Impact of Advanced Practice Consultation to Improve Pediatric Resuscitation in the Emergency Department

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Significance: Children comprise 30% of the population seen in community emergency departments (ED). Critically ill children pose an even greater challenge to ED staff. Nurses in full-service hospitals generally begin their careers with adult patient populations then transfer to the ED where education is based on adult standards of care. Nurses express feelings of anxiety in caring for critically ill children compared to adults and have a perceived lack of knowledge and training in pediatrics.

Purpose: To increase staff proficiency and confidence in pediatric resuscitation using innovative educational opportunities, simulation, and repetition.

2005 NACNS National Conference
March 9–12, 2005, Orlando, Fla

KATHY BALDWIN, PhD, RN, PAT BIELECKI, MSN, RNC, AND SUE B. DAVIDSON, PhD, RN,
Conference Co-Chairs

This year’s annual NACNS conference is planned for Orlando, Fla, March 9–12, 2005. Over 300 clinical nurse specialists (CNSs) are expected to attend, and as with past conferences, attendees will also include graduate faculty from CNS programs, nurse administrators, and nurse researchers. The theme of the conference, CNS Leadership: Navigating the Healthcare Environment Toward Excellence, was selected to showcase the many ways CNSs acquire and disseminate knowledge and innovative practices in their specialty areas. Two preconference sessions are scheduled. One session, sponsored by NACNS Legislative/Regulatory Committee, targets information for CNSs interested in understanding the legislative/regulatory process as it deals with the practice of nursing, and will also help build skills CNSs need to engage in the process. The second session, sponsored by NACNS Education Committee, focuses on CNS education issues, and as with the education preconferences of past years, anticipates informative dialogue and much sharing among CNS educators around curriculum design, teaching strategies, and indicators of quality in the curriculum that link to the NACNS education standards to program review and excellence. The conference planning committee is proud and pleased to have Jeanette Ives Erickson, MS, RN, CNA, Senior Vice President for Patient Care Services and Chief Nurse Executive of Massachusetts General Hospital as the opening keynote speaker. She will begin the conference by highlighting the importance of CNS practice on patient safety. The planning committee is equally proud and pleased to have NACNS past-president Rhonda Scott, PhD, RN, Chief Nursing Officer of Grady Health System as the closing speaker. Dr Scott will challenge attendees to use the information from the conference to shape quality care delivered in a safe environment and to advance the profession of nursing through direct care to clients, influencing standards of care delivered by other nurses, and influencing the healthcare delivery system to be to support innovative, cost-effective, quality nursing care. A total of 64 abstracts for podium and poster presentations were selected in addition to graduate student posters. The abstracts address the 3 spheres of CNS practice with a strong emphasis on clinical practice improvements. As you will note from the abstracts published in this issue of the journal, specialty practice areas represented in the abstracts include children, adults, and gerontological patient groups; hospital, outpatient, and home care settings, and community health. In addition, a wide variety of specialty topics including smoking cessation programs, end-of-life care issues, and protocols outlining nursing approaches to improved diabetes, cardiovascular and ventilator management. A number of the abstracts described hospital and healthcare system level innovations that resulted from CNS practice. Collectively, these abstracts reflect the breadth, depth, and richness of CNS contributions to the well-being of individuals, families, groups, and communities. The following abstracts are from those presenters who elected to have their work published in the journal so those who are unable to attend this year’s conference can share in the knowledge of the conference. As you read each abstract, consider the talent and clinical scholarship of your CNS colleagues who are advancing the practice of nursing and contributing to improved outcomes for patients and healthcare organizations. You may want to contact individual presenters to network, collaborate, consult, or share your own ideas about these topics. Watch for next year’s call for abstracts and consider submitting an abstract for presentation at NACNS’s next conference in Salt Lake City, Utah, March 15–18, 2006.
Description: A multidisciplinary and interdepartmental pediatric committee developed strategies to increase competence and confidence in pediatric resuscitation using code drills. After analyzing baseline assessment data, the committee identified department-specific learning needs. Clinical scenarios, competency checklists, and an evaluation tool were used to ensure consistent pediatric standards of care throughout the organization. Currently, 2 committee members procure and evaluate drills in the ED 6 times a month.

Evaluation: The involved committee members present an evaluative assessment of the drill process to the entire committee monthly. Increasingly complex scenarios are developed and introduced into the drills based on demonstrated performance improvement and increased confidence. Following every pediatric patient code, a designated committee member evaluates the emergency team response through data analysis, documentation review, and discussion to ascertain ongoing education and training needs.

Conclusions: Ongoing support, development, and education assist staff in providing expert care to critically ill children. The ED staff reported increased levels of confidence and abilities to manage children requiring emergent resuscitation. This project empowered the ED staff to take ownership of a program that addresses their learning needs and improves communication among members of the multidisciplinary and interdepartmental team.

Clinical Nurse Specialist–Initiated Smoking Cessation Program
Donna C. Bond, MSN, RN,BC, Carilion Health System, Roanoke, Va

Problem: Cigarette smoking is the most prevalent health risk behavior in the United States, with tobacco-related disease and disability accounting for 1/3 of all mortality in medical expenditures and 400,000 deaths annually. Carilion Health System in Virginia did not have a systematic protocol for providing education on smoking cessation.

Purpose: Through collaboration between the pulmonary CNS, cardiac CNS, cardiac rehabilitation nurses, and respiratory therapy practitioners, a program for smoking cessation was developed for Carilion Health System.

Significance/Justification: Seventy percent of current smokers want to quit smoking, but lack the information for success. Research has shown that smoking cessation counseling lasting as little as 10 minutes can significantly increase smoking cessation rates. In addition, recent studies have shown that utilizing a systematic protocol for identifying and addressing tobacco use facilitates the delivery of smoking cessation interventions.

Practice Innovation/Methods: Hospitalized patients are referred to the program by nurses, physicians, or other health care workers, as well as self-referral. Registered nurses or respiratory therapists, who are trained interventionists, assess the level of nicotine dependence and behavioral anchors associated with the use of tobacco. Based on the assessments, the following information is discussed, the smoker’s motivation to quit, review personal risk factors, smoking triggers/behaviors, identification of an individual to provide support, quit date, and other pertinent information. The patient is then assisted in selection of a method for nicotine cessation. Written materials are provided and tailored to the patient who made the decision to quit. A nurse who made the decision to quit will view a closed circuit television program. Follow-up telephone counseling occurs after discharge. Total time investment is approximately 30 minutes per patient.

Outcomes/Evaluation: Since this program started in 2001, more than 100 patients have received the intervention. Of the patients who have been able to follow, 27% continue to abstain from tobacco 1 month following the session.

Implications for Nursing Practice: This system change demonstrates how to create and implement a system-wide smoking cessation program based on research, the importance of involving different disciplines in change, and developing partnerships within a health system.

Instituting an Electronic Nursing Plan of Care, The ImPaCTT Project at Integris Health—Improving Patient Care Through Technology
Daphne Burnett, MS, RN, CCNS, CNS, Marc Winnimming, MS, RN, CCNS, CNS, and Doug Hartzell, MHR, RN, Integris Health, Mustang, Okla

Purpose: To provide clinicians with a comprehensive electronic Nursing Plan of Care (POC) for acute care patients utilizing NANDA nursing language.

Background/Significance: Providing adequate documentation of patient care is always an ongoing struggle in any institution. Meeting Joint Commission on Accreditation of HealthCare Organizations (JCAHO) requirements is also a struggle when it comes to documentation of the POC. Integris Health in Oklahoma City has worked with the pulmonary CNS to establish an electronic medical record (EMR). Integris Southwest Medical Center achieved great success with the placing the Admitting Patient History form online and making pertinent fields required items in order for the history to show complete during electronic auditing. The CNSs identified the Nursing POC as an important part of the patient medical record that is not always completed by the nursing staff with their current documentation utilizing the FOCUS system. Creating an EMR Nursing POC that would compliment the pieces of medical record currently electronic would not only benefit the nursing staff but would achieve all the JCAHO requirements necessary in planning patient care.

Description of the Project: Together with the Care Net Systems manager, the CNSs worked to provide a comprehensive POC looking at each system identified within the current FOCUS documentation. The group initially met with Nursing leadership and the leadership of the ImPaCTT project at Integris Health. The ImPaCTT project oversees all of the EMR at Integris Health. During this meeting many ideas were discussed as well as what body of nursing language to utilize for the POC. After this meeting, the CNSs researched various nursing languages including NIC, NOC, and NANDA. It was then decided to utilize NANDA as the core for the nursing POC. Each Focus section currently used at Integris Health was looked at individually and nursing diagnosis, nursing goals, nursing actions, and patient responses were identified. The program was built so that an individual nursing diagnosis was identified and a goal established. As the nurse documents, he or she can identify numerous actions for each diagnosis and goal. A response is also identified as ongoing or resolved. The nurse clicks on the box next to the item selected for the patients’ POC, which simplifies the computerized process for the end-user.

Outcomes: A pilot study utilizing a medical/surgical unit at Integris Southwest Medical Center was utilized to roll out the Nursing POC. Minimal education was required on how to fill out the form because the user had current computer knowledge with other EMRs utilized at Integris Health.

Evaluation: During the pilot it was recognized that a few areas in the POC were not available depending on utilization of the FOCUS sections. The main section missing related to endocrine-type disorders. Currently, the CNSs are working to add this section to the POC and will be utilizing this housewide in June of 2004.

Leading in Uncertainty: Six Simple Rules to Navigate a New World
Betsy Jessup Caine, MA, RN, Work In Progress, LLC, Bethesda, Md

It is a new world that we live and work in. Life post 9/11: A growing US presence in unstable and often dangerous regions around the world; terrorism alerts; the AIDS crisis worsens; our struggling economy...In today’s complex world, leaders in healthcare and any other industry for that matter need to be even more skilled than ever before. This presentation explores the impact of an unpredictable environment on organizational life. Forced to deal with an unprecedented rate of emerging environmental challenges, today’s leaders need to be even more adept at leading and motivating their workforce. They need to ensure that their staff do not just show up for work but do so with their hearts and heads engaged. Leading in Uncertainty is a fast-paced and lively program and is targeted for managers at all levels and for those considering management opportunities. The 6 rules address creating shared vision and values, executing with intent, anticipating predictable events, staying connected with people that run your business; terrorism alerts; the AIDS crisis worsens; our struggling economy...In today’s complex world, leaders in healthcare and any other industry for that matter need to be even more skilled than ever before. This presentation explores the impact of an unpredictable environment on organizational life. Forced to deal with an unprecedented rate of emerging environmental challenges, today’s leaders need to be even more adept at leading and motivating their workforce. They need to ensure that their staff do not just show up for work but do so with their hearts and heads engaged. Leading in Uncertainty is a fast-paced and lively program and is targeted for managers at all levels and for those considering management opportunities. The 6 rules address creating shared vision and values, executing with intent, anticipating predictable events, staying connected with people that run your business; terrorism alerts; the AIDS crisis worsens; our struggling economy...In today’s complex world, leaders in healthcare and any other industry for that matter need to be even more skilled than ever before. This presentation explores the impact of an unpredictable environment on organizational life. Forced to deal with an unprecedented rate of emerging environmental challenges, today’s leaders need to be even more adept at leading and motivating their workforce. They need to ensure that their staff do not just show up for work but do so with their hearts and heads engaged. Leading in Uncertainty is a fast-paced and lively program and is targeted for managers at all levels and for those considering management opportunities. The 6 rules address creating shared vision and values, executing with intent, anticipating predictable events, staying connected with people that run your business; terrorism alerts; the AIDS crisis worsens; our struggling economy...In today’s complex world, leaders in healthcare and any other industry for that matter need to be even more skilled than ever before. This presentation explores the impact of an unpredictable environment on organizational life. Forced to deal with an unprecedented rate of emerging environmental challenges, today’s leaders need to be even more adept at leading and motivating their workforce. They need to ensure that their staff do not just show up for work but do so with their hearts and heads engaged. Leading in Uncertainty is a fast-paced and lively program and is targeted for managers at all levels and for those considering management opportunities. The 6 rules address creating shared vision and values, executing with intent, anticipating predictable events, staying connected with people that run your business; terrorism alerts; the AIDS crisis worsens; our struggling economy...In today’s complex world, leaders in healthcare and any other industry for that matter need to be even more skilled than ever before. This presentation explores the impact of an unpredictable environment on organizational life. Forced to deal with an unprecedented rate of emerging environmental challenges, today’s leaders need to be even more adept at leading and motivating their workforce. They need to ensure that their staff do not just show up for work but do so with their hearts and heads engaged. Leading in Uncertainty is a fast-paced and lively program and is targeted for managers at all levels and for those considering management opportunities. The 6 rules address creating shared vision and values, executing with intent, anticipating predictable events, staying connected with people that run your business; terrorism alerts; the AIDS crisis worsens; our struggling economy...In today’s complex world, leaders in healthcare and any other industry for that matter need to be even more skilled than ever before. This presentation explores the impact of an unpredictable environment on organizational life. Forced to deal with a...
and a nurse manager at this hospital decided to create a comprehensive consultative model.

Purpose: To increase the effectiveness of end-of-life care by creating a budget neutral strategy to meet palliative care needs.

Description: The CNS/pharmacist-led team includes the oncology nurse manager, and CNS, pharmacists, medical-surgical CNS, chaplains, and social workers. Each member’s role includes palliative care responsibilities. An EPEC-trained hospitalist group provides medical consultation.

Methods: Initially, national and local palliative care experts provided consultation and education for health care providers. Team meetings were held regularly to design the service mission, goals, referral processes, physician order set, nursing care protocol, data management system, evaluation plan, educational brochures, and other tools. Team meetings are held weekly for collaboration about patients and to refine the services. Team members are available for on-site consultations during weekday business hours with limited weekend coverage.

