injuries and lost work days sustained during patient lifts. These injuries impose further limitations on an already scarce nursing resource. Our research shows that staff injuries arose from poor situational assessment, poor body mechanics, and improper lifting techniques. The need to protect patient safety, to minimize staff injury, and to reduce the financial and social costs arising from staff injuries served as the trigger for piloting an ergonomics program at our institution. A person trained and experienced in ergonomics was appointed to create a program incorporating a no-lift system within our institution. To execute the project, trained ergonomic coaches were assigned to train staff and provide ongoing support to promote proper lifting techniques and the use of special manual lifts procured for the program. In addition, a minimal lift policy was introduced to support this initiative. **Evaluation/Outcomes:** Our evaluative outcome measures include a 90% increase in the number of injury-free patient lifts, an 80% reduction in staff reported back injuries from lifting patients, and a 75% reduction in lost work days from injuries sustained during improperly executed patient lifts. frank040@yahoo.com

CS398 Preventing VAP in the Trauma Population Is No Accident

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Purpose: A multidisciplinary ICU team participating in the VHA Transforming the ICU (TICU) program noted a sharp rise in ventilator-associated pneumonias (VAP) following trauma designation. A collaborative quality initiative was implemented to reduce trauma VAP rates, while maintaining patient safety. **Description:** A multidisciplinary team was formed in 2004 to participate in the VHA TICU initiative. Baseline VAP rate was 31.8, which drastically decreased following VAP bundle implementation. Rates increased suddenly in 2005 with the advent of trauma designation. The trauma VAP prevention initiative was undertaken to address issues specific to the trauma patient. The TICU team was expanded to include trauma surgeons and clinical nurse specialist. Ventilator and spinal precaution protocols were modified to include reverse trendelenburg positioning for intubated patients with cervical spine precautions. Critical care and trauma teams collaborated to implement effective oral hygiene strategies for patients with facial injuries. Orientation and continuing education programs for trauma and critical care providers were revised to stress trauma VAP prevention measures. Visual reminders at patients' bedsides keep staff focused on goals. The trauma clinical nurse specialist ensures VAP prevention measures are implemented. The RN and trauma team collaborate to ensure timely discontinuation of cervical spine precautions. A dedicated ICU infection control nurse and daily VAP compliance rounding further promote compliance with VAP. **Evaluation/Outcomes:** The trauma VAP initiative, continued vigilance, and staff ownership for quality outcomes in this level II trauma center have resulted in VAP rate reduction from 23.3 to 0, an outcome sustained for the last 12 months. At an estimated $40 000 per VAP, the cost savings from these efforts is almost $500,000. More importantly, the quality of care is significantly improved for a patient population that is so vulnerable to life-threatening infection. bunnl@readinghospital.org

CS399 Promoting Family Rapport and Safety in a Busy Vascular/Thoracic Surgical Unit

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Purpose: Visiting a loved one in the ICU following major surgery can add stress to a family as they seek information about the patient's location. Staff nurses in the vascular/thoracic intensive care unit (VT-ICU) came up with a solution that encourages visitation while educating about patients' needs by providing tools they need to survive in the ICU environment. **Description:** Most institutions provide some sort of welcome package to patients with information about their hospital stay but are lacking when providing information to the families. Families need information about visiting times, key phone numbers, contact names and unit protocols, such as hand hygiene and isolation techniques. The Nurse Practice Council of the VT-ICU (CVIII) developed "welcome bags" that contain a variety of items that enhance communication between hospital staff and family members. The purpose is to educate and to reduce anxiety of the

families as they seek to establish a rapport on their first visit by providing pertinent information about their loved one's stay. A welcome pamphlet and a unit business card are placed in the bags, providing visitation guidelines and unit information that help educate the families in a convenient package. The pamphlet also educates family members and visitors on the importance of hand hygiene, thereby promoting patient safety to decrease the spread of infection. A small container of hand sanitizer is included in the bag along with note paper, a pen, a map, and a prayer card. Items for the bags are donated by various organizations including drug representatives. **Evaluation/Outcomes:** Since the welcome bags were deployed, family members have expressed decreased anxiety because they feel that they have clear instructions as to when they can visit or call the unit. In addition, families have demonstrated knowledge of the plan of care for their loved one as evidenced by their increased compliance with hand hygiene and proper isolation techniques. The welcome bags have helped established a rapport between family and hospital staff. desmar29@yahoo.com

CS400 Protecting a Healthy Work Environment Despite Change: Shift Huddles Enhancing Team Communication and Patient Safety

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Purpose: When changing from a traditional group report to a 1-on-1 bedside report , we identified the need to preserve the camaraderie, fellowship and sense of team, while ensuring that all staff knew "high risk" and "hot issue" situations for all our patients, our unit, and the critical care division. **Description:** When we changed our shift report format, in March 2007, staff felt a loss of team interaction and a decreased awareness of situations impacting the unit's workflow, or all patients' safety. We implemented a shift huddle for oncoming shift staff (RN, CNA, US). Lasting approximately 5 minutes, the off-going charge nurse leads a discussion about patient issues (DNR/fall status, isolation, arrhythmias, unusual medication/treatments, or family issues), addresses equipment/supply issues (malfunction or "loans"), and presents a staffing and patient flow report for our critical care division. A form completed by the current shift, before shift change, allows individuals to communicate safety issues and evaluate acuity. The on-coming charge nurse then leads a 1- to 2-minute team building activity for that shift's group. We have sealed envelopes, chosen at random, containing a cartoon, a quote, or a brief activity for that shift's staff—fun often being the goal, to set a positive tone for the shift. When necessary, we also use this time for crucial hospital, division, or unit news. **Evaluation/Outcomes:** Unit employee satisfaction scores in April 2007 were among the highest in our hospital. Most staff commit to ongoing quality improvement activities and demonstrate strong engagement with unit business and development. We have a waiting list of staff desiring a transfer to our unit. Our move to bedside report is not without ongoing opportunity, but with staff input and a creative approach, it did not have a negative impact on our team function. haydeng@exempla.org

CS401 Protocol Implementation of Family Presence During Cardiopulmonary Resuscitation and Procedures in an Adult ICU

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Purpose: As healthcare trends move toward family-centered care, studies prove nationally less than 10% of hospitals have a policy or protocol in place regarding the presence of families during resuscitation or procedures. In an approach to deliver more family-centered care, a policy was initiated for this process. **Description:** After review of the literature, a resuscitation team was formed. The first phase included disbursement of a basic survey to all staff, including RNs, unit clerks, physicians, pastoral care, respiratory care providers, social workers, and nursing assistants. The second phase included another survey, revisiting concerns and results from the initial survey. Phase 3 included compilation of data and literature review data to form a written policy. The final phase included education of all staff members. Staff members were also trained in the proper techniques to assist family members during their time of crisis. **Evaluation/Outcomes:** After implementation of the policy, staff was again surveyed as to how nursing practice and family-centered outcomes were improved. The policy was added to an existing bereavement program, in which family members are contacted after their experience. The family members are then asked a series of questions. At that time, family members at risk are identified and referred to social services and the appropriate community resources. carterae@somc.org

CS402 Qualitative Findings Related to Perceptions and Confidence From Videotaping and Debriefing Teaching Techniques

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Purpose: The purpose of this activity was to facilitate students' reflective learning to enhance clinical decision making and therapeutic interventions in code situations. In order to assist students learning critical care to assimilate classroom learning with clinical actions, videotaping with debriefing was used as a teaching technique. **Description:** Weekly simulations were incorporated into undergraduate critical care ECG classes which culminated in a videotaped mock code simulation. In small groups of 4-5 students, a code scenario was used in a laboratory setting with video technology and a human patient simulator. Students were given various roles and actively "resuscitated" the "patient" during taping. Debriefing of the videotaped mock code occurred immediately after it was taped. The student objectives for the videotaped mock code and debriefing session included rhythm recognition, teamwork, critical thinking, appropriate interventions, and documentation. Students provided written evaluation of their confidence using a Likert-type 5-point scale to score the impact that this activity had on their learning related to rhythm recognition, patient assessment, medications, communication, and psychomotor skills. A written evaluation tool was used to measure 5 different categories: communication/teamwork, psychomotor skills, critical thinking, safety, and documentation. **Evaluation/Outcomes:** These "code" behaviors have often been learned based on random availability in the clinical setting. Results showed overall that videotaping and debriefing is valued by the students as a teaching-learning method. The majority of students reported that it was an engaging and realistic learning experience that increased their confidence and critical thinking skills. csc21@uakron.edu

CS403 Raising the Professional Bar: Moving the Conversation in a Critical Care Environment

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Purpose: The activities of professional inquiry influence how nurses view themselves as professionals. An integrated approach was initiated to create an environment that will support and foster the scholarly. Professional activities and authorship will raise the level of engagement in evidence-based nursing. **Description:** All interested staff of the adult intensive care unit were invited to be part of the "Journal, Publication, Research" group (AICU-JPR). A mission statement and the overall goals of the group were stated. A framework was developed to support diverse scholarly activities: authorship, presentations, journal club discussions, and participation in professional organizations. The aim of these activities is to increase the visibility of clinical inquiry, develop the skills to systematically examine clinical questions, extend the practice of evidence based nursing, and create a healthy learning/working environment for our nurses. Our initial focus is to demystify the process of inquiry and scholarship. Tools and formats are evolving in collaboration with management, nurse educators, researchers, librarians, and the IT department. The journal club includes discussion meetings on the unit and will be supported by an intranet e-blog, which will provide a forum for the nurses unable to attend traditional meetings. Bimonthly meeting provide peer support along with mentoring assistance. Research ideas are being generated through discussions at both the meetings and in daily conversation on the unit. **Evaluation/Outcomes:** Combining innovation, technology and flexibility, we are moving beyond the barriers of time, inexperience, and limited role models. We have 17 nurses involved in the AICU-JPR; many of them are involved in generating research questions and writing; 3 articles are in process for possible future publication. The journal club is active and many researchable questions are being asked. The unit's conversation is changing as the environment has shifted. alexbrock1@msn.com

CS404 Rapid Bedside Consultation in the Pediatric Setting: From Conception to Implementation

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Purpose: Rapid response teams (RRT) allow for non-ICU areas to receive rapid bedside consultation from critical care experts for patients at risk of cardiac or respiratory arrest. Early intervention by the RRT may prevent deterioration to full cardiopulmonary arrest in patients who are at risk. **Description:** The RRT committee that included medical/surgical and intensive care nurses, physicians, respiratory care practitioners and quality management personnel was formed to review the literature and

examine code events at Children's Hospital of Orange County (CHOC). The literature strongly suggests that the development and initiation of adult RRTs has improved the efficiency and quality of patient care. The decision was made to implement a pilot RRT program in the medical/surgical unit that had the majority of code events. Team composition includes a PICU nurse, lead respiratory care practitioner, PICU intensivist, and senior resident. Guidelines for initiation of the RRT, teaching tools, and documentation materials were developed by the RRT committee. The committee advocated the use of the SBAR (situation, background, assessment, recommendations) to enhance communication among the members of the health care team. The RRT pilot program was put into practice in one of CHOC's medical/surgical units. Any hospital associate may initiate an RRT call on a patient whom they assess to be decompensating or at risk. **Evaluation/Outcomes:** Approximately 30% of patients involved in RRT calls were stabilized in the unit and did not require transfer to the PICU. No preventable codes have occurred in the medical/surgical units since the implementation of the program. Positive feedback from the nurses and physicians whose patients were involved in the RRT call has been received. pschriver@choc.org

CS405 Rapid Response Teams: Best Practice Through Collaboration

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Purpose: Rapid response teams (RRTs) reduce adverse outcomes through early identification and effective interventions. In 2006, a RRT was initiated at Baystate Medical Center. Its development, implementation, and success are the result of a multidisciplinary and collaborative effort between nurses, physicians, respiratory therapists, pharmacists, and other caregivers. **Description:** RRTs have been established in many hospitals across the country in response to the IHI's 100 000 Lives Campaign. Research demonstrates that many patients experience subtle signs and symptoms of clinical deterioration up to 8 hours before a cardiac arrest. At Baystate Medical Center, an interdisciplinary oversight team lead by the Division of Healthcare Quality (DHQ) was given the charge of designing an RRT model that could be implemented at our institution. Other members of the team included the clinical managers of the CICU and ICU, the director of respiratory therapy, an MD and 2 RNs from DHQ. The team spent several months determining the optimal model to use, always with an eye on best practice. The RRT composition was chosen and a 2-week pilot study was done, with successful results. The RRT at BMC is composed of an ACLS-trained critical care nurse, a respiratory therapist, and an IV nurse, and a simultaneous call is made to the patient's physician. Any nurse concerned about changes in the patient's condition can activate the RRT without fear of reprisal. Nurses, especially new graduates, feel an additional layer of support has been added. **Evaluation/Outcomes:** Since March 1, 2005, we have seen a 71% reduction in codes and a 36% increase in critical care transfers before arrest. We have also seen virtual elimination of code blues outside of critical care areas, and a survival rate to discharge > 80%, all leading to an 8% reduction in mortality. BMC has initiated a pediatric RRT at the Children's Hospital. We are also investigating other mechanisms to identify patients at risk earlier in their hospitalization. Sheila.elliott@bhs.org

CS406 Read All About It: One Unit's Care Nursing Newsletter

Thompson C, Whitcomb R, Bossart K, Trebilcock K, Barto C, Wood C, Truman B, Harris L, Woodham M, Ciccolella M, Dickerson L; Grant Medical Center; Columbus, OH

Purpose: Our medical center's critical care workteam identified a need to enhance communication specific to critical care for bedside nurses and support services. We decided the best means of accomplishing this goal was to publish a monthly newsletter. **Description:** The critical care workteam was challenged to assess how well the critical care units were achieving the AACN's standard for establishing and maintaining a healthy work environment. After reviewing the standards, we identified that skilled communication was our first priority and brainstormed ideas to improve communication in the critical care areas. As one of the action items to improve communication, the workteam decided to publish a monthly newsletter focusing on critical care topics for bedside nurses and other health care professionals. The newsletter includes features on clinical and pharmaceutical issues, policy and procedure updates, new employees and physicians, educational opportunities, committee reports, awards and recognition, and CCRN preparation. Each month the workteam reviews and selects topics for the next month's newsletter. Staff members are

encouraged to submit suggestions, articles, and questions for our multi-disciplinary clinical experts, such as "Ask Bob," an article written by the critical care pharmacist. Once published, the newsletter is distributed in both hard copy and electronic formats to critical care staff. After each publication, feedback is solicited from the staff by members of the work-team. **Evaluation/Outcomes:** The response to the newsletter from bed-side nurses, respiratory therapists, pharmacists, dietitians, and physicians has been very positive. Other service line directors have requested to be placed on the mailing list. Physicians and other disciplines have also been responsive and enthusiastic about submitting articles for publication. The most profound tribute to the newsletter is that it has moved beyond the boundaries of critical care, inspiring the nursing congress to develop a hospital-wide nursing publication. hacthompson@hughes.net

CS407 Reclaiming Our Time and Revitalizing Annual Competency Evaluation in the Intensive Care Unit

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Purpose: Critical care nurses must demonstrate competency in high-risk, low-volume procedures annually. Previous methods had been pro-longed and frustrating. In collaboration with staff, the intensive care unit educators revised the annual competency evaluation process to be effi-cient and comprehensive. **Description:** After reviewing staff comments and analyzing their dissatisfaction with the process, the educators devel-oped a plan for annual competency evaluation program (CEP) which included more efficient use of time and energy, increased testing in the clinical area, and some fun. When patients requiring tested skills were admitted to the units, educators and lead nurses used the opportunity to test the staff's proficiency at the bedside. For testing in a simulated set-ting, staff scheduled appointment times. This ensured that nurses began testing when they arrived and were not kept waiting for the availability of an educator. Nurses signed up in pairs to allow increased collaboration. The hours for testing were limited to allow educators a break and avoid tester fatigue. Study materials were expanded to include PowerPoint slide shows on the ICU intranet site, showing step by step instructions in pho-tos for tested procedures. The nurses were asked to demonstrate the skills required to be checked off, not merely recite the steps or verbalize a guide-line. Hypothetical clinical situations were used to assess critical thinking and understanding of the guidelines of care and monitoring procedures. **Evaluation/Outcomes:** Although CEP had previously been a dreaded time of the year, staff said that it was now "fun" as they prepared an intracranial pressure transducer or managed a code blue. Pass rates were similar, but the majority of staff completed CEP by July instead of Decem-ber. All felt that this new approach infused CEP with quality and effi-ciency, allowing educators and nurses more time to focus efforts on new initiatives and evidence-based practice. Leah.Brown@sharp.com

CS408 Reclaiming Priorities in Precepting, Improving Patient Outcomes

Roger M, Litvin I; University of Virginia Health System; VA

Purpose: To enhance the orientation process in our MICU by priori-tizing improvement of our preceptors. An educational program was cre-ated to emphasize and expand precepting skills. By reclaiming preceptor development, patients will experience the benefit of nurses with superior knowledge and skills. **Description:** The phased orientation process in the MICU is well established. Each phase of orientation is adjusted on the basis of the individual orientee's knowledge base and experience. This works extremely well for newly hired nurses; however, it can present chal-lenges for preceptors. The MICU used a phased template to create a simi-lar process for preceptors. An educational program and reference manual were developed to increase preceptor awareness of effective teaching and learning skills and to assist their execution of the phased orientation process. Adults learn by experience, and the MICU uses this approach. Preceptor candidates are paired with students spending 1 clinical day in the ICU environment. This provides valuable precepting experience. After preceptor candidates have at least 1 year of MICU teaching, they may pre-cept a new nurse. In addition to these experiences, the orientation com-mittee provides several opportunities for preceptor development. A presentation is given to discern the phases and provide guidance on effec-tive precepting. A preceptor class is given and educational resources are identified. The committee members are also identified as contacts for questions at any point during the precepting experiences. **Evaluation/ Outcomes:** The preceptor program is assisting our MICU in reclaiming the priority of strong, educated preceptors. Preceptor success is evaluated

by a questionnaire completed after orientation by new hires and precep-tors. The program has been in place for 3 months and the evaluation is in progress. By creating excellent preceptors for orientation, the MICU is reclaiming our priority of well-prepared nurses providing excellent patient care. maw5t@virginia.edu

CS409 Refining Intensive Care Enteral Feeding Protocols to Reduce Patient Complications

Heise C, Reischel J, Thiessen L, Staples R, Wohrley M, Fletcher A, Koloscha M, Pogmore D, Staffieri R; The Medical Center of Aurora, South Campus and University of Colorado at Denver and Health Sciences Cen-ter; CO

Purpose: ICU patients frequently require enteral feedings, and risk is involved when implementing this therapy. Evidence-based protocols are proven to decrease risk. We assembled a multidisciplinary team to revise our outdated protocol and decrease our high complication rates for this patient population. **Description:** An extensive chart review for all ICU patients receiving enteral feedings was conducted for 4 consecutive weeks and revealed this startling information: Of the 35 patients reviewed, at some point while receiving enteral feedings, 42% of the patients experi-enced high residual volumes, 86% had diarrhea, 93% had skin breakdown related to the diarrhea, 31% had constipation, 8% had episodes of emesis, and 17% eventually developed an ileus. Virtually 100% of our enteral feed-ing patients experienced some form of complication from this therapy. We assembled our multidisciplinary team, reviewed current evidence-based protocol guidelines, revised our existing protocol, devised a method to implement this new protocol, and began extensive teaching for the nurses, pharmacists, and nutritionists who care for these patients. Our team developed many methods to increase staff awareness of our efforts to decrease enteral feeding complications, including 4 x 6 cards for each staff member and 3-inch buttons with our logo "Save Yourself," indicating saving time, effort, resources, and reducing patient suffering. We sent multiple e-mails regarding our efforts, had posters in highly visible areas, and encouraged feedback from all caregivers. **Evaluation/Outcomes:** Tracking our progress was made easier by adding 2 questions to our daily ICU rounds form: If your patient is receiving enteral feedings, is the new protocol in place? Is your patient experiencing any complications? Two months after initiating our new protocol, we have seen a 54% reduction in patient complication rates and a significant reduction in the duration of complications. ceheise@comcast.net

Sponsored by: The Medical Center of Aurora, South Campus

CS410 Remote Twilight Rounds

Goodwin C, Nelson K, Pickett J; Swedish Medical Center; WA

Purpose: Multidisciplinary morning rounds deal efficiently and proactively with a variety of patient issues. Day staff satisfaction is increased by participation in a goal-driven team. Twilight rounding was implemented to similarly affect the night staff. **Description:** We are a 3-campus hospital with 4 ICUs (cardiac, neuro, medical and surgical) and one IMCU totaling 71 beds. All units are monitored off site at an "elec-tronic ICU" (eICU), allowing 1 intensivist to oversee all patients overnight. The eICU is staffed with 1 or 2 experienced RNs 24/7, and an MD inten-sivist from 7 PM to 7 AM. From this remote observatory, staff can access patient charts, lab reports, X-rays, VS trending, and telemetry. They can also make direct visual assessments via camera. Twilight rounding is a new process for our eICU intensivists. Before midnight, the MD on duty contacts each nurse for an update on his/her patients, discussing any cur-rent concerns. Benefits: The covering physician has timely information for treatment decisions. Preemptive intervention may prevent some crises. Perhaps most importantly, a routine opportunity to discuss patients with a physician outside of an acute episode (a rare occurrence on the night shift) promotes learning and teamwork. Twilight rounding was initiated in 1 unit and evaluated after a month. It was found that addi-tional time was need to streamline the process before expanding to addi-tional patient populations. **Evaluation/Outcomes:** At the end of the trial period, RN satisfaction related to interactions with the eICU MD were increased. Other anecdotal outcomes included opportunities for learning, and improved patient outcomes. In general, support from the eICU has improved morale on the nightshift as well as overall job satisfaction. rainydaybead@msn.com

CS411 Remove the Dressing, Not the Skin…Please

Waresak M, DeMuro T, Henshaw C; Duke University Health System; NC

Purpose: Pressure dressings applied after cardiac device implantation reduce postprocedural hematomas, but removal of these dressings can cause significant patient discomfort and skin tears. The electrophysiology (EP) staff sought a method to reduce these undesirable outcomes. **Description:** Many patients with an EP device take anticoagulant medication. To prevent hematoma complications, physicians order pressure dressings to cover operative sites for the first 24 hours after the procedure. Correct application and optimal adhesion of the dressing is critical. When the pressure dressings were removed, many patients complained of significant discomfort and some even experienced burnlike skin tears that required immediate intervention from wound management. The EP staff was committed to resolve this problem. The staff was educated in correct dressing application and an adhesive removal agent was found that is used by ostomy patients to preserve skin integrity. This user friendly product is available in wipette packaging, comparable to commonly used alcohol wipettes. The EP staff began taping 2 adhesive removal wipettes labeled with these instructions: "Please Use to Remove Dressing" to pressure dressing surfaces after device implantation. EP department physicians, physician extenders, and nurses were advised to use the wipettes every time a device pressure dressing was removed. Taping wipettes with instructions to dressing surfaces made them highly visible and convenient, which promoted compliance. **Evaluation/Outcomes:** During the 5 months we have practiced this intervention, no skin tears have been reported in more than 200 cardiac device implantation cases. Fewer patients report discomfort associated with dressing removal and many deny feeling any discomfort at all. This creative solution has resulted in greater patient satisfaction and reduced incidence of skin-related complications, which has led to improved outcomes. wares00l@mcduke.edu

CS412 Retention Strategies in the Neurosurgical Intensive Care Unit
Richardson T, Davis C, Retelski J, Cronin T; Carolinas Medical Center; Charlotte, NC
Purpose: To develop and implement a plan to decrease staff turnover and increase employee satisfaction in the neurosurgical intensive care unit. **Description:** Our team of critical care nurses came together to devise specific strategies to increase retention in the NSICU. Using a combination of our UBSG, small group discussions and hospital recognition programs, a plan was devised to reward staff for excellence and continued commitment to our unit. Once off orientation, employees are assigned a mentor and encouraged to communicate with mentors via e-mail, phone, or coffee breaks. The following retention rewards were devised: At 1 year, a fully funded trip to a national nursing conference; at 5 years, holiday commitment decreases from 3 to 2 major holidays and are no longer pulled to other units; and at 10 years, only 1 major holiday is required. We also began encouraging the use of "WOW" cards, a hospital reward system. WOW cards are simple cards that describe how an employee has gone above the call of duty for patients, family, or fellow staff. The card is rewarded with meal tickets and awarded in daily huddles. Once a month the employee with the most "WOW" cards is given movie passes or a carwash certificate. Names of employees achieving clinical ladder, certification, or other professional achievement are displayed on a colorful flyer posted in the unit and highlighted in our newsletter. **Evaluation/Outcomes:** In the past year, our staff turnover rate has decreased from 20% to 13%. Only 2 staff members with greater than 1 year seniority have left the unit, and those 2 staff members retired. tarich@bellsouth.net