Outcomes/Evaluation: Since 2001, the team consults have increased from 54 to 132 per year with no new FTEs. Data demonstrates more consistent assessment and management of symptoms and cost reduction. Satisfaction with services is high among the nursing staff. Bereavement services are being enhanced.

Conclusions/Implications for Nursing: CNS/pharmacist-led interdisciplinary palliative care services are a viable, cost-effective option when a dedicated team is not possible.

Have Fun With Competencies—Hold a Skills Fair!
Barbara Chamberlain, MSN, APRN,BC, CNS, CCRN, and Janet Thomas, MS, RN,C, Kennedy Health System, Cherry Hill, NJ

Problem and Significance: Keeping nurses in a health system informed of changes in policy while maintaining competency can be a challenge for the education department and the CNSs. Nurses who are unaware of changes or unfamiliar with updates are more likely to make errors in a variety of ways.

Purpose: The purpose of the skills fairs was to reach all the nursing staff and some ancillary staff at our 3 campuses as well as the surgical and dialysis centers to update them on the latest developments in nursing and to meet JACHO requirements.

Description of the Project: The project was a 10-station skills fair given over a 6-week period at various times at each campus.

Methods: The CNS, education team, and administrators met earlier this year to decide what the important items were that needed to be covered and how many stations would be needed to deliver this information. Ten topics were chosen: pain management, myths surrounding advance directives, blood administration documentation, restraint alternatives, skin breakdown prevention, safety indicators, code amber (abduction), adolescent rights, glucometer certification, and preparation for surgery. Each member of the Skills Fairs Team agreed to oversee a station and prepare the presentation for that station. Each facilitator at the station gave a short talk updating the group of 6 to 8 people; this was followed by a quiz or demonstration to validate competency. The participants then moved on to the next station.

Outcomes and Evaluation of the Practice Change: All participants were required to evaluate the skills fair and offer suggestions for future fairs. Overall, the evaluations were very good. Participants were now aware of the various changes that have been implemented in the system and the CNSs are following up to make sure appropriate competencies are being employed.

Conclusions and Implications for Nursing: These highly successful skills fairs allowed the CNSs and the education team to impart a great deal of information by having the nurses and staff come to them rather than conducting unit-to-unit in-services. Because everyone is required to attend, the chance of missing someone was reduced and the basis for compliance and competency increased. The nursing and ancillary staffs are now aware of clinically important updates and are monitored for competency.

Multidisciplinary Care Rounds: Improved Quality Care for the Patient
Barbara Chamberlain, MSN, APRN,BC, CNS, CCRN, Kennedy Health System, Turnersville, NJ

Problem and Significance: Today, patients who come to the hospital are very sick and need multidisciplinary care. A multidisciplinary approach can potentially shorten the patient’s length of stay and decrease costs for the facility.

Purpose: The purpose of multidisciplinary rounds is to hear other disciplines’ short and long-term plans and goals for the patient while hospitalized.

Description of the Project: The multidisciplinary team meets at 8:30 every morning to discuss the patients and the plan of care. Also discussed is how each discipline can impact each other.

Methods: This project was initiated and implemented by the CNS after consultation with various care managers. Once the managers agreed, discussions followed with the various disciplines that agreed to pilot the project. Rounds, facilitated by the CNS and the case manager, have been successfully conducted for the past 9 months. In addition, the team consists of the charge nurse, the nurse caring for the patient, a respiratory therapist, a dietician, a pharmacist, attending physician (if available), the infection control nurse, the medical resident (who changes each month), 2 interns, a medical student, and the family, if interested. The walking rounds are conducted outside the patient room. The nurses provide an update on the patient and then the multidisciplinary team discusses its plans.

Outcomes: All disciplines have seen rounds as a positive step in terms of patient care. We all work together to see that the patient receives quality care and leaves the hospital as soon as possible. The CNS works with the nursing staff to make accurate assessments, achieve nursing goals, and implement other disciplines’ goals.

Conclusions/Implications for Nursing Practice: All disciplines work together toward a common goal—quality care for the patient. The disciplines are pleased with this approach and understand the basis for the care that is being delivered. There is a great respect between the disciplines and each appreciates what the other brings to the team. The planned outcome is that the patient is discharged quickly.

Ketorolac (ToraIol): An Effective Adjunct to Morphine for Short-term Postoperative Pain
Mary Ann Clement, Pinnacle Health, Harrisburg, Pa

Problem: Pain management (the fifth vital sign) is an ongoing concern in medicine today. Nurses and physicians play an important role and responsibility in pain assessment, pain intervention, monitoring the effects of treatment, and communicating information about the patient’s pain. The CNS and staff nurses noticed a varied use of adjunct postoperative pain medication. The CNS discussed this observation with the Pharmacy and Therapeutic Committee and the plan to conduct a medication use evaluation (MUE) with in health system as formulated.

Purpose: To provide education to the nursing and physician staff on the advantages and disadvantages of ketorolac IV with morphine IV to control postoperative pain.

Significance: The CNS identified postsurgical care unit (PSCU) patients who received concomitant ketorolac and morphine and found that they were out of bed sooner, had better pain control, had less opioid side effects, and were discharged sooner. The literature review supports these outcomes.

Description of Practice Change: The CNS worked with the Pharmacy and Therapeutic Committee to begin a MUE owing to the varied use of ketorolac. The pharmacy began a retrospective data collection of its usage. The results will be reviewed and further recommendations presented.

Evaluation: Ketorolac use guidelines will be developed and made available to the CNS and physicians. This information will be displayed on a poster board. The CNS and staff nurses will perform unit monitoring on ketorolac usage with morphine. The pharmacy will then plan to repeat the MUE.

Conclusions: Ketorolac IV can be an effective adjunct to morphine IV in the appropriate patient to manage short-term postoperative pain. The benefits of having the patient pain-free become apparent. This was a multidisciplinary approach to improve quality care and patient outcomes.

Acute Care Diabetes Management in the Morning: Do We Need a Change?
Linda S. Cohen, MSN, MPH, RN, CDE, Downstate Medical Center, Brooklyn, NY

Problem and Significance: Hyperglycemia can increase morbidity and mortality in hospitalized patients. It is known that controlling
hyperglycemia reduces both morbidity and mortality during hospitalization while improving short, intermediate, and long-term outcomes.

**Purpose:** This study assessed the current practice of morning diabetes management in a university hospital by noting specific times of glucose monitoring, insulin administration, and delivery of breakfast to determine whether these variables affected glucose control and patient safety. Specifically, we sought to determine whether timing of insulin administration before breakfast related to development of pre-lunch hyperglycemia.

**Overall Questions:** Does current diabetes management in terms of intervals between glucose monitoring, time of insulin administration, and the time of breakfast impact on subsequent adverse outcomes?

**Hypotheses:** (1) The longer the interval between blood glucose monitoring and insulin injection, the more likely the patient will have an adverse outcome. (2) The longer the interval between insulin injection in the morning and starting breakfast, the more likely the patient will have an adverse outcome. (3) The longer the interval between blood glucose testing and breakfast, the more likely the patient will have an adverse outcome.

**Design and Methods:** A quantitative, descriptive, correlational, nonexperimental, prospective design. The practice of morning diabetes management was studied as it was practiced. This study explored relationships among the variables of interest.

**Setting and Participants:** A nonprobability convenience sample of 40 diabetic hospitalized adults in a 376-bed tertiary, urban, academic medical center.

**Study Results/Outcomes:** 40 adult diabetic patients were divided into either group 1 (breakfast <45 minutes after receiving insulin) or group 2 (breakfast >45 minutes after receiving insulin). Data collected included the interval between blood glucose monitoring and insulin administration, insulin administration and start of breakfast, and blood glucose monitoring and breakfast. Main outcome was prelunch glucose; a value less than 180 mg/dL was deemed acceptable. Mean prelunch glucose value for group 2 was significantly higher than group 1 (243 ± 90 vs 172 ± 93, P = .033). Eighty percent of patients in group 2 had prelunch glucose more than 180 mg/dL, and 20% had a prelunch glucose of less than 180 mg/dL, whereas 43% of patients in group 1 had glucose values more than 180 and 57% had glucose values less than 180, P = .026. Logistical regression analysis showed a 5.3 times higher risk of having a prelunch blood glucose value more than 180 mg/dL in patients who had breakfast less than 45 minutes after receiving insulin as compared to those who received insulin less than 45 minutes prior to breakfast (RR = 5.3[95% CI = 1.2–25, P = .026). Eighty percent of patients

**Conclusions/Implications for Nursing:** Feeding breakfast longer than 45 minutes after insulin administration induces unacceptable blood sugar control in hospitalized diabetic patients. Proper linkage of feeding with insulin administration may improve glycemic control in hospitalized patients, necessitating a change in how diabetic care is delivered. Possible alterations in sequential care include synchronizing nursing scheduled monitoring and insulin administration to the time of food delivery. The CNS is well suited to work with the various health care practitioners, hospital systems, and patients to design, implement, and evaluate necessary changes that can improve quality of care and patient safety.

**The ACE of Hearts: Developing an Acute Care for Elders Unit to Enhance Patient Outcomes**

Deborah Marks Conley, MSN, APRN,BC, CS, Christine Donovan, BSN, RN,BC, Rebecca Reilly, MD, Jacque Rauth, MA, MPT, Sherri Distafano, MSW, Sue Logan, RN, and Kevin Rockford, MSW, Nebraska Methodist Hospital and Nebraska Medical Center, Omaha

Acute care of older patients is a specialty area of practice. Elders have a spectrum of needs including physiological, psychosocial, functional, and psychopharmacologic needs that alter their response to physiologic illness and the acute care experience in general. Acute Care for Elders (ACE) units specifically designed to meet the needs of older adults and their families can have a dramatic impact on recovery from acute illness and long-term, postdischarge outcomes. Applying standardized comprehensive geriatric assessment principles across the continuum of care zone. The zone is communicated to the bed manager/house manager who allocates resources among the categories and facilitates the allocation and utilization of appropriate resources affects nurse-sensitive indicators, staff satisfaction, and patient outcomes. With the potential for these negative situations to become a reality, an initiative was established to address these concerns.

**Innovation:** The goal of the program is early detection of obstacles to patient flow and effective management of patient flow and resources while maintaining quality care and preventing the closure of units and excessive demands on the staff. The program, nicknamed “Red Light/ Green Light,” is based on the traffic light concept, a universal symbol. When each patient care unit completes an assessment, the unit is placed in a color zone that corresponds to one of the colors of a traffic light with the addition of orange. The unit assessment consists of 4 categories: anticipated turnover, patient acuity, percent RN staffing, and percent RN experience level. A score is determined for each category and then combined to determine the unit’s color zone. The zone is communicated to the bed manager/house manager who allocates resources and places patients on the appropriate units. Action steps are established for each color zone that include actions for the bed manager/house manager, unit manager, and unit staff.

**Evaluation:** The success of the program is measured by improvements in patient, staff, and physician satisfaction, decrease in admission wait times, decrease in ER turnaround time, decrease in frequency in the yellow, orange, and red zone, and a decrease in nurse-sensitive indicators. Evaluation occurs each phase at 6 months and 1 year after full implementation.

**Conclusion:** This nurse-sensitive indicators, patient satisfaction, and improvement in terms of quality and efficiency. The CNS is well suited to work with the various health care practitioners, hospital systems, and patients to design, implement, and evaluate necessary changes that can improve quality of care and patient safety.

**“RED LIGHT/GREEN LIGHT”—Resource Allocation to Optimize Patient Flow in the Hospital**

Anne M. Cooper, MSN, APRN,BC, CS, EMH Regional Healthcare System, Elyria, Ohio

**Purpose:** To develop a program that assesses the status of patient care units and facilitates the allocation and utilization of appropriate resources so as to optimize the patient flow throughout the hospital and maintain quality care.

**Significance/Background:** A delay in admission to a room has a great impact on patient satisfaction. Closing the hospital to admissions impacts the ability to care for people in the community. And overwhelming the staff with high patient acuity and not enough resources affects nurse-sensitive indicators, staff satisfaction, and patient outcomes. With the potential for these negative situations to become a reality, an initiative was established to address these concerns.

**Innovation:** The goal of the program is early detection of obstacles to patient flow and effective management of patient flow and resources while maintaining quality care and preventing the closure of units and excessive demands on the staff. The program, nicknamed “Red Light/ Green Light,” is based on the traffic light concept, a universal symbol. When each patient care unit completes an assessment, the unit is placed in a color zone that corresponds to one of the colors of a traffic light with the addition of orange. The unit assessment consists of 4 categories: anticipated turnover, patient acuity, percent RN staffing, and percent RN experience level. A score is determined for each category and then combined to determine the unit’s color zone. The zone is communicated to the bed manager/house manager who allocates resources and places patients on the appropriate units. Action steps are established for each color zone that include actions for the bed manager/house manager, unit manager, and unit staff.

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**Conclusion:** This nurse-sensitive indicators, patient satisfaction, and improvement in terms of quality and efficiency. The CNS is well suited to work with the various health care practitioners, hospital systems, and patients to design, implement, and evaluate necessary changes that can improve quality of care and patient safety.
The CNS and Evidence-based Practice: Implementing a Perioperative Beta-blockade Therapy Program

Erin Cox, MS, RN, CCRN, CS, Kathryn Ann Brush, MS, RN, CCRN, FCCM, and Ann T. Martin, MSN, RN, CS-ANP, Massachusetts General Hospital, Boston, Mass

Significance: Myocardial events are the most common medical complication of surgery, occurring in 2% to 5% of patients undergoing noncardiac surgery and 30% for patients undergoing vascular surgery. For patients who suffer cardiac ischemia/infarction during surgery, the mortality rate is nearly 60%.

Description of Practice Change: A multidisciplinary team strategized how to safely and effectively incorporate cardioprotective β-blocker therapy into practice. β-Blockade was initiated in the preoperative area and continued through discharge.