CS413 The Roadrunners Are Back. This Time They Have a Dedicated RN Running With Them
Lepman D, Hewett M; Hoag Memorial Hospital Presbyterian; CA
Purpose: Failure to recognize changes in a patient's condition that lead to complications is known as "failure to rescue." An important measure of quality for an organization is its ability to recognize such patient complications and to respond to them quickly, methodically, and appropriately. **Description:** In March 2005 our hospital implemented a medical response team known as the rapid response team (RRT). The team consists of a critical care nurse, a respiratory therapist, and the critical care intensivist. In April 2007, because of an increasing volume of RRT calls and extended RN time off the unit, hospital administration approved our request for a dedicated RN. The RN does not carry a patient assignment and responds not only to all RRT calls but also completes rounds on all units throughout the hospital. This dedicated RRT RN checks on all previous RRT patients and assesses any patient about whom the nursing staff may have concerns. The intent is to increase the safety of patients by

anticipating potential complications even before calling an RRT, thus decreasing code blues and transfers to critical care. Staff nurse response to this additional RRT response has been extremely favorable. Each shift, nurses welcome the RRT nurse to their unit and present patient concerns to the RRT nurse in a timely and meaningful manner, using SBAR format. The staff work with the RRT nurse to resolve the patient's issue, prevent further complications, and restore the patient to a safe and stable state. **Evaluation/Outcomes:** A significant increase in the number of RRT calls has occurred with a dedicated RRT nurse. Number of calls per month were 36.3 but has increased to an average of 98 calls per month. Time to response remains approximately 3.7 minutes while time spent on the unit is approximately 48.3 minutes. Of all RRT calls, only 41.5% are transferred to a higher level of care as opposed to the 55.2 % transferred before the implementation of a dedicated RRT RN. dlepman@hoaghospital.org

CS414 The Role of Simulation in Critical Care Education
Scott S; Baystate Medical Center; Springfield, MA
Purpose: Traditionally, during orientation and for ongoing education of staff, clinical experiences could not consistently be coordinated with didactic sessions. One could not arrange for an experience with a code or with titration of vasoactive medication if no patients required these interventions. **Description:** A session was designed to simulate a code blue in one of the nursing units. A room in the ICU approximating the size of a patient room in one of the nursing units was fitted with a simulation mannequin and an actual code cart with defibrillator. Other staff in the "patient room" played the roles of physician, respiratory therapist, floor nurse and at times, family members. Before beginning the simulation, all staff people involved were informed that the simulation was a confidential process in which staff were not to discuss the performance of participants to anyone outside the session. The critical care nurse was called into the room after being told that a patient was "coding." CPR was in process (performed by a nursing student posing as the floor nurse) and the critical care nurse was expected to follow protocols in place based on ACLS and on the code blue policy of the hospital (ie, place the patient on the monitor, accurately identify the cardiac rhythms, locate and use various items including medications on the code cart etc). After the entire session, participants were debriefed focusing on the positive aspects of their performance and areas that need improvement. **Evaluation/Outcomes:** Participants were evaluated based on ease of use of emergency equipment and proper identification of cardiac rhythms. Upon repeating the sessions with the same nurses 1 week later, nurses demonstrated quicker application of defibrillator pads, quicker defibrillation procedure, and quicker identification of items in the code cart as well. One participant stated that she attended an actual code after the session had felt much more comfortable with the situation. susan.scott@bhs.org

CS415 The Role of the Cardiology NP Managing Patients Needing Percutaneous Coronary and Electrophysiology Procedures
Schueler A, Schnurr M, Weeks L; The Ohio State University Medical Center Ross Heart Hospital; OH
Purpose: The role of the nurse practitioner in cardiology is pivotal in improving outcomes. Heart disease remains the No. 1 killer in the United States. A nurse practitioner–driven team approach is critical in maximizing patient care. **Description:** The ACC guidelines were reviewed and applied to care of the percutaneous coronary intervention and electrophysiology patients. Preventive screening, secondary prevention guidelines, and assessment and intervention for antiarrythmic therapy were maximized. An interdisciplinary approach with physicians, nursing, cardiac rehab, pharmacy assistance, smoking cessation, social workers, case managers, and diabetes educators enhanced care. A focus on accurate admission and discharge medications were included in a detailed discharge summary. **Evaluation/Outcomes:** An indirect cost savings occurred by facilitating early morning discharges and decreasing length of stay as well as reducing complications. The cardiology nurse practitioner is used to offset reduced resident work hours and provides an alternative to patient care without the need for residents and protects education on the conventional teaching services. aschuele@columbus.rr.com

CS416 Round 'Em Up! Creating Interdisciplinary, Patient-Focused Daily Rounds
Barone B, Wood C, Kagel E; Grant Medical Center; Columbus, OH
Purpose: To develop daily multidisciplinary rounds as a way to approach patient care in a holistic manner by promoting and building

trusting relationships between all members of the multidisciplinary team including the patient/family unit. **Description:** Our critical care process improvement team and critical care workteam identified the importance of establishing complementary practices around patient-focused care and establishing and sustaining healthy work environments. Critical care staff nurses noted an increase in the complexity of issues surrounding the care of critically ill patients. In order to maintain continuity of care between the disciplines as well as the patient and their family, a daily rounding method was devised. Each morning the intensivist, pharmacist, respiratory therapist, charge nurse, bedside nurse, and the patient's family meet at the bedside to review each case. The patient and family are encouraged to participate. Items reviewed are bundle inclusions such as VAP, UTI, CLI, S.K.I.N, and severe sepsis. Using the daily goal sheet, the patient's progress and response to treatment are discussed and revised action plans for care are implemented through use of communication boards located in the patient's room. Staff members completed surveys before and after rounding that indicated improved communication between members of the collaborating multidisciplinary team. **Evaluation/Outcomes:** These daily multidisciplinary rounds have provided a formal and organized approach to patient care, ensuring that all members of the multidisciplinary team and the patient/family unit receive consistent and accurate information, thereby increasing the efficiency and safety of the patient's care. This complementary initiative provides a road map for creating a practice environment where interdisciplinary, patient-focused care can thrive. bbarone@ohiohealth.com

CS417 SBAR Communication: Can You Hear Me Now?

Harris R; Lehigh Valley Hospital and Health Network; Bethlehem, PA
Purpose: A community, academic, Magnet hospital adopted the use of SBAR communication to meet the 2007 national patient safety goal for handoff communication. The purpose of this poster is to demonstrate the development of a project to use SBAR on units for shift to shift and transfer reports. **Description:** The educators of units involved, intensive care units (ICU), medical-surgical units, and step-down ICU, collaborated to develop a simple worksheet for shift to shift and transfer reports. The goal of the use of SBAR was to relay critical patient information efficiently during shift and transfer reports. This would ensure clear communication among nurses on all involved units. The worksheet includes checkboxes for mandatory items, such as medication reconciliation, admission data, vaccinations, and care plans. Specific units made slight modifications to the worksheet to include items unique to their unit. All nurses on the units were educated and use of the worksheet was made the unit standard for all shift to shift and transfer reports. **Evaluation/Outcomes:** Initially, resistance was met by staff when they began using the worksheet. After 2 months, staff reported increased satisfaction with the worksheet and increased satisfaction with communication during shift and transfer reports. The need for follow-up phone calls among transfer units was decreased. Overall, the use of a SBAR communication worksheet was an effective tool for meeting the national patient safety goal for handoff communication. Lynneh52@aol.com

CS418 Severe Sepsis Surveillance in the ICU

Bybee D, Weigand L, Wellman V; Blessing Hospital; Quincy, IL
Purpose: Hospitals are challenged to reduce mortality caused by sepsis by 10% by January 2009. A multidisciplinary team was developed to consider a process to identify and begin early treatment on patients suffering from sepsis. **Description:** A nurse-initiated process was developed to improve the identification and early treatment of severe sepsis. ICU began to screen all patients admitted against criteria for severe sepsis. Patients are also screened daily to evaluate for severe sepsis. A positive screening prompts the nurse to implement the severe sepsis monitoring order set. This order set begins early treatment as the attending physician is contacted for further orders. Treatment was bundled to ensure that all patients exhibiting signs of severe sepsis received the evidence-based treatment. **Evaluation/Outcomes:** Retrospective chart review demonstrates early intervention in patients meeting the criteria for severe sepsis. Fluid resuscitation, antibiotics, and lactate levels drawn were evident in 44% of the patients identified as having severe sepsis. About 20% of the patients had all the bundled treatment. Early intervention affected length of stay and mortality. dbybee@blessinghospital.com

CS419 Shared Governance As a Catalyst for Success in a Small Community Hospital ICU

Gooding M, Lindsey R; Seton Northwest Hospital; TX

Purpose: With the current nursing shortage, retention of qualified experienced staff is more important than ever. A small ICU in a community hospital is more dependent on staff expertise and stability than a larger hospital with an abundance of ancillary support. **Description:** In an effort to retain motivated experienced staff, bedside nurses and management have chosen to implement shared governance to help manage our ICU. Our ICU unit council met to identify issues important to staff. Communication, autonomy, self-scheduling, unit design, patient care excellence based on evidence-based practice, and emphasis on education, continual learning, and recognition were priority. Nurses were given the opportunity and were expected to take roles in committees or projects, depending on their interests and expertise. Each staff member received e-mail access and was encouraged to keep colleagues updated on projects or education. Nurses in our satellite hospital ICU expressed a desire to participate in the latest initiatives and programs started by our network's flagship hospital, such as a critical response team, multidisciplinary rounds, and hypothermia, sepsis, and insulin protocols. Staff chose to mentor each other as well as new nurses and nurses from other units. One staff nurse proposed to act as an information liaison between the flagship hospital ICU and our ICU. Our unit staff decided to participate and have a voice in committees network-wide and in the local AACN. **Evaluation/Outcomes:** Because of our staff-driven, management-supported shared governance system, our ICU has very low turnover, and staff are motivated to give outstanding patient care and to participate in activities to help the unit succeed. Our CCRN percentage has increased by 100%. Our VAP and pressure ulcer rates are low. We hope to set up an ICU Web site in the future, work on a research project, and are in the process of applying for Beacon. mgooding@seton.org

CS420 Shared Governance: Critical Care Nurses Collaborate With Colleagues to Improve Initial Code Blue Response

Cowles E, Noe C; Phoebe Putney Memorial Hospital; Albany, GA
Purpose: The purpose of this initiative was to improve the quality of resuscitation care and the collaboration of code blue team members with medical surgical nurses in our institution. **Description:** Four years after the successful implementation of a rapid response team, code blue occurrences had decreased by 50%. This reduction led to fewer opportunities for nurses to participate in resuscitation activities. The medical surgical nurse member of our professional development council expressed concerns about the skills and confidence levels with initial management of a cardiopulmonary arrest situation before and after the arrival of the code blue team. The ICU nurse representative developed a skills fair for nurses and other caregivers to practice standards of care for the first 5 minutes of a code blue and the medical surgical nurse members marketed the program in their areas. ICU nurses and respiratory therapists in the ICU obtained equipment, manikins, and supplies for practice stations. The areas for education included the code cart and defibrillator; lethal arrhythmia recognition; airway management; effective chest compressions; and "the first 5 minutes" or a scenario review incorporating all of the skill sets. Nurses could spend 1-on-1 time with an experienced provider who coached them in a nonthreatening and supportive manner. Nurses could focus on a single skill issue or the whole program. **Evaluation/Outcomes:** Evaluations were very positive. Many attendees were novice nurses who were grateful for the opportunity since they had never experienced a code situation. It also improved the relationships between the ICU nurses and non-ICU nurses. Nurses contacted the professional development council members asking for more classes, and this program is now a semiannual event. ecowles@ppmh.org

CS421 Short and Sweet and Right to the Point! SBAR Communication: The Key to Success for Effective, Safe Patient Care

Lepman D, Hewett M; Hoag Memorial Hospital Presbyterian; CA
Purpose: Effective, precise communication has unfailingly been the "key to success" in all affiliations. Health care systems magnify the urgency of fastidious, clear-cut communication. The JCAHO's NPSG #2 addresses this issue and mandates the implementation of a standardized "handoff" to the next provider. **Description:** Our hospital recognizes that "excellence" in communication is a vital element for superior patient care. A task force was created to establish SBAR communication as the foundation for efficacious teamwork throughout the organization. SBAR education was an adopted mandatory requirement for all clinical staff. SBAR orientation was accomplished through posters strategically placed in various locations in all nursing units. Pocket cards, distributed to all nursing

and physician staff, was another positive and innovative tool used to educate our professional staff. Long term, the task force is engaged in rapid cycle tests of change for physician-to-nurse communication and nurse-to-nurse communication. In addition, nurse-to-nurse scripting has been developed to structure communication that is standardized from one care giver to another. The goal is to organize health care discussions and promote an effective and efficient process for sharing information and planning the care and management of patients. We have completed 2 rapid cycle tests of change at present and are preparing to implement a third using SBAR technique. **Evaluation/Outcomes:** We are currently gathering data to evaluate the qualitative effects of our initiatives. Nurses have expressed that SBAR facilitates the clarity of information through its structure and simplicity. Physician compliance and satisfaction has also increased. The effect of SBAR will be substantiated through a decrease in medical errors, an increase in patient safety and patient satisfaction, and an affirmation of trust between healthcare professionals. dlepman@hoaghospital.com