Purpose: Improve outcomes for surgical patients while preserving safety in practice.

Methods: (1) Computer order entry including (a) guidelines for therapy extended from the immediate preoperative period through dosing after discharge and (b) template orders that included hold parameters and dosing for oral and intravenous therapy. (2) Education including (a) educational sessions and reference material created for physicians and nurses, (b) focused educational offerings included identifying candidates for β-blockade prophylaxis, rationale of treatment guidelines, monitoring requirements, and antidotes to therapy, (c) patient education materials to assist the nurse with discharge planning and instructions. (3) Safety in practice including (a) cardiac monitoring requirement for intravenous β-blocker therapy and (b) institution guidelines specifying that physicians must administer intravenous β-blockade therapy outside of and intensive care unit (ICU).

Conclusion: As the scope of nursing practice continues to grow, the CNS becomes even more integral to the development of change processes that are focused on patient and clinician safety. Future work will look at outcomes associated with prophylactic β-blocker therapy, obstacles to administration of the medication, and possible expansion of nursing practice in the administration of intravenous β-blocker therapy to RNs outside of the intensive care unit (ICU).

Program Evaluation: A Vital Competency for Today's CNS

Peggy Curl, MSN, ARNP, WOCN, and Dora Bradley, PhD, RN, Shawnee Mission Medical Center, Shawnee, Kan

Problem: The CNS is often challenged to create programs in response to population-based needs. Frequently, in the rush to meet the need, programs are planned and implemented before an evaluation plan is developed to measure effectiveness. However, an effective evaluation is a “powerful” tool to provide information to make decisions, measure impact, and justify continuation.

Purpose: To develop and implement a comprehensive program evaluation designed to attain useful information to guide decision-making, improve outcomes, and determine the value of a new patient surgical bariatric program.

Description: The program evaluation was developed using process and outcome variables identified as indicators of best practice and important to stakeholders. Significant measures were complication rates, cost benefit, length of stay, satisfaction, and environmental factors.

Method: The evaluation plan was based on questions reflecting critical variables identified through national benchmarking and stakeholders’ expectations. Reliable and valid measures were identified or created. Specific data collection and analysis processes were delineated. A formal communication strategy was designed for respective stakeholders.

Evaluation: Through ongoing evaluation, numerous areas for improvement were identified. Changes included new equipment, patient room redesign, and sensitivity training for the interdisciplinary team. Analysis also demonstrated variation in preparative processes were delineated. A formal communication strategy was designed for respective stakeholders.

Implications for Practice: Comprehensive evaluation plans with reliable and valid measures provide avenues to validate change and increase program support. Adding this vital competency to the CNS repertoire enhances their contribution and value to today’s dynamic healthcare organization.

Adult Dosage-range Policy Development for Pain Medication Administration

Phyllis Daniel, MSN, RN, CHPN, Carilion Roanoke Memorial Hospital, Roanoke, Va

Purpose: Dosage-range orders are important in pharmacological pain management. To ensure safe, consistent use of dosage-range orders, a nursing policy was developed to clarify numerous concerns, dangers, and controversies regarding implementation of dosage-range orders written without parameters.

Significance/Background: Effective January 2004, the JCAHO mandated that facilities have a policy addressing dosage-range orders.

Description: Representatives from nursing, pharmacy, and medicine developed this policy over 10 months. Education was an enormous but critical endeavor within our 800+ bed, 2 hospitals. Educational opportunities included live presentations by pain council members as well as the pain management CNS. In addition, the pain management CNS and the educational department developed a flipchart presentation and pain hub for staff to visit for a posttest. The quarterly pain newsletter and pain Web pages promoted the education.

Outcome: LPNs and RNs completed the education on the adult dosage-range policy and pain management practice guideline between October 2003 and June 2004.

Interpretation/Conclusion: Nursing staff is providing a more consistent approach to opioid administration, resulting in safer and better opioid medication administration.

Implications for Practice: Nursing is shaping our pain management program within our health system by taking a proactive approach in developing pain management policies and practices.

Innovative Advanced Practice: The Psychiatric CNS in Medical-Surgical Nursing Practice

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Shands Hospital at the University of Florida is a 570-bed academic medical center that provides highly specialized, complex care to both pediatric and adult patient populations. The hospital’s inpatient psychiatric unit recently became a geri-psychiatric unit, thus transitioning patients with psychiatric/mental health issues to the adult and pediatric medical/surgical units. Implementation of a psychiatric CNS position dedicated to medical/surgical units became a priority for improved patient outcomes and staff satisfaction. Nurses verbalized lack of knowledge related to mental health issues. This gap in knowledge created work-related stress and impacted the nurses’ ability to interact therapeutically with psychiatric patients. Psychiatric CNS practice in this setting has involved clinical practice, system analysis, and nursing staff education and consultation. Problem identification for the medical/surgical units included lack of consistent, evidence-based practice for treatment of alcohol withdrawal; underrecognized, untreated anxiety and mood disorders contributing to extended lengths of stay; staff stress related to dealing with difficult and/or angry patients; lack of consistency in dealing with suicidal patients. CNS interventions included creating an alcohol withdrawal protocol, educating the staff about psychosocial interventions, conducting staff sessions for “Dealing with Difficult Families and Patients,” revising the suicide protocol, participating in interdisciplinary patient care rounds, and consulting with staff about psychiatric issues. The psychiatric CNS for the medical/surgical units has enhanced collaboration with members of the interdisciplinary team, increased staff education, satisfaction, and support. Earlier and more appropriate use of pharmacological and nonpharmacological therapies has resulted in improved clinical outcomes and decreased lengths of stay.

Providing Evidence of Competence: Development and Use of a Professional Portfolio

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The focus on evidence in today’s health care systems permeates decision making in clinical practice, leadership, and professional development. A professional portfolio provides evidence of competencies, contributions, and professional growth. The process of collecting evidence and developing a professional portfolio provides an opportunity for reflection and assessment of current competencies, proficiencies, and...
learning needs. Review of the portfolio allows the nurses to monitor their career development and progress toward professional goals. Selected portions of the portfolio, sometimes referred to as a profile, may be used for annual performance reviews, credentialing, certification, and application for jobs, promotions, or postgraduate education.

This presentation will acquaint the CNS with (1) uses of a professional portfolio—performance reviews, credentialing, certification, application for new position, application for promotion, and application for admission to postgraduate education; (2) evidence to be included in a professional portfolio; and (3) formats that may be used to organize and present a professional portfolio. Participants will identify documents to be included as evidence of competencies, contributions, and professional growth in a professional portfolio. A professional portfolio is a unique way to organize and present a professional portfolio. It is important for nurses to begin as early as possible to collect evidentiary materials to include in their professional portfolio to document their competencies, proficiencies, and expertise.

Professionalism
Cheryl Donelan, MSN, MBA, RN, Judy Dusek, MSN, MEd, RN, ARNP, CNS, and Dawn Gossnell, MSN, RN, ARNP, CNS, Via Christi Regional Medical Center Wichita, Kan

Problem and Significance: One of the initiatives defined by the practice development specialists during a fall retreat was an awareness of professionalism in practice and the significance of identifying what it is according to our nursing staff.

Purpose or Objectives of the Project: The purpose of the project was to identify characteristics of professionalism according to our nursing staff and to compare to the nursing literature.

Description of the Project: According to human resources, approximately 5000 nurses in the Via Christi Health System provide care to patients. The nursing directors for each unit were given a packet with a question regarding professionalism for each professional nurse to be distributed by the directors at staff meetings.

Methods: Each professional nursing staff employee was given a half sheet of paper with a request to identify professionalism. The question was, “In an effort to define professionalism, we ask you as a professional nurse complete the question below. What are 3 characteristics that identify professionalism?” The nursing directors highly recommended completion of the questionnaire, although not mandatory. No identifiers were required on the forms.

Outcomes: Approximately 300 professional nurses completed the questionnaire and the results were tabulated on an Excel Spreadsheet in 3 categories: Personal, Professional, and Technical. The most responses were in the Personal and Professional categories. The top 3 in the Professional Category were knowledge, appearance, and competence. Nurses were then chosen to discuss these characteristics while being videotaped. The videotape was then copied for all nursing units to view as well as having it available for all to see during Nurses’ Week May 2004. In addition, one CNE hour was offered free to all nurses on the Internet that was developed by the authors.

Conclusions, Including Implications for Nursing Practice: The process of asking nurses to share opinions about professionalism was viewed by them as allowing their voices be heard. It would have been easier to have reviewed the literature and given the information to them, but our approach to this initiative was much more meaningful. Behaviors have shown that they believe what they said and are showing it by their actions in caring for patients. Professionalism has become more visible in our institution through the efforts that were made to incorporate our nurses into the process.

Tackling Tobacco: A CNS Approach to SAK the Pack
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Background/Rationale: Tobacco use is responsible for more than 430,000 avoidable deaths in the United States. Center of Medicare and Medicaid requires smoking education as a publicly reported indicator for identified populations. Columbus Regional Hospital lacked a standardized approach to identification of smokers, incentives for clinicians to intervene consistently, an evidence-based intervention, continuity between sites of care. In addition, there was minimal documentation of smoking education (33%). The CNS partnered with the community coordinator to develop an innovative smoking cessation model across the continuum.

Description: The Transtheoretical Model was integrated in the admission database to assess tobacco use and readiness to change behavior. A standardized, stage-based consciousness-raising message was included in daily nursing documentation and patient materials. CNS developed and implemented the Smoking Aid Kit (SAK), a supportive package used during smoking cessation education. Tobacco counselors met with smokers in contemplation and preparation for a 15-minute stage-based intervention. Follow-up phone call was conducted to register smokers in the outpatient class 2 weeks postdischarge. A 4-week outpatient class was developed for further tailored interventions. Volunteer counselors participated in a 3-day training course with competencies taught by the CNS.

Outcome: Six months postimplementation demonstrated a increase in the number of patients within the hospital environment who received smoking cessation education. A significant increase in the documentation of smoking cessation education for CMS populations was also noted. Of the smokers counseled, 26% were registered for the outpatient class and had a positive stage of change movement. Five patients continue to be smoke-free and will be followed to evaluate annual quit rates. CNSs have the ability to influence change at the system level. Through collaborative practice, an innovative smoking cessation model demonstrated improved outcomes among smokers.

First Story/Second Story: A Method to Enhance Organizational Learning for Patient Safety and Retention Efforts
Patricia E bright, DNS, RN, CNS, Indiana University School of Nursing, Kathy McEwen, MBA, RN, Clarian Health Partners, and Katherine Rapala, JD, RN, Clarian Health Partners, Indianapolis, Ind

Purpose: The purpose of this innovative project is to operationalize a method for (1) work environment problem identification through stories, (2) action plan development, and (3) organizational learning.

Problem/Significance: The workplace environment has been targeted as a critical factor related to patient safety as well as nurse retention and recruitment. How to best identity and prioritize problems for improvement that will achieve patient safety and retention outcomes is essential for maximizing efficient use of resources.

Description of Project: Project developers created a structured format for staff to elicit through storytelling details surrounding near-miss and adverse events. Cognitive task analysis (CTA) techniques were adapted for use by selected hospital staff to facilitate recollection and identification of individual and team cues, goals, trade-offs, actions, and rationale at the time of an event.

Methods: The project consisted of (1) story data collection and report forms; (2) process and team meeting guidelines; (3) testing, evaluation, and revision; (4) education across facilities; (5) summary report data collection, analyses, and management; and (6) project evaluation.

Evaluation of Innovation: Use of storytelling and CTA techniques has proven to be very useful as an adjunct to routine root-cause analyses. In addition to evaluation data regarding the effectiveness of the widespread implementation of this project across multiple hospital sites and staff, results will be shared regarding overall organizational learning, and triangulation and management of storytelling data with other organizational data.

Conclusions: Program development, facilitation, implementation, and evaluation are key competencies of the CNS who is in a unique position to lead patient safety and staff retention efforts. This project will provide a specific example of an organization-wide exemplar of innovative strategies for use by CNSs.

Reaching for the Stars—Implementation of a Fall Management Program—The Galaxy Project
Debbie Ferguson, MSN, RN, CCRN, CNRN, and Marcy Grandstaff, MSN, RN, CRNN, Community Health Network, Indianapolis, Ind

Problem and Significance: During the years 2002–2003, our 3-hospital system documented 1136 inpatient falls. Several of these falls lead to...
root-cause analyses, identifying many areas for improvement in our prior fall assessment.

Purpose/Objective: The purpose of this project was to develop and implement an evidence-based, interdisciplinary fall program throughout our 4-hospital network.

Description of Program: After an extensive literature search and consultation with experts in the area of fall prevention, a multidisciplinary team was formulated. The team developed a comprehensive program targeted to (1) increase fall risk awareness across all disciplines, (2) develop guidelines for care for patients at risk for falls, (3) introduce and educate new fall risk assessment processes and scale (Morse Fall scale was selected for a high degree of reliability and validity across many patient populations) with fall risk assessment starting in the ED, and (5) initiate multidisciplinary fall prevention interventions (nursing orders).

Methods: The network-wide educational program, launched in March 2004, consisted of 2 posters: one for general fall risk awareness, and the second for Morse Scale fall risk assessment. Subsequent educational packets were provided to unit-based leaders along with ongoing updates from our computer documentation tools, clinical news services flyers for general questions, and updates at hospital-based practice council meetings.

Outcome/Evaluation: Ongoing evaluation is currently being done by the unit-based leaders for accuracy of assessment, initiation of interventions, utilization of guidelines of care, feedback from other disciplines (pharmacy, physical therapy, nutritional support). The long-term outcome goal is to decrease all inpatient falls by 5% in 2004.

Conclusion/Implication for Nursing: The Galaxy Project has significantly shifted paradigms about this aspect of patient safety in all departments. Nursing now has a program that incorporates all aspects of the nursing process.

Nursing Theory: Linking the CNS Role to Innovations in Practice

Jane Flanagan, PhD, APRN,BC, University of Massachusetts Lowell, Lowell, Mass

Background: The patient care environment remains increasingly complex and challenged by organizational responses to changes proposed within health care delivery systems. Often these changes are without linkages to nursing knowledge, fostering frustration and nurse burnout (AOHE, 2000; Buerhaus, 1998). The nursing shortage presents the CNS with challenges and opportunities to use nursing knowledge and guide the restructuring of the practice environment.

Significance: When nurses participate in the development of nursing care models, they recognize, distinguish, and articulate the inimitable contributions they make with patients during the times of stress and vulnerability.

Purpose: The purpose of this presentation is to describe the development, implementation, and evaluation of 3 nursing-focused innovations that linked nursing knowledge with practice and research. The first is a model implemented by a task force of CNSs at a large medical center, which created a shared vision for practice guided by nursing knowledge; the second utilized nursing theory to reshape CNS practice affecting patients with a chronic illness, and the third was an innovative nursing practice model driven by nursing theory, implemented in a perioperative environment.

Outcome and Implications: The use of nursing knowledge continues to promote a unique focus on health, holism, and process (Flanagan, 2004). By recognizing core disciplinary values and using nursing knowledge to guide practice, the CNS created new opportunities to advance professional nursing and create exciting practice environments delineating nursing’s unique contribution to patient outcomes. Nursing theory helped connect staff practice to disciplinary goals and enhanced their outlook on nursing as a desired profession.

Best Practices in Venous Thromboembolism Prophylaxis

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Problem and Significance: Venous thromboembolism (VTE) is responsible for 600,000 hospitalizations annually, with an average length of stay of 5.5 days. Pulmonary embolism causes 150,000 to 200,000 deaths per year in the United States despite advances in treatment. Prophylaxis for VTE is 70% to 80% effective when appropriately prescribed. Research reveals that 30% to 38% of patients receive appropriate VTE prophylaxis.

Purpose: The purpose of this project is to implement a program at our hospital on the basis of national standards that will require 100% of adult inpatients to be assessed for risk of VTE and appropriate prophylaxis initiated.

Description of the Project: Patients will be assessed for VTE risk factors on the basis of guidelines from the American College of Chest Physicians. Patients are then classified as low, moderate, or high risk as determined by their risk factors score. Each risk level has clearly defined recommendations for appropriate interventions.

Methods: This project is being implemented through the use of Six Sigma methodology, which is the quality improvement program at our hospital. Chart audits were performed to examine current practice on the nursing units. The audit results were then used in the development of the VTE assessment and intervention tools that will be implemented in the next step of our project.

Outcomes/Evaluation: Effectiveness of the VTE assessment and intervention process will be measured using Six Sigma Control Phase tools. The Control Phase ensures that change in practice is maintained and continually reviewed.

Conclusions/Implications for Nursing: Potential benefits of this project are increased patient safety, reduced complications, and increased customer satisfaction. With the success of the VTE prophylaxis program, nurses and physicians will be shown that Six Sigma methodology is an effective way to introduce innovative solutions to complex problems in the healthcare setting.

Job Sharing in the CNS Role: Who Does What?

Colleen E. Gonzalez, MSN, RN, CNS, Siobhan M. Haldeman, MSN, RN, CNS, and Judith H. Silva, MSN, RN, Massachusetts General Hospital, Boston, Mass

Significance: Job-sharing a nursing leadership position is both unique and complex in a tertiary care environment. Job-sharing can be an opportunity to bring more talents and styles to a nursing leadership team, while at the same time maintaining a high level of accountability and outcomes. This job option also increases the opportunities for individuals with a desire to work as CNSs who choose to work less than full-time. Flexibility in hiring nursing leaders will enhance the pool of applicants available to fill these critical roles.

Background: To create a highly functioning job-share there are critical elements, which must be present. These include individual commitment to the role and the other job-share participant, organizational support, manager understanding of the role, tolerance within the culture for an individual’s schedule, and communication and trust within the group.

Description: Within a full-time budgeted position for a unit-based CNS position, there are 2 individuals who job-share. There are elements of structure that facilitate the seamless accountability, while at the same time appreciating the individual strengths and areas for growth. The nurse manager must commit themselves to the job-share and each individual in so as ensure a functional nursing leadership team.

Outcome: The potential for organizational, staff, patient, and individual satisfaction are great when a job-share is successfully developed.

Conclusion: A well-constructed job-share is a potential option when considering applicants for the role of CNS.

Implications: For organizations with challenges to find applicants who are willing to work full-time, a possible strategy can be to consider the capacity of the organization, unit, role group, and individuals to create a job-share that will maximize the potential benefits within all CNS spheres of influence.

Sitter Protocol Development and Implementation: The Role of the Clinical Nurse Specialist in Process Improvement and Resource Utilization

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Shands Hospital at the University of Florida is a 570-bed academic medical center that provides highly specialized, complex care to both pediatric and adult patient populations. Like many other hospitals, maximizing resources, optimizing patient safety, and balancing the budget are goals that impact nursing and the delivery of patient care. Sitter utilization, averaging 3000 hours per month, was an area that offered opportunity for improvement. A team composed of managers,
staff nurses, CNSs, and the administrative director for patient care used the FADE2 (Focus, Analyze, Develop, Execute, and Evaluate) process to address this problem. Problems identified with sitter utilization included lack of specific criteria, variation in use on staffing and budget, no defined mechanism to reassess patients' conditions for continued use once sitters were implemented. Internal data were analyzed, and benchmarking and literature reviews were completed. Process improvements included a written sitter protocol and verification form, coded reasons for sitter utilization, evaluation of the sitter job description, and a survey tool to assess the effectiveness of the sitter role. The sitter protocol and CNS involvement have resulted in positive patient, staff, and budget outcomes. Prior to the 3-month pilot, third quarter sitter hours were 8839. After implementation, fourth quarter sitter hours were 7101, resulting in a 19.6% decrease (1738 hours). Fourth quarter hospital savings were $15,208.00, based on an hourly sitter wage of $8.75 ($60,832 annualized). CNSs at Shands Hospital were instrumental in protocol development, patient assessments, nursing interventions, staff education, and improved use of resources.

Who Develops Clinical Staff?
Sioban Haldeman, MSN, RN, CNS, Colleen Gonzalez, MSN, RN, CNS, Chelsey L. Clerpal, MSN, RN, Erin Cox, MSN, RN, CNS, and Judith H. Silva, MSN, RN, Massachusetts General Hospital, Boston

Purpose/Objective: To describe a unit-based strategy to create a culture where staff is developed, retained, and empowered to solve unit and organizational problems.

Significance: The development of clinical staff in direct care roles has historically been imbedded as a core value of CNS practice. Through the development of staff, the quality of clinical practice can be optimized and the CNS can affect the spheres of influence directly for patient care and clinical staff. The added value of CNS practice to the organization includes quality clinical practice, patient satisfaction, and staff retention. In addition, staff who are empowered and capable of meeting their potential as care providers. CNSs, while directing their efforts towards staff, are not alone in this development work. In settings where there are multiple nursing job roles, navigating and ensuring the development of every clinical staff person can be complex.

Background/Rationale: At our academic medical center, with Magnet designation, there are many nursing roles that influence the development of clinical staff. CNSs are unit-based or service-based within this organization. The clinical staff are expected to maximize their full potential by embracing the efforts of many resource persons and groups. Within the staff nurse role, there are individuals who develop their peers every day.

Description: The Interventional Cardiology Unit, a 36-bed inpatient service, uses an NP-based model, as part of an interdisciplinary patient and family centered care model. There are 2 CNSs who share accountability for the unit-based clinical staff development with the nurse manager. The unit's entire clinical and operational staff is managed by a nurse manager. There is also a CNS who is a dedicated nurse researcher and who is based within the cardiology nursing units, that also contributes in a unique way to the development of clinical staff and nursing leaders.

Outcome: The success of this model can be recognized through the clinical practice in direct clinical care, the retention of the clinical staff, the satisfaction of patients, and the achievements of the clinical staff.

Interpretation/Conclusion: CNS practice remains integral in the development of clinical staff. To succeed in developing and retaining staff, there is an inherent need for all To contribute to sustaining this culture.

Implications: CNS practice must remain closely aligned with the development of staff. Concentrating on the unit-based clinical practice development will ensure a highly functional team of clinical staff and nursing leaders. Communication and a culture that can support such development will thrive in the presence of highly developed clinical staff.

Thinking Outside the Box: Mentoring Across Boundaries
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Problem: Mentoring provides a crucial link in professional CNS development. Experienced CNSs have much to share; however, novice CNSs may have difficulty finding mentors in their immediate environment. Developing a mentoring relationship does not need to require face-to-face contact.

Purpose/Description: How can mentoring occur in the face of geographical boundaries? How can trust be built without being face-to-face? The terms virtual, distance, and e-Mentoring all represent a mentoring relationship where 2 parties are physically located in different geographical areas, but the outcome is consistent—sharing of knowledge and wisdom. Participants in this program will be able to (1) discuss the pros and cons of long-distance mentoring and (2) identify strategies to develop an individualized experience on the basis of mentor and mentee perspectives.

Methods: Mentoring across boundaries can be a viable option for supporting professional growth and development of CNSs. Presenters will offer pitfalls and benefits gleaned from long-distance mentoring partners.

Evaluation: Before you attempt long-distance mentoring, assess your personal beliefs, choose to recognize it as a viable strategy, build enthusiasm, and find ways to maximize return on investment. This will assist in evaluating the outcomes of the mentoring relationship in meeting needs.

Implications: Long-distance mentoring allows participants to focus more intently because meetings are planned in advance and both parties “get down to business” etc sooner. It allows for mentoring in highly individualized or specialized areas. It acquaints participants with unfamiliar cultures and geographies, which translates into CNSs who are more culturally and professionally savvy.

Improving Medication Calculation Skills of Nurses and Nursing Students
Sarah Harne-Brittner, MSN, RN, CCRN, PinnacleHealth System, Harrisburg, Pa

Purpose/Objectives: This collaborative research study examined medication calculation skills of nurses and students in the practice and academic settings. The purposes of the study were to (1) assess the medication calculation skills of practicing nurses and senior baccalaureate students and (2) test the effectiveness of a teaching strategy to improve computational skills.

Significance: The CNS has a key responsibility to assess and monitor the practice of safe medication administration. The National Coordinating Council for Medication Errors Reporting and Prevention (NCC-MERP) found that 7% of reported medication errors were related to miscalculation (Thomas, Holquist, & Philips, 2001). Previous research on the medication calculation skills of practicing nurses showed that the majority of nurses were unable to calculate medications at a 90% level of proficiency (Ashby, 1997; Bindler & Bayne, 1991; Bayne & Bindler, 1988).

Design/Methods: The CNS collaborated with the Chair of the Department of Nursing at a local college, staff nurses, and nursing students to design and implement the study. A pretest/posttest design was used. A convenience sample of 21 practicing nurses and 32 senior nursing students participated in the study. Subjects completed a demographic questionnaire and medication calculation pretest. Participants then chose 1 of 3 educational strategies to improve calculation skills: (1) classroom tutorial session, (2) self-study workbook, or (3) self-study using own references. A medication calculation posttest was administered 4 weeks later.

Findings: The mean RN pretest score was 77.3 and the mean posttest score was 93. The mean student pretest score was 79.5 and the mean post-test score was 86.9. Both groups improved with all of the interventions; however, the increases weren’t statistically significant (P < .05).

Conclusions: Postscore trends in both groups support the use of these educational strategies to improve medication calculation skills.

Implications for Practice: The CNS is working with the Professional Development Council and Clinical Education Committee to implement a medication calculation test for all new nurses. The medication calculation pretest/posttest and education strategies will be used as a standardized remediation plan for nurses with poor calculation skills. The academic setting is reviewing results with the Curriculum Committee and is going to incorporate more time for classroom instruction and practice of medication calculations.
Research Roundtables
Sarah Harne-Britner, MSN, RN, CCRN, PinnacleHealth System, Harrisburg, Pa

Purpose: To describe the development and implementation of a collaborative project between academic and practice settings to enhance the evidence-based practice skills of senior nursing students and practicing nurses.

Significance: The CNS has a primary responsibility to be a leader in the effort to promote evidence-based practice. The development of the Research Roundtable project demonstrates the impact of the CNS role in all 3 spheres of influence—patients, nursing staff, and the organization.

Background: Increased emphasis has been placed recently on evidence-based practice so as to provide high-quality cost-effective care. Common barriers cited in the literature to evidence-based practice include lack of time, support, knowledge, resources, and negative perceptions of research (DeBourgh, 2001; Thompson, Bell, & Provost, 1999).

Description: The CNS led a planning team to develop and implement the Research Roundtable project. Participants included 19 senior baccalaureate nursing students enrolled in a Nursing Research Course, 9 staff nurses, and 8 research facilitators. The facilitators represented advanced practice, nursing administration, quality and nursing faculty. The research focus was medication calculation skills of practicing nurses and senior nursing students. The group met 6 times during the fall 2003 to review the literature on the topic and develop a research proposal. The study was implemented in the spring 2004 and results were presented at the annual Nursing Research Conference.

Outcome: Staff nurse participants completed the Nurses’ Research Knowledge, Attitudes and Practices of Research (KAP) Survey at the beginning and the end of the project to determine if participation had an impact on skills (Van Mullen et al., 2001). Staff nurses did show statistically significant increases in knowledge and ability in 9 research skills (P < .05). Project evaluations from staff nurses and senior nursing students at the end of the semester were positive and both groups recommended continuing the Research Roundtable project next year.

Interpretation/Conclusion: The Research Roundtable provided a unique opportunity for learning and collaboration between the academic and practice settings. All levels of participants improved evidence-based practice skills. The project provided a win-win for both settings to apply evidence-based practice skills to a pertinent clinical topic.