CS422 Silos to Synergy: Tapping Staff Potential

Fullwood J, Washington D, Johnson R, Bride W; Duke University Hospital; NC

Purpose: We have many staff members who have unique strengths, interests, education, and expertise. Alone they represent a divergent pool of knowledge and talent, but with guidance, support, and encouragement, they have the potential to coalesce into a dynamic and focused workforce. **Description:** Our ICU has nurses of varied education, experience, and backgrounds. Management has always recognized and encouraged individual strengths, yet a lack of communication and common goals among the staff members and management resulted in a "silo" approach to unit contributions that had a direct impact on productivity. Managers, who served as the gatekeepers of support, resources, and information realized the significantly magnified potential of a group outcome. Staff was provided with the motivation and coordination needed to channel individual talents for the greater good of the unit. Working with staff, managers made themselves available to act as resources, articulate goals, and provide paid time for hospital committee work. Guidance was offered on the nuts and bolts of finding conference rooms, staff coverage for meetings, as well as sharing knowledge of available resources and how to access them. Originally, a staff leadership meeting was organized to discern staff goals and ambitions and how they overlapped with unit goals. As discussion progressed, specific unit goals were articulated and individuals with talents to contribute for specific goals came forward. Collaboration geared to seamless unit function was paramount. **Evaluation/Outcomes:** Focusing on teamwork rather than individual accomplishments reinforce both individual and unit growth. By tapping into talent and education, we now boast many collaborative endeavors including a group interview process for new hires, research, publication and a best practice committee that coordinates and enhances all unit committees. Moving from a system of silos to synergy has resulted in greater staff immersion, contribution, and success. fullw002@mc.duke.edu

CS423 "Sink or Swim": Riding the Waves to a Successful RRT

Evangelista E, Grau J, Prata J, Gill B, Gebrian L, Ritter C, Dechant L, Johnson K, Seckel M; Christiana Care Health System; Newark, DE

Purpose: Developing teamwork and skill is paramount to the continued success of the rapid response team (RRT) program at Christiana Care Health Services. Multifaceted education was developed by RRT nurses for team members to conquer the "waves of inexperience" and get to the "shore of safety and success." **Description:** The RRT committee in the medical intensive care unit (MICU) continually reevaluates the education and development of both current and new RRT nurses. Through review of actual RRT calls and feedback from current RRT nurses, a multifaceted educational approach evolved and provides a thorough preparation for new members of the team. The process begins with a self-assessment. Prospective candidates complete the "RRT Nurse Selection Tool" and describe why they are ready to become RRT nurses. After the MICU RRT committee reviews each candidate's form, qualified candidates are scheduled time to work with an experienced RRT nurse. The preceptor initiates the "RRT Orientation Checklist," which is a checklist of requirements including skills that need to be completed during orientation. Successful mentoring is crucial during this process and the preceptor reviews multiple MICU "lifesavers" or resources. These include the RRT Resource Book, the MICU RRT Committee, and the multidisciplinary RRT Workgroup. As

an added layer for both education and team building, simulation (SIM) lab training is being developed for both experienced and new RRT nurses, respiratory therapy, and physicians. **Evaluation/Outcomes:** Survey results show satisfaction with a multifaceted approach. The orientation checklist defines necessary skills and is a reminder of the standards for RRT nurses after orientation. SIM lab training has been an exciting project that will provide hands on teamwork. RRT education teaches the nurses to surf past the rip currents of inexperience and become successful lifeguards for their patients. eevangelista@christianacare.org

CS424 The Sound of Goodbye, Life's Final Journey

Crocker D, Johnson R; Duke University Health Systems; Durham, NC

Purpose: In our ICU, available resources were not easily accessible and did not always target the spectrum of holistic needs necessary for effectively assisting families and friends of patients who are facing death. **Description:** Nurses are attracted to intensive care units (ICU) because they enjoy fast paced action and teamwork. Hospital staff as well as families has the expectation that high-tech skills, pharmacotherapies, and procedures will be used to ensure a patient's return to health, but what occurs when cure is not possible? How do we change gears and deal with death? One staff member, who not only had many years of ICU experience, but had also faced the loss of several close family members, identified the need for more holistic and detailed information. Many families have little or no previous experience with death and no idea of the sights and sounds of they will encounter. Consulting the literature and end-of-life experts, she worked with the staff to make this territory less frightening. The resulting brochure is targeted to patients and families but is also useful to staff members. It is descriptive leaflet or "road map" explaining what many patients experience as they complete life's journey. It is an accurate and convenient method to begin the communication process for this sensitive subject. It is a road map for understanding the sights and sounds of goodbye. **Evaluation/Outcomes:** Accessible resources provide consistent education, guidance, and support. By supplementing our available cache of technically focused material with this pamphlet, we have provided a resource that fosters a holistic approach to assisting families and patients through the dying process. djcrocker@bellsouth.net

CS425 Staffing Interviews: Not Just for Nurse Managers

Edwards S, Fullwood J, Washington D, Mostaghimi Z, Hall C, Johnson R; Duke University Health System; NC

Purpose: Interviews for new hires in our ICU were conducted by the nurse manager (NM) with limited input from the nursing staff. To ensure a good unit match and to decrease the number of nurses who left within 1 year of hire, a new interview process was initiated by the NMs and the best practice committee. **Description:** Our BPC decided that an interview committee comprised of NMs and interested staff nurses would facilitate a well-rounded process for both the applicant and nurses who ultimately work with the candidate. Initial meetings were conducted with discussions on what, how, and when to implement. An expert from human resources was invited to share with the group the legalities of interviewing, including what one could and could not ask during an interview session. A mock interview was held to increase the comfort level of the nursing staff and an opportunity was given to ask questions regarding the process. Staff began participating in interviews based on their availability. To lessen intimidation, no more than 4 members interviewed the applicant at one time. The interview was performed in a comfortable environment using a tool designed to assess the candidate's suitability for the unit. Answers regarding flexibility, work standards, and problem solving skills were ranked according to importance. The applicant was given a unit description with manager contact information and encouraged to call with any follow-up questions. A debriefing session was held and a joint decision was made whether or not to hire. **Evaluation/Outcomes:** Participation on the interview team has increased the nurses' professional growth and communication skills. Motivation and commitment has also been enhanced. Applicants cited their approval of the process, especially the opportunity to dialogue with potential colleagues, receiving a real perspective of the ICU environment. Sixty-six percent of applicants interviewed by the team, have been hired: so far a good match! sheri.edwards@duke.edu

CS426 Staying Afloat: Clinical Nurse Specialist in the Central Float Pool

Burns J, Brames N; Barnes-Jewish Hospital; MO

Purpose: Float pool nurses provide a valuable service to patient care areas. Since these nurses are not regular staff in these areas, they often do not receive the same educational opportunities. A new clinical nurse specialist (CNS) position was created to bridge the gap. **Description:** RN vacancy rates continue to be high in some patient care areas. To address these needs, the central float pool in our hospital continues to grow. These nurses need the skills to function across many different service lines. A CNS role was created to meet the educational needs of these nurses. To develop these nurses and to keep them updated on changing policies and procedures, the CNS has implemented several strategies. Some of the innovations specific to central float pool nurses include a monthly newsletter, web page with weekly updates, feedback on individual documentation, and development of orientation classes to specialty areas. **Evaluation/Outcomes:** The staff of the central float pool now feel that they have someone to go to with clinical questions. They have commented that they feel like a more cohesive group and that someone is watching out for them. By being held accountable, they have become more responsible in their practice and have become a vital part of the patient care team. jmb0662@bjc.org

CS427 A Step Toward Decreasing Falls and Preventing Injuries in Critical Care

Taylor S, Sayre C, Nasenbeny K, Sisco K; University of Washington Medical Center; Seattle, WA

Purpose: Patients admitted to critical care units have unique factors that put them at risk for falls with current trends to minimize the use of restraints and for early mobilization. A patient safety initiative was undertaken to develop a fall prevention plan specific for critical care patients. **Description:** The Critical Care Local Practice Council (CC-LPC) at an academic medical center was challenged to develop a fall prevention plan to decrease falls and fall-related injuries in critical care. The CC-LPC requested information on the factors and circumstances related to the falls in order to develop a tailored fall prevention plan, with a specific interest in the sedation level of patients who fell. Data related to falls in 2 critical care units that occurred from June 2006 to June 2007 were reviewed. The data were systematically examined for demographics, when and where falls occurred, the types of falls, the related fall risk scores, the sedation level of patients, fall-related injuries, and documentation of fall-related interventions and patient education. Results indicated that the greatest number of falls occurred on day shift between 7 AM and 10:59 AM (a time when patients were routinely out of bed for early mobilization and hygiene); 68% of patients were found on the floor, 31% of falls resulted in injury, and no injury resulted when floor mats were used. Of interest, by including patients with a Hendrich II score of 4 or greater, 95% of the falls would have been predicted. **Evaluation/Outcomes:** The CC-LPC, nurse managers, and CNS for falls collaborated to create a plan to improve staff awareness of high risk factors for falls, increase access to fall prevention/protection equipment, and improve functionality of bed alarms. The results were used to develop a tailored rather than general plan for each level of fall risk. Evaluation of fall rates and fall characteristics is ongoing to evaluate effectiveness of this evidence-based plan. smtaylor@u.washington.edu

CS428 The "Suite" Life of Family-Centered Care

Schneider JM, Sostre AM; Emory University Hospital; GA

Purpose: The purpose of this presentation is to demonstrate how families can be incorporated into the design and construction of a true family-centered care environment within a neurological ICU. This environment took into account their experiences, fears, desires, and wishes. **Description:** Current research shows that family involvement within the critical care environment improves patients' outcomes. However, data detailing the importance of family influences on actual design are limited. In 2007, our hospital opened a new critical care unit that included input from families. Eighteen months before opening day, family members of former patients were invited to a day-long conference where they expressed their vision for the ideal ICU setting. Families expressed their likes and dislikes of the traditional ICU versus their views of an optimal unit. Architects and engineers were present to welcome their comments and ask questions. **Evaluation/Outcomes:** These ideas gave life to private enclosed suites built into each patient room that allow 2 family members to sleep each night, an arm's length away from their family member. A larger family waiting area attended by a trained family coordinator was also developed to include a children's center, café, shower area, and laundry facilities. Family surveys taken after the opening of the unit showed increased satisfaction. julie.schneider@emoryhealthcare.org

CS429 Take Apart and Make New so as to Help Others: Improving Patient Flow From the ED to the MICU Using a Kaizen Model

Daly ML; Rochester General Hospital; NY

Purpose: Patient flow from the ED to the MICU was identified as an issue. The MICU charge nurse was faced with a new challenge—collaborating with the ED charge nurse to improve patient flow. The purpose was to facilitate decision-making by improved communication between the 2 departments. **Description:** Kaizen, a quality improvement process, was undertaken to assess existing patient flow. A Kaizen event is used to "make a leap" when the other processes and tools have hit an obstacle. With this philosophy in mind, our hospital undertook the challenge of promptly getting patients seen in the ED to the proper level of care—in this case the MICU. Usual practice was examined with multidisciplinary stakeholders involved. Discussion centered on individual perceptions of current practice problems and opportunities for improvement. A key component to the planning process involved resolving interdepartmental conflicts with active listening and mutual respect. Our solution was an innovative approach involving an autonomous collaborative effort between nurses in both departments. The outcome was to give the authority of the patient flow process to the ED and MICU charge nurses. The 2 charge nurses were optimally qualified to decide which patients should be transferred first when multiple admissions were in the queue. No longer were there delays in transfer due to house staff procrastination. To facilitate the process, the charge nurses communicate via cell phone. Weekly Kaizen rounds occur to monitor the process. **Evaluation/Outcomes:** Cooperation between departments has led to increased respect, collaboration, and better patient flow. The MICU staff is now challenged with beyond capacity census requiring the boarding of patients in our other ICUs. The MICU charge nurse has taken on increased responsibility with positive results. Increased collegiality and respect between departments, more efficient patient flow, and less ED overcrowding are all benefits of this program. tbase2@hughes.net

CS430 Taking Advantage of Technology: Creation of an ICU Website As a Resource for Education and Communication