Implications for Practice: This project showcases the impact of the CNS in all 3 spheres of influence. The research study topics and implications for patient safety and outcomes. Practicing nurses improved evidence-based practice skills. The project established a formal collaborative relationship between the academic and practice settings.

CNS as Educator: Teaching Evidence-based Practice
Cindra Holland, MS, APRN,BC, CNS, Wright State University, Dayton, Ohio

Statement of the Problem: Evidence-based practice (EBP) is a paradigm shift that has been identified in health care as a vital tool for research utilization. The impetus for incorporating evidence-based practice into nursing care must begin with the education process.

Purpose: The purpose of this presentation is to explore methods of integrating EBP into nursing curriculum that will ultimately enhance the link between research outcomes and application to everyday practice.

Significance and Justification: As an educator, the CNS provides clinical expertise and is equipped with the knowledge to bridge research outcomes to guide everyday patient care. One of the primary goals of evidence-based practice is to educate nurses to advance the profession by disseminating research findings to improve patient outcomes.

Practice Innovation: In the past, nursing research findings have not been adequately utilized as a basis to guide nursing practice. The challenge for educators is to make the topic of research “come alive” in the classroom so that the students will have a desire to seek research outcomes for answers to questions in the clinical setting.

Methods: Teaching EBP is actually a problem-solving skill that integrates literature searches, evaluation of research findings, and utilization of unique interventions to improve patient outcomes.

Evaluation and Outcomes: The health care environment itself has an immense influence on nursing education. The responsibility in health care today is to continually validate the care and interventions implemented for patients. The utilization of research findings from EBP will support the momentum of improved patient outcomes and savings in medical costs.

Implications for Practice: Evidence-based practice is the future of the nursing profession. Utilizing findings from research can have a direct impact on the way health care is delivered. CNSs are a vital link to implementing research findings to improve patient care outcomes.

Endotracheal Suctioning: How Deep Is Too Deep?
Humphries Linda, Texas Christian University, Harris Methodist Southwest Hospital, Fort Worth, Tex

Purpose: This research project explored the effectiveness of a teaching program for intensive care nurses and respiratory therapists on changing the practice of endotracheal suctioning. Endotracheal suctioning is a high-risk procedure performed on patients in ICU or longterm ventilator care unit. Nurses and respiratory therapists have traditionally been taught to advance the suction catheter until resistance is met or the patient coughs. Research has shown that passing the catheter until resistance is met increases the risk of tracheal trauma, airway edema, inflammation, tissue necrosis, and bleeding. Despite the research, the practice of deep tracheal suctioning continues to be taught and practiced. Current evidence recommends performing a minimally invasive suctioning approach, advancing the suction catheter no further than 1 to 2 cm past the end of the endotracheal tube, preventing the tip of the catheter from coming in contact with tracheal tissue.

Description: A teaching tool was developed as a guideline to prevent passing the catheter further than necessary. The staff was presented with an in-service addressing the risks of endotracheal suctioning and how to suction using a minimally invasive approach. A preteaching and postteaching questionnaire was used to evaluate the effectiveness of teaching on practice change.

Evaluation and Outcomes: The findings support Roger’s stages of knowledge dissemination, with the majority (82%) of nurses and respiratory therapists readily adopting the changes in endotracheal suctioning and putting the new technique into practice. Furthermore, this research project opened up the opportunity to purchase marked suction catheters for staff to use, which further supports the staff’s ability to practice minimally invasive suctioning.

Increasing Clinical Excellence: The Development, Implementation, and Evaluation of a Nurse Model
Beverly Hydo, MSN, APRN,BC, and Karen Harris, MSN, RNC, WHNP, William Beaumont Hospital, Royal Oak, Mich

Problem: Our facility has a philosophy of nursing, a document with many words that most nurses are not familiar with and that does not apply to guide practice.

Purpose: The purpose was to define what it means to be a professional nurse at our institution. The development of a framework enables the nurse to articulate the facets of nursing to peers and other health care providers as well as the community. Research has shown that a well-developed professional self-concept can positively affect the delivery of care.

Description of the Project: A committee of CNs and managers convened to determine a framework to serve as a model for nurses to clearly articulate their role. It was thought that a graphic representation of the facets of the professional nurse would have more of an impact than words on paper. Review of literature, hospital standards, and brainstorming assisted the committee to delineate the facets of nursing to include in the model.

Methods: The concepts were presented to the Professional Nurse Council, other managers, and CNSs to validate the model and seek broad support. It was decided that a survey should be conducted to ask nurses in the organization what they thought it meant to be a nurse. Through the survey process, nurses assisted the committee in ensuring that all elements of professionalism were covered in the model. Pictures of staff nurses were taken and life-size displays were used to collect the entries. Another method of implementation included the development of a 30 x 30 game board of the model with a spinner in the middle. This was utilized at staff meetings as well as during nurse’s week to elicit discussion with nurses about the facets of nursing on their units. Crossword puzzles and word searches were also distributed and prizes awarded from a drawing of the returned
puzzles. The model has also been integrated into orientation by the CNs. By including a presentation in orientation, new nursing staff are exposed to the tone of professionalism.

Outcomes and Evaluation of Practice Change: A questionnaire with a Likert scale was developed by the committee to evaluate the nurses’ perception of the model in their work environment. The initial survey will be repeated in 18 months to fully evaluate the impact of the model. Initial results reveal findings consistent with previous surveys. Opportunities for improvement include professional relationships with physicians and teamwork. Initial implementation efforts have been successful, and positive comments from many staff, CNs, and managers have been noted.

Implications: The findings from the research, as well as the model itself, will guide the growth of clinical excellence in nursing staff. These facets can serve as a basis for future evaluations on a managerial level, and also as a foundation for CNs to utilize for continued professional development with staff during rounds and in-services.

CNS Development of a Patient-teaching Plan for Tracheostomy Patients
Marian Jeffries, MSN, RN, FNP-C, Massachusetts General Hospital, Boston

Problem: To care for patients with a tracheostomy, nurses need to be knowledgeable about tracheal airway management and able to communicate this information to the patient using various methods for comprehension.

Purpose: The purpose of this project was to develop practice guidelines for teaching tracheostomy care that included both the patient and family using a multifaceted approach with a focus on discharge planning.

Background: The large volume of patients admitted with a tracheostomy to the general care units within the hospital illuminated a need for a consistent approach to teaching tracheostomy care prior to discharge. Teaching patients and family members about tracheal airway needs while anticipating discharge to home or rehabilitation units should be uncomplicated, with visual cues and patient interaction. A Teaching Guide was proposed for the general care units (Adult and Pedi) along with obtaining a Tracheal Mannequin and mirror for each unit.

Method: The teaching guide was developed and implemented. It contains instructions for teaching (for the nurse), visual tear-off sheets for suctioning and cleaning, information booklets about tracheostomy, as well as community and medical alert information. A grant was obtained to purchase tracheal mannequins and mirrors. All equipment were distributed to CNs on the designated units for nurse review prior to use.

Conclusions: The CNS focused on improving current nursing standards of care for the patient with a tracheostomy by using visual models and cues to supplement the usual reading material in teaching self-care. Feedback from the units indicates an improved awareness of the needs of these patients as well as patients demonstrating fine technique in suctioning and self-care.

Implications for Nursing Practice: The effectiveness of these CNS interventions will be monitored through an existing annual nurse survey, which includes common patient problems.

CNS Intervention to Improve Care of the Respiratory-compromised Patient
Marian Jeffries, MSN, RN, FNP-C, and Susan Gavaghan, MSN, RN, Massachusetts General Hospital, Boston

Problem and Significance: Respiratory emergencies on the general care units necessitate transferring the patient to an ICU level of care. Staff nurses outside of the ICU often feel unprepared to care for this challenging population.

Purpose: The purpose of this initiative was to develop, implement, and evaluate a program to increase the nursing staff’s knowledge around the effective management of patients with acute respiratory problems.

Description of Project: An educational respiratory program was designed by the CNs and implemented by a multidisciplinary team that included the CNS, respiratory therapist, and staff from the professional development department. The program began in April 2004 and was presented to new staff working across several general care units in the hospital.

Clinical Issue Analysis: Finding Evidence for the Use of Air-Eliminating Filters on Intravenous Lines in Adult Patients With Patent Foramen Ovale
Elizabeth Johnson, MSN, RN, CNS (Oncology), and Catherine A. Griffith, MSN, RN, CNS (Cardiac Surgery), Massachusetts General Hospital, Boston

Problem and Significance: Air embolism is usually a minor complication of intravenous (IV) therapy in individuals with normal cardiac anatomy. If small air bubbles are infused, they are harmlessly eliminated through the lung. Patent foramen ovale (PFO) exists in an estimated 25% of the population. As adults with PFO age, changes in the cardiac structures and hemodynamic pressure gradients may allow stray air from IV infusions to migrate to the left atrium through a naturally enlarging septal channel. Once in the left atrium, misplaced air is then introduced into the systemic circulation, putting the patient at risk for ischemic developments as a result of air embolization.

Objective: CNSs for the oncology and cardiac surgical nursing services of an academic medical center collaborated to provide evidence-based guidance for staff nurses implementing IV therapies to patients with known PFO.

Description: A comprehensive review of medical and nursing literature was conducted to identify evidence for describing best practice with respect to inline IV air filtration in patients with known PFO.

Outcomes: No recommendations were found for the use of air-eliminating filters (AEFs) in adults with septal anomalies, but useful information on PFO, air embolism, and safe use of AEFs was uncovered.

Conclusions: Despite finding no recommendations for the use of AEFs, their use remains a justifiable intervention to infuse IV fluids safely to patients with known PFO. Stricter adherence to proper technique when using AEFs is essential.

Practice Implications: CNS practice includes helping to establish best practices and creating a safe practice environment for patients and staff. Creating standards, grounded in evidence, around the delivery of IV therapies can enable safety and improve patient outcomes.

The CNS Leadership Role in Assisting Staff Nurses to Address Sexual Concerns of Chronically Ill Patients and Their Partners
Donald D. Kautz, PhD, RN, CRRN-A, CNRN, University of North Carolina at Greensboro, NC

Problem and Significance: Research has shown that diabetes, heart disease, stroke, chronic lung disease, and arthritis can all impact the patient and their partner’s sexual function, sexual self-concept, and sexual relationships. Self-help groups and health care organizations have published patient education materials available on the web for patients and their partners that address these sexual concerns. However, studies have found that staff nurses ignore patients’ sexual concerns.

Objectives: This presentation will outline strategies nurses can use to address the sexual concerns of their clients by accessing patient education materials readily available from Internet sources. The author uses these sources when consulting with nurses, and when
teaching both graduate and undergraduate students. One advantage of addressing sexual concerns is that adherence to the diet and exercise recommendations for the chronic illnesses mentioned also has the potential to increase sexual function in both men and women, thus intimacy may be a motivator for clients in managing their chronic illnesses.

Methods: Reliable and appropriate internet resources will be identified and made available to all CNSs attending this session. Recommendations for implementing the use of these resources focusing on the leadership skills of the CNS in bringing about change will also be presented.

Practice Change: As nurses begin to address the sexual concerns of patients that arise because of chronic illness, the quality of life of the clients will be enhanced. Providing patients with patient education handouts and helpful internet sites requires little time on the part of the nurse, and can be incorporated as a normal part of client education activities.

Conclusion: Staff nurses working in acute care, long-term care, and community settings can all utilize these strategies to enhance the quality of life of their patients.

Ductoscopy Screening in the High-Risk Breast Cancer Population

Jane Lacovara, MSN, RN, BC, and Jill Arzouman, MS, RN-APRN, CNS, University Medical Center, Tucson, Ariz

Mammograms are considered the gold standard for screening the general population of women older than 40 years for breast cancer. When a woman is younger, or has particularly dense breast tissue, the sonogram may be the first diagnostic tool used to evaluate specific breast abnormalities. When neither tool is suitable, an magnetic resonance imaging (MRI) is used to help locate and evaluate abnormalities.

However, additional screening considerations may be necessary for a patient who has a known familial genetic mutation but no active disease. For example, the BRCA1 or BRCA2 mutation, if inherited, may place the patient at an 87% lifetime risk of developing breast cancer.

The breast cancer associated with this mutation also tends to occur at a much younger age (≤50) and many times in the 30s. Ductoscopy is the use of a very thin fiberoptic scope inserted into a fluid-producing breast duct to look for abnormalities. The scope is threaded through the milk ducts inside the breast. An attached camera and imaging system magnify the video images, and display these pictures on a video screen, allowing visualization inside the duct. During the ductoscopy procedure, intraductal biopsies may be retrieved and sent off for analysis. In addition, the general health of the duct may be observed, noting any inflammatory or cytological changes. It is believed that up to 80% of breast cancers originate within the breast duct. Mammograms and MRIs rarely identify tumors until they are at least 5 mm in size. Most often, tumors have grown for several years (up to 10) before they are large enough to be noted on the mammogram. The ductoscopy can identify tumors at a much smaller stage, hopefully decreasing the morbidity and mortality of breast cancer.

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Clinical Competencies: A Program Designed to Optimize Critical Thinking Skills, Care Delivery, and Collaborative Practice

Lisa R. Maloy, MSN, RN, and Cheryl Mattas, MS, RN, CNS, CCRN, Kaiser Permanente Southern California, San Diego

Statement of the Project: Several methodologies and approaches to evaluate staff for annual competencies are often lacking in methods to evaluate critical thinking skills, care delivery performance, and patient-focused decision making. These processes can be difficult and tedious work for the educator and for the staff involved in the process. Often, the programs are set up more like a workshop or all-day test session, intraductal biopsies may be retrieved and sent off for analysis. In addition, the general health of the duct may be observed, noting any inflammatory or cytological changes. It is believed that up to 80% of breast cancers originate within the breast duct. Mammograms and MRIs rarely identify tumors until they are at least 5 mm in size. Most often, tumors have grown for several years (up to 10) before they are large enough to be noted on the mammogram. The ductoscopy can identify tumors at a much smaller stage, hopefully decreasing the morbidity and mortality of breast cancer. CNS interested in cancer prevention and/or genetic counseling should be aware of this newly emerging technological screening option.
in the trauma population. Content included in the guide was determined by reviewing trauma program guidelines, textbooks on the topic, and reflecting on clinical knowledge about the population cared for on the trauma/surgical floors. The team decided to organize the content in the guide using a head-to-toe assessment approach and to discuss a typical trauma patient and trauma experiences seen on the hospital units. The team described the patient’s experiences from the time EMS arrived on the scene, and to include the sequence of events once a patient enters the ED. Building on this information, a patient assessment was created to guide care when the patient is admitted to the trauma unit and specific injuries are documented. Major body systems review included a review of signs and symptoms, physical and psychosocial assessment, and potential injuries and treatment. Each presentation was followed by several questions to help reinforce the material covered.

Validation: The content was validated and discussed with senior nurses, new nurses, CNS, and other experts in the trauma field. Literature used to develop the guide came from resources such as ATLS, ACLS, Trauma Nursing Text, and TNCC text. Experts in the field of trauma nursing will review it and the final draft will be honed by and in collaboration by the aforementioned staff.

Implementation: The guide will be piloted and distributed to assess for effectiveness and usefulness. The team will evaluate learning by using pre-post test measures following exposure to the guide. A case study review will be used to evaluate knowledge acquisition. Following this effort, the guide will become included in the orientation materials to better address the needs of the trauma nurses who are working with this ever-changing population.

A Systematic Approach to Using Evidence to Answer Clinical Questions

Dana Martyn, MS, RN, Banner Estrella Medical Center, Phoenix, Ariz, Carol Hansen, MS, RN, CNS, Mayo Clinic Hospital, Phoenix, Ariz, Terri Britt Pipe, PhD, RN, Mayo Clinic, Scottsdale, Ariz, Kay Wellik, MLS, AHIP, Mayo Clinic, Scottsdale, Ariz, and Vicki Buchda, MS, RN, Mayo Clinic, Scottsdale, Ariz

Problem: Teaching nurses to critically and systematically review evidence to address clinical questions.

Purpose and Evidence: CINAHL search addressing question of “Is there evidence to support the use of early warning scoring systems to guide nurses in clinical decision making and communication triggers?”

Strategy and Methods: Educational sessions in which a bedside nurse paired with CNS and director of libraries to review literature, collaborate with nurse researcher to weigh evidence, describe findings in conference setting (CEUs awarded). Nurse administrator described how evidence pertains to institutional practice. Clinically appraised topic posted on nursing Web site and disseminated information via nursing committees.

Practice Change: Evidence does not support clinical trigger instruments. Rather, it supports the importance of knowing the patient/family and being able to recognize and communicate patterns of worsening clinical scenarios. Plans to mentor nurses in these skills and further investigate MD/RN communication are underway.

Evaluation: Outcomes included formulation and dissemination of a clinical “bottom line,” high levels of involvement in and satisfaction with the conference, changes to preceptor class.

Conclusions and Recommendations: Quarterly conferences addressing clinical questions, led by bedside nurse and CNS, facilitated by nurse researcher and attended by wide array of nurses. Continue feedback regarding how the evidence-based intervention will occur within our institutional culture.

Utilizing Data to Understand Work Complexity and Optimize Patient Safety

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Purpose: To provide the CNS with a structured framework for understanding work complexity and utilization of this information to optimize patient safety and hospital care quality in complex health care systems.

Significance: Heightened awareness of the need to focus on patient safety has created the need to implement effective performance improvement strategies that ensure optimal outcomes. Positive outcomes that have system-wide impact are best accomplished by understanding work complexity and barriers for performance. The CNS is uniquely qualified to examine work complexity, and develop strategies to reduce error-prone processes.

Background/Rationale: Healthcare organizations strive to optimize care quality and safety. Environmental and/or practice modifications often lead to system redesign. Economic challenges require thoughtful evaluation of redesign prior to implementation. Evaluating the real work of bedside clinicians allows for the greatest opportunity for improvement with the most efficient expenditure. Facilitation of performance improvement teams, involving targeted departments, requires the CNS to act as data analyst and change agent.

Description: This framework provided rich data, from a variety of sources, revealing that nursing staff was encountering problems regarding IV therapy administration and maintenance. These problems were further analyzed by the CNS-lead focus group, evaluating (1) nursing practice, (2) nursing policy, (3) supplies and equipment, and (4) the work environment. Examples of work complexity, and implemented improvement plans with outcomes-to date-will be presented.

Outcome: Analysis of work complexity as it relates to patient safety allowed the team to make effective decisions regarding redesign. Process changes were received well, since the work complexity was understood and the improvement plan was logical. Patient safety, regarding IV therapy and administration, has been favorably impacted.

Interpretation/Conclusion: The CNS has a crucial role in relating data, understanding work complexity, and impacting patient safety. Intrapartemental and interdepartmental collaboration bridges safety gaps and optimizes outcomes.

Implications for Practice: Understanding work complexity for targeted departments and resultant system impact is crucial to develop an effective performance improvement plan. Work complexity awareness will allow the CNS to identify gaps that may impact patient safety.

Monitored Room Development and Implementation: The Role of the Clinical Nurse Specialist in Maximizing Resources and Optimizing Patient Safety

Harriet Miller, MSN, ARNP, Shands Children’s Hospital at the University of Florida, Gainesville, Fla

Shands Children’s Hospital at the University of Florida is a hospital located within a hospital. It provides specialized care for complex cases in an academic medical center. Optimizing patient safety and maximizing resources were identified goals. Problem identification included (1) the growing need to empty pediatric ICU and intermediary care unit beds to accommodate the growing population of post-surgical and trauma patients and (2) the need for a monitored area to care for patients who needed closer observation than the pediatric floor, but less than the intermediate care unit. Examples of such patients were those with a stable tracheostomy, and those requiring nasal continuous positive airway pressure (CPAP).

A multidisciplinary team composed of nurses, managers and directors, respiratory therapists, the pediatric CNS, and physicians met to develop guidelines for the Monitored Room. Admission criteria, orders, and the frequency of assessments and interventions were developed. The CNS worked closely with the staff in designing the nurse training and development which included modular, video, and hands-on aspects. The nurses from the pediatric floor cross-trained with the staff of the ICU working with patients who would meet the admission specifications. Minor modifications to a preexisting area resulted in a 4-bed unit with continuous pulse oximetry–, apnea-, and bradycardia-monitoring capabilities. The development of the Monitored Room was a clinical project designed to maximize resources and optimize patient safety. The CNS played a pivotal role in the development and staff education.

From Cloudy to Clear: Unscrambling the Intricacies of Diabetes Care

Mary Beth Modic, MSN, RN, CNS, The Cleveland Clinic Foundation, Cleveland, Ohio

Problem: Thirty percent of all hospitalized patients have diabetes. Research related to diabetes has concluded that tight glycemic control...
of hospitalized patients reduce morbidity and mortality. However, there are many barriers to achieving this tight control. Care of diabetics is often secondary to a primary diagnosis of infection, glucocorticoid therapy, surgical trauma, and decreased physical activity. Additional barriers include timing of blood glucose monitoring, nutrition interruption, misuse of sliding scale protocols, and lack of knowledge among nursing staff about current management strategies.

Purpose: The purpose of this project was to give the bedside nurse the “tools,” “rules,” and “skills” to manage the diabetic patient more effectively.

Objectives: (1) Describe the barriers to achieving glycemic control in the hospitalized diabetic patient. (2) Identify 3 strategies the CNS can use to facilitate positive outcomes in the diabetic patient. Project Description: A comprehensive approach was taken to educate nursing staff, develop protocols, and support nurses in the practice of diabetes management. The project was led by a CNS with collaboration from an outpatient NP and a hospital-based NP.

Methods: This multifaceted project involved establishing a multidisciplinary team to identify obstacles to effective management; develop and disseminate protocols; create unit-based diabetic resource nurse who interfaced with the medical staff and supported nursing staff in clinical decision making, revise documentation to facilitate communication amongst disciplines; promote the new ACE guidelines from an outpatient NP and a hospital-based NP.

Outcomes: Forty diabetic resource nurses have been educated and work at the unit level to provide support to staff nurse colleagues. They have convened with the current science driving tight glycemic control, and are consulted by their peers to resolve clinical issues. One hundred and fifty staff nurses within the Heart Center have attended monthly educational sessions presented by CNSs, NPs, dietitians, pharmacists, and physicians. The feedback from these sessions has been extremely positive. Protocols for SSI, hypoglycemic management, and nutrition interruption have been created and disseminated. The impact on glycemic control and error reduction has been positive, although data collection is in its early stages at this time.

Conclusions/Implications for Practice: The CNS is intensely aware of the interplay between “rules,” “tools,” and “skills” to manage the diabetic patient more effectively. This content was reinforced with practical application. The content was relevant to the current hospital initiatives.
of this practice, and thus actual clinical practice is variable. In addition, the practice of “daily wakeup”—a procedure for withholding sedative medications until the patient can follow commands, become agitated, or is objectively uncomfortable—has been described as a necessary safeguard against oversedation. This practice is potentially harmful and clinical outcomes demonstrate that standardizing sedative medication use and eliminating “wakeup” is superior to outcomes published in the literature where the daily wakeup is used.

**Purpose:** This project aimed to create a standardized protocol for medication management of discomfort among ventilated patients in an ICU setting.

**Description of Project:** Physicians, nurses, and pharmacists designed and implemented a sedation scale and protocol that empowered nurses to meet therapeutic goals for anxiety management while eliminating the occurrence of oversedation.

**Methods:** The critical care CNS of this Midwestern integrated health network led a multidisciplinary team to implement evidence-based interventions to improve the practice of the administration of anxiety-relieving medications. The team standardized drug selection and administration guidelines—using a scale and protocol. The team effectively worked to change the language (and thinking) to “anxiety-relieving medications” from the old term “sedatives.”

**Outcomes:** This protocol has been successfully implemented in 3 ICUs within this integrated network. The outcomes associated with nurses using the standardized guidelines included decreases in length of stay, incidences of ventilator-associated pneumonia (VAP) cost per day, and mortality.

**Conclusions/Nursing Implications:** The outcomes in this health care network demonstrate that the practice of managing the anxiety among ventilated ICU patients can be accomplished by use of a specific, standardized protocol developed by a multidisciplinary team and implemented by staff nurses. The practice of the daily wakeup is not necessary if the staff is educated and empowered to manage the anxiety of the patients.

**Ventilator-associated Pneumonia as a Nurse-sensitive Outcome: The Role of the Clinical Nurse Specialist in the Development and Implementation of Clinical Systems to Reduce Ventilator-associated Pneumonia**

Theresa Murray, MSN, RN, CCRN, Community Health Network, Indianapolis, Ind

**Problem and Significance:** The Centers for Disease Control and Prevention (CDC) defines ventilator-associated pneumonia (VAP) as pneumonia in patients who have been on mechanical ventilation for more than 48 hours. VAP falls under the umbrella of hospital-acquired pneumonia, and accounts for 10% to 15% of all nosocomial infections. VAP is the most common of the infections seen in the ICU and is associated with the highest mortality rate.

**Purpose:** This project was designed to implement evidence-based interventions aimed at preventing VAP, including the system-level changes that support implementation of the selected interventions.

**Description of Project:** This project involved creating goal-directed, multifocused, evidence-based interventions for reducing/eliminating VAP in an integrated health network with several ICUs.

**Methods:** The implementation of many evidence-based and overlapping systems, called independent redundancies, was used. The concept of independent redundancies involves putting multiple triggers in the system to help ensure that a particular activity will take place with high reliability. Some examples of these interventions are protocols for mobility, enteral nutrition, weaning the ventilator, and pain and anxiety management; education of all caregivers on key principles of VAP prevention; changes in the equipment used and the process for caring for this equipment and the patient receiving mechanical ventilation. Mutual reminders were established that each patient, each day, receives interventions to prevent VAP.

**Outcomes:** Within several months, each ICU was at an internal benchmark of “green light” status on each of the identified process measures targeted at the preventing VAP. Green light status is attained when 95% of the time each patient has every intervention. Each ICU now has gone over 60 days without a VAP, the longest has been 314 days, and one unit currently has had no VAP for the entire year of 2004.

**Conclusions and Nursing Implications:** Systematic implementation of independent redundancies in a clinical arena can ensure significant clinical performance improvement. This system improvements have demonstrated that reducing the occurrence of VAP is a nurse-sensitive outcome and can be prevented in most patients. By implementing the interventions using a multiple redundancies strategy, a CNS can help reduce or eliminate VAP in a critical care unit, significantly improving the quality of care in the critical care unit, and potentially reducing cost and mortality.

**The ACE Project: Avoiding Chemotherapy Errors in a Blended Medical/Surgical/Oncology Unit**

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**Problem:** Failure to identify chemotherapy infusion errors may lead to catastrophic consequences that may involve loss of life or limb.

**Significance:** The high occurrence of preventable errors in hospitals continues to be a concern. Chemotherapy-certified nurses provide the last link in the process steps in the administration of chemotherapy and are therefore in the best position to identify and reduce errors and improve quality outcomes for patients.

**Purpose:** To provide chemotherapy-certified nurses with a tool to identify and eliminate errors in chemotherapy administration.