Corliss G; Dartmouth Hitchcock Medical Center; Lebanon, NH

Purpose: Accessing the most recently relevant clinical information remains a challenge for bedside nurses. Our goal was to make the nurse's job less frustrating and more productive by creating an accessible, central resource for education, communication, and unit-specific policies and procedures. **Description:** A review of all the resource materials and tools that were needed to practice in the ICU was conducted by the unit educators. An assessment of some of the challenges nurses face to obtain current information was completed by interviewing staff nurses and other educators. We determined that we have many resources available to nurses, but not all are easily located when needed. For example, our ICU resource book includes unit-specific policies and procedures. It often takes a nurse time to locate the binder and when found, the binder may have missing pages. Disseminating new information to all clinical staff was also a challenge. As a solution, we created a Web site on the DHMC intranet that is accessible from all computers in the hospital. Now, the ICU resource book can be viewed online and pages can be printed for use at the bedside. In-services are presented in PowerPoint form, so if nurses miss an educational session, they can view it from the Web site. A link was created for completion of annual mandatory modules. Historically about 55% were completed independently. Upcoming educational offerings, educational videos, links for all orientation modules, the medication quick reference sheets and a QTc calculator are also included. **Evaluation/Outcomes:** Feedback from staff has been positive. They express appreciation for this reliable and accessible resource. Mandatory module completion has increased from 55% to 95% and the QTc calculator is used regularly. The orientation process has been streamlined by adding a central location for all vital documents. Taking advantage of Web-based technology can reduce nurse's frustration and ultimately leaves more time for patient care. gene.corliss@hitchcock.org

CS431 Team Huddles Improve Communication and Recognition in MICU, SICU, and CCICU

Purkel D, Helle L, Fulks C, Lucas G, Eddy L, Allar C, Bortell T; OSF Saint Francis Medical Center; Peoria, IL

Purpose: The need for improved communication and recognition was identified through in-house surveys in the intensive care units. The ICU unit councils of MICU, SICU, and CCICU developed the formats and each area implemented daily team huddles. **Description:** At OSF Saint Francis Medical Center, the emergency department and telemetry unit were the first to develop huddles. The huddle consists of a 5-minute update of hospital events, unit patient status, education, equipment and supply issues, and recognition. The concept was designed to meet each unit's preferences. The huddles are held once or twice daily. Huddles allow all staff to be aware of unit issues, policy changes, unit needs, and also recognize staff with their peers present. Previously, information was disseminated at unit meetings at which the staff attendance averaged 50% every month. Initially, the huddle idea was met with staff resistance due to time constraints. After a trial period, staff realized the benefits of the huddle. Communication improved as staff felt well informed of issues and resolutions, house-wide and unit changes, new policies, and procedure changes. Equipment needs and repairs were identified and addressed. Recognition in front of peers for exceeding expectations in teamwork and patient satisfaction fostered a collaborative work environment. **Evaluation/Outcomes:** Two months after implementation, survey results were very positive. Monthly unit meetings were eliminated, which satisfied staff as well as reduced costs. The consensus of the staff was to continue the team huddles. purk@mtco.com

CS432 Time Is Muscle: Creative Strategies for Managing Emergent Care of STEMI Patients

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Purpose: To improve care and outcomes for STEMI patients, our interdisciplinary AMI Clinical Action Team representing 3 affiliated hospitals and EMS service worked together to revise call systems and change practices in the rig, the 3 emergency departments and the cardiovascular (CV) lab at Mercy Hospital. **Description:** Immediately after the implementation of a new computerized medical record (Excellian) and all the challenges that accompanied this process, we experienced intermittent delays in arrival to PCI times for STEMI patients. Our team determined the need to analyze each case that presented to any of the EDs, maximize Excellian features, and eliminate variation in processes to transfer patients to the CV Lab and get arteries open fast! We began concurrent review of all emergent STEMI cases and provided timely feedback to every involved provider. Prehospital activation of the CV call team by the ambulance service and group page additions/changes, including a simultaneous page to the interventionalist, have had a huge impact. Each of the 3 EDs have made changes to ensure that the EKG is done immediately on arrival before the triage process and registration occurs at the bedside. Standardization of CV Lab processes has also reduced variation in procedure times. **Evaluation/Outcomes:** Measurement of our success includes steady progress toward specific aims with aggressive targets for improvement in each of the following time frames: arrival to EKG, EKG to CV Lab arrival (depending on which hospital the patient presents to), and CV Lab arrival to PCI. Our current average arrival to PCI times are 48 minutes. andrea.olson@allina.com

CS433 Totally Unrestrictive: Opening the Doors to Patient- and Family-Centered Care in 10 ICUs Across 1 Institution

Puppe J, Evenson L, Pfrimmer D, Holubar J; Mayo Clinic; MN

Purpose: Our critical care nurse practice committee (CCNPC) implemented open visitation in all 10 ICUs in a large medical center. The purpose of this poster is to share how we implemented and achieved consistent evidence-based practice among a large multidisciplinary team, including more than 800 nurses. **Description:** In March 2006, IHI issued a challenge to institute a "totally unrestricted" visiting policy in ICUs. The CCNPC accepted the challenge to champion this best-practice change in critical care. An evaluation of practice across units reflected visitation variations. An open visitation work group was created to plan, implement, and evaluate an open visitation practice change. In order to achieve staff buy-in, the work group collaborated with the CCNPC members in each unit for endorsement and identification of foreseen obstacles at the unit level. In addition, the work group attended the multidisciplinary critical care committee (CCC) to request feedback and endorsement of the proposed open visitation practice change. An 8-week open visitation evaluation phase was implemented in all ICUs. A tracking tool was created to track both positive comments as well as perceived barriers. The work group met weekly to review the feedback and address perceived barriers,

which were mostly communication issues. Since communication was the most common issue, classes offered by the human resources department on communication skills were highlighted. This poster will highlight common experiences and how we successfully standardized open visitation across 10 ICUs. **Evaluation/Outcomes:** All unit brochures were combined into 1 critical care brochure highlighting open visitation. Unit signage on visiting hours was taken down, open visitation was incorporated into the institution visitor policy, and unit visitation guidelines were discontinued. As we progressed in the evaluation phase, staff shared more positive experiences and embraced the practice change. All the above changes allowed us to successfully standardize practice. puppe.jacqueline@mayo.edu

CS434 Transitioning From Nurse Extern to Intern: Steady Progression to Independence

Smith D, Dicks E, Mical-Robb K, Wallace K, Wood T; Henry Ford Hospital; MI

Purpose: Working as a nurse extern can help future ICU nurses gain valuable work experience. However, there are no research studies to demonstrate how best to transition students from the nurse extern "student" role to the nurse intern "RN" role. **Description:** The unit governance council of the cardiac intensive care unit (CICU) at Henry Ford Hospital developed a staging process to ease the progression of nurse externs to capable nurse interns. Staff members in the CICU felt that the externs were not being taught how to efficiently perform basic nursing care before learning technical nursing tasks and were therefore, not an asset to the unit while in training. The UGC developed a 2-year staging process with specific skill sets to be mastered and criteria to be met before the extern progresses. Movement from one level to the next is determined by assessment of the skills of the externs by the preceptor and the management staff. The extern must also work a minimum number of hours in each stage and meet goals to progress to the next level The process consists of 4 stages, each lasting 6 months. The goal for stage I is to learn the role of the nursing assistant. The goal for stage II is to learn more technical skills. The goal for stage III is to focus more on the patient and critical thinking. The goal for stage IV is to work side by side with an RN preceptor to learn to work as an RN. **Evaluation/Outcomes:** The key outcomes expected from the new staging process include greater intern/extern satisfaction, better tracking of intern/extern progress, and increased retention. The plan began with the new externs that started work in the fall of 2006. So far, 1 extern in the program has finished training and become an RN. Two externs are currently in the program. Evaluation consists of interviews throughout the process as well as an exit interview. dsmith15@hfhs.org

CS435 Translating Ideas From the NTI Into Practice: "The No-Interruption Zone"

Anthony K, Kotora K, Wiencek C; University Hospitals Case Medical Center; OH

Purpose: Many ideas presented at the NTI provide eye-opening insight, for the bedside nurse, into issues that are consistent with "Reclaiming our Priorities." The process of translating a specific safety innovation into practice is described. **Description:** The "No-Interruption Zone" (NIZ), modeled after the sterile cockpit rule in airlines, was adapted by Barbara Bates for ICUs. The sterile cockpit rule emphasizes complete focus on critical tasks. In busy ICUs, it is easy to have attention diverted from medication preparation, thus increasing the chance of error. The need for an increase in medication safety has been identified by JCAHO, AHRQ, and The Institute for Safe Medication Practices. The medication preparation area is a space where informal conversations and patient updates commonly occur. The NIZ for this project was defined as the space surrounding medication preparation. It served as a visual cue or demarcated red area in the ICU for the nurse to completely focus on medication preparation without interruption. Translating the innovation into practice required a stepwise approach. At the unit level, the idea was first discussed with peers and then formally presented to the nurse manager who helped plan the strategy for organizational implementation. Subsequently the NIZ was presented to the hospital's quality center with an overwhelmingly enthusiastic response and authorization for pilot study in the MICU. Red carpets and tally counters were purchased. **Evaluation/Outcomes:** The pilot study included 3 phases consisting of a presurvey of MICU staff nurses, implementation of the NIZ for 2 weeks, and a postsurvey. Nurses' self-report of the frequency of interruptions and results of tally counting were compared. After the pilot in MICU, this initiative will

be evaluated for implementation throughout the hosptial. kyle.anthony@UHhospitals.org

CS436 Turn on the Heat: Surviving the Trauma Hypothermia Ice Age With Intravascular Core Rewarming

Mastropieri C, Foreman M; Baylor University Medical Center; TX

Purpose: Trauma hypothermia frequently occurs in severely injured patients and leads to increased morbidity and mortality. Current warming measures are inadequate to treat hypothermia. A trauma program initiative was undertaken to implement and evaluate intravascular core rewarming for hypothermia. **Description:** Maintaining normothermia during resuscitation plays a vital role in overall care and outcomes. After review of evidence-based guidelines, a trauma hypothermia protocol was developed for intravascular core rewarming with CoolGard 3000. Two systems were purchased from a foundation grant and training was initiated. Case analysis revealed a 52-year-old man with history of depression found unresponsive in a swimming pool with self-inflicted SW to the throat, abdomen and wrists. EMS care included intubation and IV fluid resuscitation. The patient was transported to a level I trauma center. The initial blood pressure was 65/25, heart rate 114, oxygen saturation 100%, score on Glasgow Coma Scale 3, and rectal temperature 86.9°F. The patient received 3 units of warm packed red blood cells (PRBCs), bladder temperature monitoring, and warm blankets. Initial pH was 6.9 and base excess -20. The patient was taken to the operating room, where an ICY catheter was placed in the femoral vein and core rewarming was started with CoolGard 3000. The patient received 7 units of PRBCs, 20 units of cryoprecipitate, and 1 single donor platelets. Injuries included a neck laceration with tracheal injury, open transverse colon injury, median nerve transection, tendon laceration, and bilateral ulna artery transection. **Evaluation/Outcomes:** The patient was warmed to 94.8°F with a pH of 7.33 and base excess of -6 in the operating room within 3 hours. The patient was taken to the ICU and the temperature reached 98.6°F in 1.5 hours. The ICY catheter was removed in 24 hours with no complications. The ISS was 12, RTS 2.63 and RPS .6416. The length of stay was 13 days. The use of intravascular core rewarming during trauma resuscitation was instrumental to decrease morbidity-mortality and improve outcomes. cyndima@baylorhealth.edu

CS437 Undergraduate Nursing Residency Program As a Tool for Recruitment

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Purpose: Recruitment and retention of critical care nurses is a continuing problem. The forecast for Kansas City, Missouri, is an 11% deficiency by 2010. Recruitment of nurses including new graduates is therefore very competitive. Most new graduates have their first job long before graduation. **Description:** To address the problem of recruitment of exceptional new graduates, it was decided that interventions needed to be initiated earlier in their educational process. In response, a learning residency program for students who have completed their junior year was established 6 years ago. Our ICUs and PCUs have been very active participants in this program. Nursing students who have completed their junior year of a baccalaureate program, have a GPA of at least 3.0/4.0, and are recommended by their nursing program are invited to apply. Qualified applicants are then interviewed by a committee that includes clinical staff. This year we were able to accommodate 10 students, 7 in critical care. Students work a total of 400 hours and were paid at 80% of a beginning RN salary. Participants are assigned a preceptor, attend various classes, and have multiple observational experiences. The students are not counted into staffing but do provide care and perform selected skills with preceptor. Their primary job is to learn and experience the full professional role. Benefits are 2-fold: (1) we are able to assist professional growth of future nurses and (2) development of excellent relationships that facilitate recruitment. **Evaluation/Outcomes:** Resident students' evaluations are very positive, often stating that the experience was far superior to previous clinical experiences. The nurse managers have the opportunity to observe candidates before a long-term commitment. The hire rate for the former residents is 67% and the positive word of mouth has also assisted recruitment of other graduates. Those completing the residency program move through the orientation process much more easily. jenkins@ucmo.edu

CS438 Use of eICU Surveillance for Compliance With VAP Bundle Items

Mullen-FortinoM, Worley K, Sites F; Penn E-Lert; PA

Purpose: Reducing VAP requires an organized process that uses consistent application of evidence-based practices. Through the health system's clinical effectiveness and quality improvement (CEQI) method, a 14-bed intensive care unit (ICU) identified an opportunity to enhance outcomes related to VAP. **Description:** Education of the VAP bundle components as outlined by the Institute for Healthcare Improvement's 100 000 Lives Campaign was presented to nursing and respiratory staff in an effort to reduce VAP. Bundle compliance and VAP rates for the first quarter were presented to staff. Education alone proved to be ineffective in the reduction of VAP or in bundle compliance. The revision of the VAP plan included collaboration with the eICU. The eICU is the health systems telemedicine program charged with proactively identifying issues and for support of bedside staff. Beginning in the second quarter the eICU monitored compliance of head of bed elevation, peptic ulcer prophylaxis, and deep vein ulcer prophylaxis. The use of transparent documentation, daily management reports and video surveillance provided by eICU assisted the ICU with monitoring of VAP bundle item compliance. This information was reviewed during daily combined medical and nursing rounds to enable conformity with bundle items. Monthly and quarterly VAP rates were presented to ICU staff. **Evaluation/Outcomes:** Through collaboration with the eICU, there was shown to be an inverse relationship between bundle compliance and reduction in VAP. Achievement of reduced VAP has occurred over the last 5 quarters due in part to the collaborative efforts of the ICU and eICU. Education, dissemination of evidence-based data, and the CEQI process has led to substantial and sustained improvements in VAP rates. Fortino-Mullen.Margaret@uphs.upenn.edu

CS439 Using an EBP Model to Answer Clinical Inquiry Questions: Making Structured Curiosity a PRIORITY

Forshner B; Morristown Memorial Hospital; NJ

Purpose: A vital duty of critical care nurses is to properly differentiate wide-complex tachycardias. The purpose of this project was to use an evidence-based practice model to answer the clinical question: In adult critically ill patients experiencing tachycardia with a wide-QRS complex, will selecting V_1 rather than lead II as the standard of practice result in more effective differentiation of VT versus SVT with aberrancy? **Description:** All too often, critical care nurses monitor lead II because this lead shows the tallest R waves and easily recognizable P waves, but this practice has never been based on best evidence. Misdiagnosis of cardiac arrhythmias such as VT versus SVT with aberrancy is common in critical care and can result in inappropriate treatment and adverse outcomes. A creative approach to this clinical inquiry was to use an evidence-based practice model, the Johns Hopkins Nursing Process for Evidence-Based Practice, to formulate the question, review the literature, make conclusions, and then integrate the evidence into practice. The following evidence was identified: 1–level 3, good quality; 2–level 4, high quality; and, 1–level 4, good quality. Based on a review of the best evidence available, the following conclusions were made: (1) Lead II is an inferior monitoring lead that should not be used as the standard monitoring lead for all patients and (2) Lead V_1 is the preferred lead to differentiate VT from SVT with aberrancy. **Evaluation/Outcomes:** A plan-do-study-act strategy was implemented that focused on education to increase awareness on the use of lead V_1. A baseline audit yielded 12.5% usage of V_1. One month following the educational initiative, the compliance rate jumped to 62.5% but still was not at the 90% goal. As awareness activities continued, it resulted in a sustained 100% compliance. Ultimately, choosing the best lead to monitor a patient specific to the diagnosis or dysrhythmia will translate into prompt treatment and better outcomes. bonnie.forshner@atlantichealth.org

CS440 Using Guidelines to Increase Appropriate Use of Therapeutic Beds for Patients With Pulmonary Alterations

Walker C, Lerum S; Sharp Memorial Hospital; CA

Purpose: The purpose of this project was to create and implement evidence-based guidelines to assist in the management of patients with acute lung injury (ALI) and acute respiratory distress syndrome (ARDS). Ultimately, the aim was to increase the appropriate use of prone and kinetic therapy beds. **Description:** Supported by a county-wide collaboration on evidence-based practice, a critical care staff nurse developed this project with mentorship from the critical care clinical nurse specialist. Kinetic and prone therapies were currently used as an adjunctive treatment for patients with severe pulmonary dysfunction in our critical care units, but lack of established guidelines served as the impetus for

implementing an evidence-based approach. Immediate outcomes included establishing guidelines and standardized physician order sets that guided appropriate and safe placement of patients on kinetic and proning therapeutic beds. With approval of the institutional review board, data on appropriate use of therapy was gathered anonymously for like quarters from 2006 and 2007. Despite lack of evidence to support that this therapy decreases ventilator days and length of stay, these data points were collected for comparison to existing research. This comparison was used to assess if implementing guidelines for kinetic and proning therapies improves appropriate use of these therapies in patients meeting the criteria for ALI/ARDS. **Evaluation/Outcomes:** Retrospective data collection for 2006 revealed that less than 10% of patients meeting the criteria for ALI/ARDS received either kinetic or prone therapies. Although data collection is ongoing for our postimplementation phase, significant improvements in appropriate use have been demonstrated. Complete data analysis will be performed to determine the effectiveness of this evidence-based project. christopher.walker@sharp.com

CS441 Use of Software to Improve Nosocomial Urinary Tract Infections

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Purpose: Nosocomial urinary tract infections (NUTIs) are the most common nosocomial infection in institutionalized patients, accounting for greater than 40% of all nosocomial-acquired infections. Our hospital had urine marker of 27.9% from June 2004 to May 2005. Our hospital was not capturing the data in the most efficient manner. **Description:** A UTI task force was formed as a subcommittee of our nursing quality council. The team identified potential resources and identified a database service-MedMined, Inc. The MedMined program provides data designed to reduce human and economic cost of infections. MedMined is an algorithm-based program that uses clinical, laboratory and pharmacy data that is extracted from current systems. The MedMined data were used to evaluate nosocomial infections related to urinary tract infection.Based on data from Medmined, the UTI task force assessed nursing practice related to care of patients with Foley catheters. Armed with assessment data, the team set a goal to reduce nosocomial markers by 10% within 12 months. **Evaluation/Outcomes:** Following strategies such as changing to silver tip coated Foley catheter, educating staff about the importance of securing the catheter to the extremity, and adding a securement device to Foley kits, by 9 months, our hospital saw a reduction in diagnosis-related group (DRG)-adjusted loss by $5000 per case and DRG length of stay by 5.4 days per case. The team exceeded the goal by reducing the urine marker by 17.09% for fiscal year 2007. mgwillia@ppmh.org

CS442 Using Concepts of Lean Engineering to Improve the Resuscitation Process

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Purpose: Time is the enemy during a resuscitation event. Lean engineering techniques that remove waste/delays would help to streamline this process. Our goal was to eliminate the obstacles that kept us from delivering the first chest compression in < 1 minute and the first defibrillation in < 3 minutes. **Description:** After administrative support was confirmed, a group of stakeholders were assembled for a 1-day event. The focus was to conduct a value stream analysis of the steps involved in the first 5 minutes of resuscitation. A video recording of an event was the starting point for everyone to identify the steps in the process. Many excess steps involving multiple trips to retrieve equipment already in the room, confusion and duplication of roles, etc were identified. The value of each step was also analyzed. Issues including lack of initial assisted ventilation, poor quality of chest compressions, and delays in attaching the patient to the AED were identified. Smaller teams of stakeholders then developed solutions for each category of issues. Solutions included adding visual prompts in the patient's room highlighting the actions in the first 3 minutes. Equipment solutions involved adding a CPR mask to each patient's room, preattach the hands-off defibrillator cable to the manual defibrillation to ensure ease of movement from the AED to the manual defibrillator, add drawer organizers to crash carts. The documentation worksheet was revised to bring more attention to the 4 initial time elements. **Evaluation/Outcomes:** A 4-month pilot test was conducted on the medicine and surgical floors. Nursing staff were educated on the proposed changes. Mock codes were conducted to practice the proposed

changes. All proposed changes listed above were implemented. Median time to first chest compressions before the pilot study was 1.5 minutes; after the pilot study, it was <1 minute. Median time to first defibrillation before the pilot study was 3.5 minutes, after the pilot study, it was <3 minutes. nkm1535@bjc.org

CS443 Using Evidence-Based Literature to Guide the Development of an Oral Care Protocol

Wolak ES, McCann MF, Maisano D, Brooks B, Harden JM, Madigan CK; University of North Carolina Hospitals; NC

Purpose: Various methods of oral care to prevent ventilator-associated pneumonia (VAP) are used in ICUs. The goal was to review literature for the most effective means to prevent/reduce VAP. A comprehensive search was performed in multiple search engines. Only peer-reviewed, interventional literature in the past 10 years was critiqued. **Description:** The search strategy resulted in the extraction of 8 research-based articles. Critical review revealed 2 themes for oral care effective for the prevention of VAP: (1) use of 0.12% chlorhexidine gluconate (CHG) twice daily, (2) mechanical debridement via brushing followed by supraglottal suctioning. Articles outlining these interventions had a total of 3169 research subjects, 1387 control subjects, and showed a 52% to 65% decrease in VAP. An oral care protocol was developed in our institution using this evidence-based literature. After development, a multidisciplinary intensive education program was initiated with ICU physicians and nurses from June to August 2006. This protocol is a required element of orientation for all new house staff and nurses entering the critical care arena. **Evaluation/Outcomes:** The implementation of this evidence-based protocol has provided a consistent definition of "oral care" for mechanically ventilated patients. Moreover, comparative VAP data from within the institution's Heart Center show a reduction in VAP rates from 4.6 infections per 1000 ventilator days before protocol implementation to 3.0 infections per 1000 ventilator days after protocol implementation. ewolak@unch.unc.edu

CS444 Using RN Competency-Based Expertise to Ensure Door-To-Flow Time for an Inpatient Cardiac Alert Program

Behr D; Exempla Lutheran Hospital; Wheat Ridge, CO

Purpose: Successful implementation of an In-House Cardiac Alert (IHCA) program in a nonteaching community hospital is based on the nurses' ability to accurately recognize new-onset ST elevation of 1 mm in 2 or more anatomically contiguous leads and communicate this to the physician. **Description:** Inpatients warrant a standard of care equivalent to that given patients coming to the emergency department with ST elevated myocardial infarction (STEMI). Sixty cardiac nurses were surveyed to determine their baseline competency. The nurses were asked to identify the J-point and accurately measure the ST elevation. Only 15% were able to perform this exercise with a score of 100%. Based on these findings, an independent study module was developed. All CCU and selected telemetry nurses completed the module within 2 weeks, including a posttest. An optional 3-hour course focused on the rapid recognition of STEMI including case scenarios with hands-on practice was also made available. **Evaluation/Outcomes:** Cardiac nurses' competency in accurately recognizing new-onset ST-segment elevation was a prerequisite to implementation of an IHCA program. Based on the accuracy of these evaluations, the CCU nurses now call an IHCA, and bring in the cardiologist and the cath lab team regardless of day or time. This program has decreased symptom-to-balloon time to a mean of 77 minutes, from a mean of 417 minutes for inpatients. behrd@exempla.org

CS445 Venous Thromboembolism (VTE) Prophylaxis: A New Look at an Old Problem

Bybee D; Blessing Hospital; Quincy, IL

Purpose: Approximately 900 000 Americans have some form of VTE newly diagnosed each year. VTE has been identified as a preventable complication and one that nursing can play a vital role. A team was formed to determine an evidence-based process for VTE prophylaxis. **Description:** The goal of the team was to develop a standard order set and risk screening criteria involving both physician and nursing. The literature was searched and an evidence table created to determine the existing evidence and recommendations for VTE prophylaxis. Nursing was given the autonomy to determine the type of mechanical prophylaxis on the basis of screening criteria. The screening was created within the electronic record for efficiency and consistency. The order set provides pharmacological prophylactic choices for the physicians and a physician risk assessment

reference. An electronic alert was created for the physicians to remind them to review the order set and choose pharmacological prophylaxis as indicated. Patient education was created to support the process and involve the patient in prophylaxis. The emphasis was that VTE prevention is collaboration between physician, nurse, and patient. **Evaluation/Outcomes:** An evidence-based process was developed on the basis of the information available. Patients are now screened at admission for VTE risk against standard criteria. The documentation is consistently completed in the electronic record and the appropriate mechanical prophylaxis applied. A pilot study showed increased compliance with VTE prophylaxis and an increase in the use of pharmacological prophylaxis. dbybee@blessinghospital.com