**Background:** The public health problem of death and serious harm resulting from medication errors has gained national attention largely through an error that caused the death of Boston Globe medical writer Betsy Lehman of a chemotherapy overdose. Most recently, the JCAHO has issued a requirement for hospitals to perform one Failure Mode Effects Analysis (FMEA) each year in light of the excessive occurrence of preventable errors. FMEA recognizes that humans will err; however, these errors need to be acknowledged, not as a result of individual incompetence but rather of multiple breakdowns throughout the healthcare system. Errors related to chemotherapy administration result from a multitude of factors within the healthcare system. Generally, errors may occur at any time during the entire chemotherapy administration process including staff education and competence; ordering, transcribing, dosing, verification, and preparation/dispensing; administration; and the influence of the work environment. Contrary to what most chemotherapy-certified nurses would assume, Reed et al (1998) revealed that medication error rates were not correlated with patient acuity but were more likely to indicate quality of nursing care. Chemotherapy-certified nurses play an important role in the chemotherapy administration process and for that reason must assume an active role in the identification and reduction of errors to improve quality outcomes for patients.

**Practice Innovation:** A descriptive design will be used to examine and describe the practices of chemotherapy administration prior to and after the introduction of a Chemotherapy Verification Form. Nurse practitioners, registered nurses, and pharmacists will be asked to participate in a study requesting them to carry out mock-up chemotherapy orders utilizing current policies and procedures. The same nurses will then be provided with a Chemotherapy Verification Form and will again be asked to carry out the same orders. To emphasize the simplicity and fool-proof design of the form, no verbal instructions or directions will be given on how to utilize the form.

**Expected Outcome:** Based on anecdotal reports of nonverification of chemotherapy orders and nonadherence to the current policies and procedures, errors may occur during the chemotherapy administration process. Utilizing the Chemotherapy Verification Form, nurses will be prompted to verify data that may inadvertently be missed.

**Conclusion:** Oncology nurses have acquired the knowledge and skills necessary to administer treatments and provide services safely. Their aptitude to identify errors prior to the administration of chemotherapy will greatly reduce the risk of serious and sometimes fatal consequences.

**Implications for Practice:** Chemotherapy administration involves the effort of a team of health professionals, including the oncologist, pharmacist, nurse, ancillary staff, and the patient. Albeit everyone is responsible for providing safe and quality care, it is ultimately the chemotherapy-certified nurse who will provide the last safeguard against an error that may result in the patient’s death. Providing nurses with a tool that is convenient and functional leaves nothing to chance, underscoring their role in delivering safe quality care.

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**Problem:** Death and serious harm as a result of chemotherapy errors continue to be a concern. Chemicals continue to be a concern. Chemicals involved in chemotherapy are highly toxic and are potentially harmful and clinical outcomes demonstrate that system improvements are necessary if the staff is educated and empowered to manage the anxiety of the patients.

**Purpose:** To create a tool to facilitate the documentation of anxiety in patients receiving chemotherapy.

**Methods:** The project was to implement a tool that would standardize and document the chemotherapy administration process. The tool would be designed and implemented a sedation scale and protocol that empower nurses to meet therapeutic goals for anxiety management while eliminating the occurrence of oversedation.

**Outcomes:** This tool has been successfully implemented in 3 ICUs within this integrated network. The outcomes associated with nurses using the standardized guidelines included decreases in length of stay, incidences of ventilator-associated pneumonia (VAP) cost per day, and mortality.

**Conclusions/Nursing Implications:** The outcomes in this health care network demonstrate that the practice of managing the anxiety among ventilated ICU patients can be accomplished by use of a specific, standardized protocol developed by a multidisciplinary team and implemented by staff nurses. The practice of the daily wakeup is not necessary if the staff is educated and empowered to manage the anxiety of the patients.
**Animal-assisted Activities/Therapy in a Long-term Antepartum Unit**

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**Purpose/Objectives:** To offer a program that uses animals to enhance the quality of life and improve the emotional well-being of the long-term antepartum patient.

**Significance:** Interactions with animals in healthcare settings have resulted in positive physical and psychological responses in patients. Numerous studies report effective reduction of loneliness and isolation in long-term patients, decreased stress and enhanced coping with stressful events, general improved psychological well-being, increased social interaction, and improved self-esteem.

**Background/Rationale:** Pregnancy is a time of anticipation, discovery, and physical and emotional adjustments. However, approximately 20% to 25% of pregnant women are diagnosed with complications that may threaten the safety or life of the mother or fetus. A complication diagnosis induces shock, fear, and feelings of being overwhelmed. High-risk pregnancy heralds increased stress and anxiety to the puerperal woman and family. Hospitalization heightens stress and has a significant psychosocial impact. The hospitalized pregnant woman demonstrates the degrees of powerlessness, loneliness, loss of control and autonomy, boredom, anxiety, and depression. The stress of separation from home compounds the complex reactions and often results in the feelings of guilt and low self-esteem. The CNS faces the challenge of improving the emotional well-being of the patient.

**Description:** An animal-assisted activities/therapy (AAAT) program was developed by the perinatal CNS for the long-term antepartum patient. The CNS collaborated with nursing, infection control, risk management, security, and volunteer services. Guidelines were developed that addressed the responsibilities of the AAAT coordinator and animal/handler teams, and described the criteria for animal participation.

**Outcome:** Data will be collected and analyzed to determine the impact of the program on patient and staff satisfaction and psychological well-being.

**Implications for Practice:** The role of the CNS is integral to the management of the patient with complex needs. The CNS is responsible for integrating knowledge to design innovative, cost-effective programs that improve patient outcomes. An AAAT program is an example of a therapeutic intervention that utilizes the animal/human bond to maximize positive results.

**Conducting Research Across a Healthcare System: Mania or a Good Idea**

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**Problem:** Clinical inquiry through conducting and utilizing research is one of the foundational characteristics of CNS practice. Actualizing this component of practice becomes challenging because of the limited resources of time, money, and patients.

**Purpose/Objectives:** To devise an innovative method to conduct and utilize research when time is a limited commodity for busy CNSs.

**Description:** The practice innovation focused on CNS colleagues within an integrated healthcare system joining forces to foster clinical inquiry through the conduct and utilization of research within the cardiovascular nursing specialty. The CNSs collaborated and divided the workload by sharing the responsibilities of reviewing the literature, writing research protocols, and Institutional Review Board (IRB) applications. The protocol was to be implemented, additional benefits of CNS collaboration included enrollment of patients, delivery of interventions, collection of data, and dissemination of results. In addition, CNSs shared resources and tools to bring the research to the staff and utilize the findings in practice.

**Outcomes/Conclusion:** Combining the forces of 3 CNSs enabled research experiences that otherwise would not have been possible. Presently, 2 studies have been completed and are being written up for publication.

**Implications for Practice:** Collaborating with other CNS colleagues allows the research role to be actualized by dividing the work. Each CNS can take “turns” drafting a research protocol, including being the principal investigator, going through the IRB process, and presenting the results.

**Multidisciplinary Approach to Implementing a CMS-compliant Vaccination Protocol**

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**Problem and Significance:** Noting that pneumococcal disease and influenza together are the fifth leading cause of death in the United States among persons age 65 years or older, the Centers for Medicare and Medicaid Services (CMS), in partnership with CDC and others, have targeted vaccination with their Influenza/Pneumococcal Campaign. US immunization rates for pneumococcal vaccination have increased to 54.1% and influenza vaccination to 66.9% for persons aged 65 years and older in 1999; however, the Leading Health Indicators established by Healthy People 2010 target both of these vaccination rates to reach 90% for this population. CDC recommends that all persons receive a dose of pneumococcal vaccination when or after they reach age 65 and that all persons with unknown vaccination status should receive one dose of vaccine. This vaccination can be given anytime during the year and is generally once in a lifetime after age 65. Likewise, they recommend all persons receive an annual dose of influenza vaccine between October and November, and include persons older than 65 years in the high-priority target group of those at increased risk for complications from influenza. While widely recognized as a noble objective, vaccination of at-risk individuals is problematic for several reasons: overcoming the logistic barriers of patients moving back-and-forth through a complex and fragmented healthcare continuum; bridging the gap of discrepancies between nurses, physicians, and pharmacists about the “ownership” of medication administration and, finally, effecting a change in healthcare organizational culture from (1) a Medical model to an interdisciplinary patient-focused model and (2) from acute care to a prevention model.

**Purpose of the Project:** The purpose of this project was to develop a seamless and consistent system for vaccinating high-risk patients as recommended by the CMS.

**Objectives:** The objective of the project was to fulfill our Catholic Health Initiatives value of excellence in our ability to serve the community by vaccinating eligible patients so as to reduce morbidity and mortality associated with vaccine-preventable illnesses, and to do so in a manner that causes minimal disruption of acute care and provides communication back to the primary care provider and other healthcare providers in the continuum.

**Description of Project:** The CNS and the infection control nurse undertook development of a process to order, dispense, administer, and document routine Influenza and Pneumococcal vaccine of at-risk patients without the order of a physician.

**Methods:** A small multidisciplinary committee was assembled to consider this possibility. Guidelines and recommendations were reviewed and national practices benchmarked prior to flow-charting the ideal process and developing related documents. Input from medical staff, nurses, and pharmacists was sought along the development process. An attempt at medical staff committee approval resulted in significant concerns with the ability to communicate vaccination within the community, resulting in the overvaccination of the population requiring multiple admissions to institutions. With these concerns in mind, the decision-making process was expanded to include members of the healthcare continuum. Consensus was quickly reached that the good of the patient requires that all members of the healthcare continuum use better communication to achieve the standard desired, including improved use of documentation and technology. Medical staff approved during this early phase of the project on the medical/oncology unit for patients 65 years and older. Education was conducted prior to launching the pilot.

**Outcomes and Evaluation:** This is a work in progress. In the first month, prehospitalization or during hospitalization, vaccination was received by 91% (Influenza) and 89% (Pneumovax®) of patients. Problems identified during this early phase of the project were being addressed prior to expansion of the pilot to include at-risk patients admitted anywhere in the Medical Center.
Conclusions/Implications for Nursing Practice: CNS can be successful in changing the culture from a medical model to a multidisciplinary approach to providing wellness services that bridges the gaps in society. The project also demonstrated that the healthcare continuum becomes more fluid, lessons learned and electronic communication can prevent duplication of services and gaps in care.

Clinical Nurse Specialist Integration of Complex Adaptive Systems Theory to Positively Influence the Achievement and Sustainability of Surgical Site Infection Prevention

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Background/Rationale: To succeed, a CNS innovator will disrupt the present. A kaleidoscope, not a computer, is the ultimate weapon to help CNSs meet the challenges of the 21st century. Factors that drive the business case for the CNS innovator in the hospital include the following: patient/family expectations; public expectations based upon public-reported indicators and outcomes; changing workforce; clinician dissatisfaction; and a drive for excellence. Innovation emerges as the CNS works with teams to apply basic principles of complexity science. The opportunity was for the CNS to utilize a complex adaptive systems (CASs) approach to achieve and sustain excellence regarding public-reported surgical site infection process indicators that include antibiotic administration within 60 minutes of first incision; antibiotic selection; and the duration of antibiotic prophylaxis.

Description: Complex adaptive systems are collections of individuals or agents who act in ways that are not always totally predictable, and whose actions are interconnected so that one actions change the context for other agents (Plsek & Greenhalgh, 2001). The CNS worked with the Surgical Site Infection Prevention Team to identify and modify structures, processes, and patterns influencing achievement and sustainability. Utilizing a complexity lens, surgical site infection process improvement was led by senior leadership who positioned surgical site infection as a strategic priority. The CNS used the CAS framework to engage bedside nurses using a “few simple rules” (Plsek, 2000). Simple rules include (1) all of our work is patient-centered; (2) all of our work is evidence-based; and (3) solutions are derived from the bedside nurse. A good enough vision regarding surgical site infection prevention improvement initiative was clearly and frequently communicated informally and formally at nursing unit nursing practice councils as well as within leadership forums. With the initial implementation, resistance to practice change was anticipated. The CNS designed strategies aimed at decreasing resistance, ie, incentive, information, intervention, indoctrination, and involvement (Hammer and Staton, 1995).

Outcome: Among retrospective records reviewed, 90% to 100% of persons receiving an elective total joint replacement and coronary artery bypass graft (CABG) receive antibiotic administration within 60 minutes of first incision. In addition, 90% to 100% of records reviewed suggest evidence-based selection of antibiotics for this population. Surgical site infection rates have decreased among target populations. Initial achievement was realized in 2001 and has been sustained as the team attempts spread across other eligible populations and surgical unit interventions.

Conclusion: Providers and hospitals are CASs. In complex systems, unpredictability and paradox are inherent. The machine metaphor doesn’t allow us to understand fully the influence of nondisease-based patterns influencing system outcomes. The CNS is well positioned to diagnose and manage nondisease-based patterns (knowledge deficit, self-efficacy, outcome efficacy, values, influencing provider practice. Understanding and applying basic concepts of CASs broadens the CNS capacity to meet the expected patient, provider, and system outcomes.

Implications for Practice: The CNS is well positioned to positively influence CNS public reported outcomes such as surgical site infection prevention process indicators by applying a CASs approach to diagnosing, modifying, and/or eliminating structures, processes, and patterns influencing patient, provider, and system outcomes. CNS competencies demonstrated within this innovation include, but are not limited to, the following: (1) design system-level assessment methods and instruments to identify organization structures and functions that influence nursing practice and patient care outcomes; (2) diagnose variations in organizational culture (values, beliefs, or attitudes) that can positively or negatively affect outcomes; (3) plan for achieving intended system-wide outcomes, while avoiding or minimizing unintended consequences; and (4) design methods/strategies to sustain and spread change and innovation.