CS446 Ventilator Educational Series to Optimize Quality Care
Perrecone M; Albany Medical Center; Albany, NY

Purpose: To ensure and enhance all registered cardiac care nurses' competency for care of patients receiving mechanical ventilation, because of a recent increase in alarm reporting and unplanned extubations during the summer of 2006. **Description:** Our 18-bed CCU consistently has MICU/SICU overflow patients. Using the premise of healthy work environment standards, communication and collaboration were the initial steps to working to ensure competency. In the fall of 2006, nursing leadership worked collaboratively with MICU physicians to identify challenges of this population through occurrence reporting, ventilator alarm monitors, chart reviews, daily rounds, and management observation. Nursing identified lack of knowledge related to care of ventilated patients. During a 6-month period from December 2006 to May 2007, 4 required educational in-service training sessions were provided for more than 50 CCU RNs of varying experience. The CCU leadership team wrote specific goals using adult learning principles in its educational offerings. Ventilator series 1 consisted of an 8-hour bedside clinical with a preceptor or a 4-hour rounding with either the critical care educator or CNS reviewing ventilator settings on ventilated patients and pathophysiology. Series 2 was a videotaped lecture presentation by the MICU's medical director focusing on modes and case studies. Series 3 was a poster on ventilator-acquired pneumonia, including a section for the patient care associates who perform bedside care. **Evaluation/Outcomes:** To date, occurrences and VAPs remain at 0%. Chart reviews continue with improved documentation and on-the-spot learning opportunity by the RN staff. All 4 educational series achieved 100% compliance. The CCU research and performance improvement teams identified through chart reviews that CCU was deficient with sedation interruption and unassisted ventilator trials. The hospital protocol focused on MICU/SICU patients and respiratory therapy treated the MICU/SICU boarders as CCU patients. perrecm@mail.amc.edu

CS447 Ventilator Liberation Unit
Bond D; Carilion Clinic; Roanoke, VA

Purpose: Patients who receive mechanical ventilation as a means of life support are a very special population with unique requirements. Today's technology enables severely ill patients to survive major medical crises. **Description:** After reviewing the literature, a method of strengthening the patient emotionally and physically for independent breathing and concentrating mechanical ventilation liberation care was developed among a core of experienced, dedicated health care professionals working as a team. The Ventilator Liberation Unit (VLU) was established to provide a collaborative effort between nursing, respiratory, medical staff, physical therapy, occupational therapy, speech therapy, case management, social work services, and nutrition to present a concentrated effort to wean selected patients from mechanical ventilation. Patients who have failed prior attempts to wean from mechanical ventilation are screened by the CNS, RRT, and MD and are accepted into the program if specific criteria are met. The goal of this project is to liberate patients from mechanical ventilation and expedite discharge from the hospital. While participating in this program, an interdisciplinary team works with the patient concentrating on motor function, cognitive function, nutrition, and communication while preparing the patient to transit to a home or extended care setting. **Evaluation/Outcomes:** Since the opening of the unit, a total of 3 patients have been admitted. One patient was considered slow to wean, the other 2 patients were deemed chronic and a ventilator nursing home bed was being pursued. All 3 were successfully weaned from mechanical ventilation in a mean of 6.3 days (range, 3 to 9 days). Two patients were discharged home with home health; the third patient was discharged to a rehabilitation facility. DCBond@Carilion.com

CS448 The Virtual ICU: Building Multidisciplinary Collaboration in a Healthy Work Environment
Zapatochny Rufo R, Lyon D, Nigro K, Hester A; Resurrection eICU Partners, Resurrection Health Care; Chicago, IL

Purpose: Multidisciplinary collaboration was critical to the successful integration of the virtual ICU within 8 acute care facilities at Resurrection Heath Care. We used AACN's 6 standards for establishing and sustaining a healthy work environment as the foundation for multidisciplinary collaboration of a new care delivery model. **Description:** The virtual ICU leverages technology to accelerate overall critical care delivery by using an innovative care delivery model. The virtual ICU allows a centralized intensivist-led care team (critical care MDs, RNs, support staff) to continuously monitor, assess, and intervene in support of onsite caregivers. Resurrection eICU Partners was challenged with developing strategies for effective multidisciplinary collaboration throughout 8 acute care hospitals. We integrated the AACN's 6 healthy work environment standards into redesigning of a new care delivery model with integration of the virtual ICU. The 6 standards provide the foundation for a safe professional environment that fosters ethical behavior in the pursuit of excellence in patient quality and safety. Bedside clinicians are connected to the purpose and empowered in the transition of the virtual ICU. The virtual ICU eliminates nursing practice variations by centralizing activities to improve efficiency and workflow of the bedside nurse. Multidisciplinary collaboration is facilitated by integration of the virtual ICU technology with daily care activities. **Evaluation/Outcomes:** The integration of the virtual ICU throughout 8 acute care facilities at Resurrection Health Care will promote standardization and systemization of health care delivery. Multidisciplinary rounds are more efficient through daily use of the technology and real-time reports to measure compliance with best practice interventions. We found that the virtual ICU provides an immediate critical care resource to bedside caregivers, fosters a mentor-preceptor relationship, comforts the family, and establishes best practice. rebecca.rufo@reshealthcare.org

CS449 VTE Prophylaxis: A Nurse-Driven Protocol
Shimet T, Jones C, Hadas L, Morrison J, Ricket S, Galera R, Caluag V, Geoghagen-Taylor L, Cully P, Eager S; Florida Hospital Medical Center; Orlando, FL

Purpose: The purpose of this initiative is to augment the hospital-wide venous thromboembolism (VTE) prophylaxis program with a nurse-driven protocol for the cardiovascular surgical patients. Studies have shown that patients are at risk for VTE after major surgery, including cardiac surgery, and this protocol helps the nursing staff mitigate that risk for their patients. **Description:** Hospital VTE prophylaxis protocols help to assess patients for VTE risk and provide options for mechanical or chemical prophylaxis but provide very little in the way of instructions for patient mobilization. The nurse practice councils developed, taught, and implemented a protocol that helps define specific activities and frequency of those activities to help mitigate the VTE risk. Specific activities begin preoperatively with patient education and exercises and continue throughout the hospital stay. In the immediate postoperative period, nursing staff follow an algorithm that addresses patient mobility. Those who are immobile and unable to participate with mobility exercises are passively mobilized until they can participate themselves. Patients and their families are also educated by the nursing staff and the ambulation team to prepare them for their postdischarge activity progression. **Evaluation/Outcomes:** After initiating this program, the VTE rate for isolated CABG for quarter 1, 2007 went from 3.1% to 1.7% in quarter 2, 2007. The nurses feel empowered to be able expand on the medical prophylaxis with patient activities that minimize VTE risk while augmenting physician-driven strategies. This team approach is helping to prevent the devastating postoperative complication of VTE. troy.shimet@flhosp.org

CS450 What's The Skinny? A Reduction In Pressure Ulcer Prevalence in the Surgical Intensive Care Unit (SICU)
Browning M, Boudreau L, Franco L, Grenier J, Vainisi D, Herman E, Franker L, Ryan L, Sierra M, Fitzgerald R; Rush University Medical Center; Chicago, IL

Purpose: Caring for a patient's skin is primarily a nursing responsibility. Skin breakdown from pressure is associated with increased mortality, cost, and length of stay. A nursing initiative to decrease the prevalence of hospital-acquired pressure ulcers and improve the quality of skin care was implemented. **Description:** Analysis of Braden scores showed that

the mean score in the SICU was 11.35, indicating that these patients are at high risk for developing pressure ulcers. Contributing factors include long operating room times, poor nutrition and perfusion, fecal incontinence, and the inability to turn hemodynamically unstable or fresh graft patients. In January 2007, SICU management collaborated with the WOCN to create an SICU Skin Care Committee. RNs were educated on skin assessment, protocols for data collection, and preventative skin care. To improve accuracy of data collection, committee members also completed an online course on pressure ulcer surveillance. Monthly data collection of pressure ulcer prevalence with quarterly submission to NDNQI has provided benchmarks to assess outcomes. Additionally, the SICU has implemented low-air-loss mattresses for all patients, increased committee membership, posted skin and wound care guidelines at all bedsides, and provided staff education on risk assessment, preventative skin care, wound care, and resources for consultation. A turning team was started on the night shift to turn and position patients every 2 hours, and the charge nurse performs weekly audits on skin care documentation. **Evaluation/Outcomes:** Audits show improvement in the identification of patients at risk for pressure ulcers developing as well as appropriate prevention and treatment. Although most patients in the SICU are at risk for pressure ulcers developing, the prevalence has gone from 37% in February 2007 to 6.2% in July 2007 (NDNQI mean 15%). The SICU Skin Care Team initiative has and will continue to improve skin and wound care for these high-risk, critically ill patients. melissa_browning@rush.edu

CS451 When Time Is of the Essence: An Early Nursing Intervention Team Poised to Respond to In-House Stroke Patients

Daly ML; Rochester General Hospital; NY

Purpose: Emergency room staff are able to identify and quickly begin treatment of stroke victims; however, inpatients are less likely to receive the same prompt stroke response. Our primary stroke center has taken an innovative approach to preemptively address this issue. **Description:** Our Early Nursing Intervention Team (ENIT), a nurse-led rapid response team, is poised to respond to the "in-house stroke" patient. Planning for an in-house stroke response involved several steps including education related to stroke etiology and presentation for all general care nurses and for ENIT responders. Additionally, the ENIT responders NIH stroke scale certification and received alteplase-administration training. Collaboration with the staff neurologists, stroke unit staff, and pharmacy was essential. With stroke training complete, we have begun to respond to calls concerning patients with a suspected stroke in progress. The ENIT nurse responds, collaborating with the patient's nurse, the provider, and/or neurologist. He/she accompanies the patient to radiology for emergent CT imaging and administers alteplase if indicated. The patient will then be transferred to the stroke unit or to the MICU, depending on the patient's condition. While in-house stroke is uncommon, our program of early recognition and prompt response preserves brain function. Incorporating in-house stroke response into the existing ENIT process was the logical solution to minimize or avert the devastating aftermath of an acute stroke event. **Evaluation/Outcomes:** Our in-house stroke response was implemented in January 2007. To date, 7 patients have been referred for suspected in-house stroke. Two of these patients were deemed eligible for thrombolytic therapy. Both patients showed prompt improvement in neurologic symptoms. We are proud to be on the cutting edge of what we hope will soon become a nationwide movement in the care of in-house stroke victims. tbase2@hughes.net

CS452 A Whole New World: Nurse-Driven Protocols in Critical Care

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Purpose: In the old world of critical care, nurses assessed patient situations and collaborated with physicians concerning changes in the plan of care, losing valuable time. Nurse-driven protocols allow the nurse to make needed changes within set parameters. These interventions increased nursing autonomy. **Description:** Our intensive care unit has 24/7 intensivist coverage, which allows timely collaboration on patient care issues. We formed a committee to explore the possibilities and drawbacks of protocol-driven care in an effort to improve our patients' outcomes. Physicians in collaboration with nurses developed several protocols. During the development of the protocols, a "tweaking process" took place. Protocols would be tried out and sent back to committee for changes. The intensivist group reviewed and approved all changes. Once the protocols were finalized, all staff members and physicians were edu-

cated on their use. To date, the following protocols have been developed and are in use in our 15-bed ICU: glucose, electrolyte replacement, adrenocortical replacement, stress ulcer prophylaxis, anemia, DVT prophylaxis, sepsis, hypothermia, sedation/analgesia, and postoperative beta-blocker. The intensivists and respiratory therapists developed a lung protective protocol for use with our ARDS patients. Additionally as part of the IHI 100 000 Lives program, we developed VAP and BSI guidelines. **Evaluation/Outcomes:** These protocols allow the bedside critical care nurse increased autonomy and decision making related to patient care. The use of these protocols in the ICU has led to increased job satisfaction, nurse retention, and increased physician appreciation of the role of the nurse. Nurse-driven critical care protocols opened up a whole new world for the nurses, physicians, and patients. vette72hr@yahoo.com

CS453 Wisdom Wagon: Empowering Nurses to Become Involved in the Most Current Bedside Practices!

Clarkson Y, Johnson R, Aishman L; Oklahoma Heart Hospital; OK

Purpose: To develop a convenient and standardized way of providing education to nurses at the bedside. The "Wisdom Wagon" allows a nurse to access educational material about new practices and procedures in a readily accessible way. **Description:** The Oklahoma Heart Hospital is an acute care hospital that is leading the nation in the care of cardiovascular patients. With constant changes in technology, techniques, and practices, it is vital that we keep our nurses up-to-date with the most recent information. Through the development of the Wisdom Wagon, we are able to empower bedside nurses to feel prepared to care for any new practice or procedure. An educational needs assessment tool was completed to identify the education needs of the staff. The Wisdom Wagon is a rolling cart with an attached bulletin board where educational information can be presented to the staff. The cart can be easily moved throughout the facility to accommodate the needs of each department. We also use the Wisdom Wagon in specific locations where new procedures are being introduced. The wagon can be rolled directly outside the patient's room to reinforce specific nursing behavior with a new procedure. This provides for consistency in patient care and empowers nurses to feel confident with their bedside practice. Continuing education credit is available upon completion of the handouts on the wagon. Sign-in sheets are used to track those employees who have completed the education. **Evaluation/Outcomes:** With the implementation of the Wisdom Wagon, we were able to provide just-in-time education to the staff at the bedside. The nurses have enjoyed access to education at any time day or night. Through the dynamic presentations on the Wisdom Wagon, we have been able to provide the nurses with the proper tools and knowledge to perform excellent patient care. yclarkson@okheart.com.

Sponsored by: Oklahoma Heart Hospital

CS454 You Can Take It With You: An Educational Tool for Patients After Cardiac Catheterization

Guthrie D, Overman K, Parker J; Duke University Medical Center; NC

Purpose: To address patients' inability recalling cardiac catheterization results and risk factors after catheterization. It was decided to supply these to patients in an accessible, user-friendly format. This would assist patients in remembering results, when asked by their primary physician or family. **Description:** The staff met, discussed the problem, and in collaboration with the physicians developed a wallet card that provided catheterization results and risk factors. A grant received from the patient education committee funded the "Know Your Heart Wallet Card." The card has 4 folds. It has our program logo, phone number, and Web site on one side and the right coronary artery on another. The next fold consists of risk factors, BP, weight, and LDL level. A third fold consists of the left coronary system and a notes side. The last fold is a removable follow-up survey. Physicians are responsible for entering catheterization results on the card. The staff assists in filling in other areas. The physicians distribute the cards when they explain the results to the patient. Staff members answer any patient questions regarding the card and have the patient answer questions on the removable follow-up survey, before discharge. Data was collected for 1 year. A total of 55 cards and surveys were distributed. The initial survey was completed just before discharge. **Evaluation/Outcomes:** Initially, 95% of patients agreed to a better understanding of results. About 69% identified risk factors and discussed them with their physician. A total of 82% agreed to make lifestyle changes. When 25 phone calls were made after 6 months to determine the effectiveness of our educational efforts, 60% of respondents still had the cards, and 50%

said they still used the cards. This tool was determined to be useful in the educational efforts of patients. guthr002@mc.duke.edu

CS455 You Rang?
Sanford PJ; Washington Hospital Center; Washington, DC

Purpose: In January 2007, the cardiovascular and thoracic surgery progressive care unit at Washington Hospital Center implemented an action plan centered on improving the patient satisfaction item entitled: "Promptness response to call." The goals of the project were to improve timeliness surrounding patient needs. **Description:** An evidence-based article by Meade et al titled "Original Research: Effects of Nursing Rounds on Patient Call Light Use Satisfaction and Safety" was reviewed by the professional nursing staff and leadership team using a journal club format. Coupled with the journal club, the staff reviewed the most recent patient satisfaction survey results with attention to both the overall number and the quartile percentage. External benchmark information was also available. The nursing staff developed best-practice language to use when answering the call bell and interacting with the patient in the room. An example included having the nurse/technician ask before leaving the room, "What else can I do for you before I leave? I have the time." Other examples included having them ask, "Do you have any personal goals you would like to attain today?" or "Do you have any concerns that I may address?" These best-practice open-ended questions assisted with daily care and also coincided with language used on the patient survey questions. A triage algorithm was developed that was used by the unit clerks when answering the call bell in determining which clinician (nurse/technician/unit clerk) was appropriate to complete the patient's request. **Evaluation/Outcomes:** Before implementation, the patient satisfaction scores/percentile were as follows: For the first quarter of the fiscal year (FY) 2007, the "Promptness response to call" score was 83.7, which compared to our Custom Urban benchmark, placed us in the 57th percentile. For the second quarter of FY07, the score dropped to 72.3, placing us in the 9th percentile. After implementing our action plan, our score for FY07 third quarter was 86.0 with a percentile ranking of 82! paula.j.sanford@medstar.net

CS456 You've Got a Friend: The Use of Volunteers in Assisting Families of Critically Ill
Ninni S, Fochesto D; Morristown Memorial Hospital, Atlantic Health; Morristown, NJ

Purpose: Critical care family needs are significant and well documented. The care of the family is a vital component in obtaining optimal patient outcomes and improving satisfaction levels. Our volunteer program provides the opportunity for provision of information, guidance, and support to families of the critically ill. **Description:** The use of volunteers is a creative solution for assisting family members with coping during this stressful time period. Family-centered care is integral to an open visitation policy but often difficult to achieve. Research shows that family members need to be close to their critically ill loved ones and receive information and support. A volunteer assistance program was implemented that includes carefully selected volunteers and a thorough orientation to both the institution and the unique critical care environment. Volunteers are used during "quiet time," when the environment is "softened," by directing families elsewhere and providing emotional/informational support. They are also used during change of shift when patient confidentiality needs to be maintained. They are positioned at the entrance to the ICU to provide a friendly face, a soft voice, and comforting words. They assist with the introduction into the world of critical care and often become a trusted friend and confidant. This cost-effective intervention has been priceless. **Evaluation/Outcomes:** Our volunteers love their "jobs" as evidenced by their continued commitment and dedication to our unit for more than a year. Nurses appreciate the volunteers for their assistance with family needs. Most importantly, our families believe that our volunteers make a positive impact, as evidenced by a significant overall improvement in satisfaction levels. (P = .03) As one volunteer says, "This is the best job I've ever had, and I don't get paid to do it!" sherry.ninni@atlantichealth.org

CS457 Love the Skin You're In! Implementation of a Skin Care Bundle
Wood C; Grant Medical Center/OhioHealth; Columbus, OH

Purpose: Critical care patients are at increased risk for pressure ulcers and represent a significant care management challenge for clini-

cians. Focusing on prevention, our Critical Care Workteam accepted a mission to develop a standardized and evidence-based Skin Care Bundle. **Description:** Staff completed a skin care survey indicating practice inconsistency in daily skin care routines. A subcommittee of the Workteam consisting of critical care managers, educators, outcomes manager, and specialty wound/skin care nurses searched current literature and reviewed best-practice guidelines. The team decided to incorporate it's own bundle of practices adopting the mnemonic SKIN found in recent writings. S stands for "support surface," K stands for "keep turning," I stands for "incontinence management," and N stands for "nutrition." The bundle is initiated for a Braden score of 18 or less and includes assessment and documentation guidelines, interventions the nurse may initiate without a physician's order, clear and concise step-by-step directions on skin care interventions in each category, and consultation criteria for the Skin Care Team, specialty beds, and MD notification. The bundle was laminated and placed on all bedside charts. Education included rollout at Critical Care Skills Days, Powerpoint presentation lunches, prizes awarded for completion of "Skin Bundle Brain Twisters," and inservices on the appropriate use of individual products. **Evaluation/Outcomes:** Implementation of the bundle has stimulated a renewed awareness in pressure ulcer prevention. Critical care nursing staff have instituted "Turning Rounds" on odd hours where available staff travel room to room repositioning patients. Unit skin care champions have been identified and daily skin bundle quality monitoring is performed by charge nurses who give real-time feedback. Future plans include rollout of the bundle hospital-wide. cwood2@ohiohealth.com

CS458 Improving Patient- and Family-Centered Care: A Shared Decision Making Approach
Engdahl R, 10-3 Nursing Practice Committee; Rochester Methodist Hospital; Rochester, MN

Purpose: In the critical care unit, often the patient is unable to communicate wishes and healthcare professionals turn to family members. Research shows families desire collaboration and an information-sharing environment with healthcare professionals. Healthcare professionals must be aware of the importance of this collaboration and presence of family members during patient health crisis. **Description:** A medical/surgical-transplant ICU in Rochester, Minnesota, strives to meet the needs of the patients and their family members in times of health crisis. In the past, conflict occurred between health care workers and family members on a restrictive visiting hour policy. Realizing this conflict, the unit nursing practice committee took initiative to evaluate visiting policies. Reviewing literature, the committee found family presence has physiological and psychological benefits for family members and patients. This evidence was presented to staff members with encouragement for staff input in changing the restrictive visiting policy. A survey was passed out to staff members. Major concerns of the staff included patient confidentiality and safety. These concerns were addressed in a staff meeting. **Evaluation/Outcomes:** An open visiting hour policy was tried and made permanent. The nursing practice committee continues promotion of open visiting hours and developing tools to aid families and healthcare professionals in maintaining a collaborative environment. This poster presentation exhibits physiological and psychological benefits of family presence in intensive care units. It also highlights the process of shared decision making the nursing practice committee underwent to educate healthcare professionals and facilitate improved communications with patients and families. otto.rebecca@mayo.edu

CS459 Unit-Based Shared Governance Leads the Journey of Creating a Healthy Work Environment
Lewis L, Vickers A; Carolinas Medical Center; Charlotte, NC

Purpose: The progressive care staff felt uninformed and uninvolved in decisions affecting their nursing practice. The unit-based council introduced the concept of using AACN's 6 standards for establishing and sustaining a healthy work environment as the basis for developing goals and a mission statement. **Description:** Our unit, with our manager's support, changed our administrative model to one of unit-based shared governance, using the 6 standards as the basis for education, goal setting, and developing a mission statement. Goals included increasing the involvement of bedside nurses in practice decisions, quality improvement, research, recruitment and retention, and improving collaboration and communication between nursing and all disciplines. Three councils including quality, clinical practice, and recruitment/retention were

created. Monthly meetings used problem solving and brainstorming activities to develop creative solutions to achieve goals. Goals are discussed at daily huddles. Unit-based councils receive the results of all audits and use that information to develop 90-day plans or share best practice with other units. Wins include an increased in documentation completion, increased recognition for excellence in care, and decreased restraint use. To further recognize staff we designated a "Wall of Fame" where certificates of certification and other awards are displayed. We distribute candy grams as thanks to physicians and other team members. Physicians and nurses round with other ancillaries to improve communication. **Evaluation/**
Outcomes: Staff shifted from things being "their" problem to working as a team to improve patients' outcomes, staff satisfaction, physician satisfaction, and patient/family satisfaction. Staff involvement has increased interaction, professionalism, and communication. Staff participates in peer interviewing and evaluations. We are engaged in researching and changing policy to provide the best evidence-based care ensuring positive outcomes for patients. laura@lakenorman.com

CS460 Implementation of Standardized Orders for Patients With Severe Sepsis/Septic Shock
Juarez P; Advocate South Suburban Hospital; Hazel Crest, IL
Purpose: Severe sepsis/septic shock is the most frequent cause of death in noncardiac intensive care units. Research has shown that early, goal-directed therapy improves patient outcome, but evidence-based treatment is complex. A standardized order set was developed for patients with this diagnosis. **Description:** The Sepsis Workgroup was formed in order to identify evidence-based interventions for the care of the patient with severe sepsis/septic shock. An order set was developed based upon the Surviving Sepsis Campaign guidelines endorsed by the Society of Critical Care Medicine and outcomes were measured according to elements of the Sepsis Bundle recommended by the IHI. ICU, ED nurses, and the medical staff received education on severe sepsis/septic shock and on the process for use of the orders. Orders were implemented, the data collection/reporting tool was piloted, and data collection began. All patients who met criteria for the orders, whether or not the orders were actually used, were monitored for survival to discharge and compliance with the Sepsis Bundle. Concurrent data was collected for all patients related to patient origination (ED, in-patient unit); for those who received the orders the time to order initiation, whether a central catheter was placed within 6 hours and compliance with implementation with select items on the order set were monitored. The Sepsis Workgroup continues to meet monthly to analyze the data and develop ongoing action plans for improvement based on results. **Evaluation/Outcomes:** During the first 8 months, most patients who met criteria to receive the orders did receive the orders (75%). Survival to discharge of all patients was 65%, although rates were greater for those with orders (74%) than for those without orders (38%). Challenges included timeliness of patient identification, provision of fluid resuscitation as outlined in the order set, and achieving the goal urine output. pat.juarez@advocatehealth.com