CNS Competencies Influencing Professional Nursing Practice Culture Development, Implementation, and Evaluation of Unit-Based Diabetes Care Facilitators

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Background/Rationale: Driving forces that influenced this innovation include, but were not limited to, maintaining the professional nursing practice model and the need for management of diabetes and hyperglycemia in the hospital setting. Professional Nursing Practice models demonstrate the following characteristics: (1) working with other nurses who are clinically competent; (2) good nurse-physician relationships; (3) nurse autonomy and accountability; (4) supportive nurse manager-supervisor; (5) control over nursing practice and practice environment; (6) support for education; (7) adequacy of nurse staffing; and (8) concern for the patient is paramount (McClure & Hinshaw, 2002). The prevalence of diabetes in adults hospitalized in the United States is significant and predicted to be at 12.4% to 25% (Clement et al., 2004). Following a needs assessment, nursing knowledge, autonomy, and control over practice in diabetes care were identified as opportunity areas for CNS intervention. The innovation was the development, implementation, and evaluation of bedside (sharp-end RN unit-based diabetes care facilitators).

Description: The development, implementation, and evaluation of this role integrated Social Cognitive Learning Theory (Bandura, 1986). The CNS recruited activated, interested bedside nurses who were interested in advancing the practice of diabetes care within their respective nursing unit. Traditional educational opportunities have included the development of written materials, subsequent classes, followed by posttests, which are not clear measures of learning. The intent of the CNS and Diabetes Team was to provide information and experiences that stimulate learning, resulting in diabetes nursing practice behavior change positively influencing a professional nursing practice model. Subprocesses governing observational learning include the following: Attentional Process, Retention Process, Production Process, and Motivational Process. Activities were designed to address each subprocess governing learning. What followed was unit-based diabetes care facilitator partnership with unit-based nursing leadership, advanced practice, and unit-based practice councils in the design, implementation, and evaluation of unit-based plans aimed at advancing the practice of unit-based diabetes nursing care.

Outcome: Multiple outcomes were experienced within the 3 spheres of CNS practice. Professional nursing practice influencing the assessment and management of patients diagnosed with hyperglycemia has resulted in patient outcomes that include, but are not limited to, a decrease in surgical wound infections among CABG population influenced by continuous insulin infusion within the first 24 hours postoperatively in the CVU; nursing demonstrated increased confidence and competency to assess and meet the complex needs of persons diagnosed with diabetes. Examples of system outcomes include, but are not limited to, bedside nursing verbalizing and demonstrating nursing autonomy and control over nursing practice influencing Magnet designation.

Interpretation/Conclusion: The CNS is perfectly positioned to influence a professional nursing practice model positively influencing high-quality nursing care. Without CNS competency support, the bedside nurse is limited to achieve and master control over their practice or to be able to collaborate with nursing peers or other disciplines to ensure high-quality care. Control over nursing practice promotes the recognition of the contribution of professional nursing to organizational goals and outcomes (Perley & Rabb, 1994).

Implication for CNS Practice: Implications for CNS practice include, but are not limited to, the following considerations: (1) use methods and instruments to assess patterns of outcomes related to nursing practice within and across nursing units of care; (2) gather and analyzes data to substantiate desirable and undesirable patient outcomes linked to nursing practice; (3) draws conclusions about the evidence base and outcomes of nursing practice that require change, enhancement, or maintenance; (4) anchors nursing practice to evidence-based information and nursing science; (5) evaluates the ability of nurses and nursing personnel to implement changes in nursing practice with individual patients and populations (NACNS, 2004).
CNS Competencies Influencing the Journey Toward a Professional Nursing Practice Model Influencing Magnet Designation

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Background: Forces of magnetism (McClure et al, 1983) have been identified as those elements that contribute to an organizational culture that allows patients to receive excellent care from nurses practicing in an excellent health care environment. Those forces include (1) quality of nursing leadership; (2) organizational structure; (3) management style; (4) personnel policies and programs; (5) professional models of care; (6) quality of care; (7) quality improvement; (8) consultation and resources; (9) autonomy; (10) community and the hospital; (11) nurses as teachers; (12) image of nursing; (13) interdisciplinary relationships; and (14) professional development (McClure, & Hinshaw, 2002). In 1992, the the chief nursing officer (CNO) of a regional organization set out to develop a professional nursing practice model that included the development of a differentiated nursing practice model that included CNSs.

Description: The development of the professional nursing practice model began with a needs assessment. The objectives of the needs assessment included the following: (1) examine professional nursing practice within the organization; (2) identify nursing services authority within the organization; (3) identify nursing service position of influence within the organization; (4) identify differentiation between nursing roles; (5) identify the bedside nursing contribution to the interdisciplinary practice team. Findings were remarkable. What followed was the development and implementation of strategies aimed at advancing the practice of nursing and patient care within the organization. Strategies included the following: (1) establish a Professional Nursing Steering Committee including CNSs; (2) identify, educate, excite, and embed professional nursing practice standards; (3) examine better performer practice models integrating differentiated nursing practice; (4) build and measure the effect of differentiated nursing practice; (5) design interdisciplinary practice teams led by the CNS; (6) implement and measure the effect of the first-generation practice teams; (7) enhance and measure the effect of the second-generation practice teams; (8) design and implement shared governance led by bedside (sharp-end) nursing and facilitated by CNSs; (9) measure the effectiveness of this model; and (10) based upon measurement findings, raise the bar.

Conclusions/Implications for Practice: On multiple occasions, the CNO for this organization shares that the CNS competencies were integral to achievement of a professional nursing practice model resulting in Magnet designation. CNS competencies within the patient, provider, and system spheres influencing the design, testing, and evaluation of strategies toward a professional practice journey are expertly described in the Statement on Clinical Nurse Specialist Practice and Education (NACNS, 2004).

Surfing the Waves of Change: CNS Role in Creating a Foundation for Computerized Documentation

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Statement of Problem: Our narrative documentation system lacked definitive descriptors and the ability to support the evaluation of nursing processes. The hospital also had a strategic plan to implement an EMR. Together, the opportunity existed to design a documentation framework creating a synergistic relationship between best nursing practices and computerization.

Purpose: To develop documentation philosophy and structural framework based on evidence and standards of care that captures the essence of nursing practice and facilitate the transition to computerization.

Description: In preparation for computerization, a new paper documentation system was created based on a framework of defined descriptors and protocols. The protocol and specific nursing care sets represented evidence-based nursing practice and structure for the EMR.

Method: Key stakeholders from each nursing practice area were recruited to the documentation committee. Following an intensive literature review, including the American Nurses Association documentation and JCAHO standards, definitive descriptors were identified. Practice Council used evidence and standards of care to develop practice protocols. The CNS was positioned to facilitate the development of a documentation framework. The written system was then piloted, refined, and implemented throughout the hospital.

Evaluation: The act of defining best practices increased nursing ownership of patient care standards and outcomes. JCAHO recognition of the documentation system as “best practice” added validity to the product. Our protocols and descriptors are streamlining the transition to EMR for our hospital and others in our system.

Implications for Practice: Operationalization of best practice documentation facilitates outcome measurement and process improvement. This allows the CNS, and others, to evaluate the effectiveness of clinical practice.

Developing a Physiologic Model to Explain Cold Salt and Soda Mouthwash Intervention for Pain Associated With Oral Mucositis

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Purpose: Oral mucositis is a frequent and dose-limiting side effect of cancer treatment, experienced by 40% of chemotherapy and up to 80% of bone marrow transplant patients. Bone marrow transplant patients rated oral mucositis as the single most debilitating side effect over nausea, vomiting, diarrhea, and fatigue. Oral mucositis increases length of stay an average 5 additional days, and involves costs up to $50,000. No interventions are available to prevent or reduce severity; therefore, effective palliative strategies are needed to decrease the pain and associated distress that accompanies oral mucositis. Cold salt and soda mouthwash is often prescribed as an intervention; however, there is little research to validate the effectiveness of this intervention and the rationale for the intervention is not well described. The model developed explores the physiologic basis of cold salt and soda mouthwash as an intervention for pain associated with oral mucositis and offers a model that may be useful in future research.

Rationale: Two models explaining the physiologic rationale of mucositis were located in the literature. One model outlined the cellular-level development of mucositis, describing the process of tissue destruction; the second model outlined the consequences of tissue destruction. Neither model described the pathway of mucositis pain adequately enough to identify the physiologic rationale for the cold salt and soda mouthwash intervention.

Model Development: Literature that was reviewed included the cellular physiology of the mouth, the pathophysiology of cellular damage secondary to chemotherapy, chemical and mechanical nociception in the oral cavity, and the inflammatory process and its contribution to chemical nociception.

Outcome: The model derived to explain the rationale for the intervention theorizes that cold salt and soda mouthwashes interrupt the pain pathway prior to nociception, thus blocking the mechanical and chemical pathway that lead to pain and distress while promoting repair of cellular damage and providing oral hygiene.

Interpretation: A better understanding of the theoretical basis of interventions will help ground clinical practice interventions in scientific principles and can assist in designing and explaining research.

Implications for Nursing Practice: Salt and soda mouthwashes are listed as an intervention for mucositis management in guidelines published by the National Cancer Institute. This model helps to explain the scientific basis of the intervention and can give clinicians confidence when using the intervention in clinical care.

Controlling Blood Culture Contamination

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Problem: Contamination of blood cultures is a common problem. False-positive blood culture results may lead to errors in clinical interpretation; administration of inappropriate antibiotics; increased length of hospital stays; and increased costs.

Significance: Blood culture contamination rates were exceedingly high in our ED, with rates averaging 7% despite extensive educational efforts for ED RNs led by the hospital’s infection control and
microbiology laboratory personnel. The new CNS for the ED was challenged by the nursing director to lead efforts to decrease blood culture contamination rates.

Description of Project: After assessing the problem, the CNS focused on 2 themes in this project: (1) creating an environment making it easy for nurses to do the right thing; (2) Providing education focusing on the significance of the problem, the research, and how to translate that research into practice. The CNS developed blood culture contamination bags. The CNS with the help of hospital volunteers packaged together all blood culture bottles with tincture of iodine and 70% alcohol prep pads in the lab specimen bag. Also included in this bag was a copy of our campaign slogan “SO the skin’s bugs can die...let your preps dry...1 minute!” The RNs and nursing technicians therefore always had the right prep readily available along with a reminder regarding drying times. Education was provided to RNs and technicians by the CNS in the format of 10-minute educational roving sessions. The CNS was available to reinforce teaching during the times of lower census and acuity in the busy ED. The campaign slogan was also posted throughout the department.

Outcomes: The ED's blood culture contamination rates dropped to 3.4% and 3.3% in the 2 months following this effort. The CNS has celebrated the success with the ED and continues to lead efforts to further decrease our rates to less than 3%.

Implications for Practice: This project supports that by providing resources and evidence-based education, blood culture contamination rates can be decreased significantly. The themes the CNS utilized for this practice change can be translated into other practice changes. This project also supports the role of the CNS in improving patient outcomes.

The RN-initiated Tobacco Use Intervention Protocol: Role of the CNS
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Tobacco use continues to be the number one risk factor in cardiovascular diseases as well as many major health problems. As CNSs, our role is one of facilitating and influencing the “Spheres of Influence” to create a community, improved overall quality of life for our patients and their families. This presentation will address the CNS role in the creation of, rationale for, presentation to multidisciplinary professionals, and initiation of a “Tobacco Use Intervention Protocol.” A protocol as political and sensitive as one on tobacco has presented many challenges. This RN-initiated protocol is 2-fold: to address both behavioral intervention as well as medication intervention for the patient's comfort and abstinence from tobacco use, immediately after the patient's admission to hospital. This protocol is to promote comfort, begin tobacco cessation, and, hopefully, start the patient on lifelong abstinence from tobacco products.

Describing RNs’ Attitudes Toward Bariatric Patients: An Intervening Influence on Quality of Nursing Care
Patti Rager Zuzelo, EdD, APRN,BC, CNS, LaSalle University, Philadelphia, PA

Problem and Significance: Bariatric patients have a body mass index greater than 40% or are 100 pounds over ideal body weight. Obese individuals experience stigma throughout their lives, including in their interactions with health professionals. Patient-nurse interactions may be more effective if RNs' attitudes are known and addressed. The study measured RNs' attitudes toward obese adult patients using a nonexperimental design with survey instrumentation.

Research Questions: What are the attitudes of RNs toward obese adults? Is there a relationship between RN attitudes toward obese adult patients to educational preparation, self-reported body size, years of experience, type of unit, and work setting? Are there differences in attitudes toward obese adult patients between RNs working in hospital, acute rehabilitation, or skilled care facilities?

Methods: Full-time RNs employed in a medical center, acute rehabilitation, or skilled nursing facility responded to The Nurses’ Attitudes Toward Obese Adult Patients Scale, a 28-item survey with established content validity. An open-ended statement was added to the instrument to elicit comments.

Implications for Practice: Overall RN response rate was 16.2%, with institutional response rates ranging from 14.9% to 28.6%. The overall attitude score (M = 3.32) demonstrated a positive attitude toward obese adults. There were no statistically significant relationships between demographic variables to attitude scores. Test of homogeneity of variance justified the assumption of equal variances for the three groups (Levene statistic = 1.654; P = .238). One-way ANOVA revealed statistically significant differences in mean score based upon institutional type (F = 11.935; P = .000). Posthoc Scheffé procedure (P = .000) identified a statistically significant difference between the mean scores of acute rehabilitation RNs (M = 2.91; SD = 0.499) versus medical center RNs (M = 3.41; SD = 0.376). Analysis of RN comments revealed several themes, including the following: believing obese patients deserve equal treatment, recognizing unique care needs, feeling overwhelmed by care needs, and making an effort to avoid hurtful encounters.

Implications for Practice: RNs should acknowledge RNs’ safety concerns and workload worries when addressing bariatric nursing care. Many RNs are ambivalent about obesity and need to improve their knowledge base. Stigmatizing behaviors, verbal and nonverbal, may not be recognized by RNs. Discussion may encourage self-awareness and promote improved practice.

Promoting a Paradigm Shift Within a Shared Governance Organization: Establishing a New Norm of EBP, CQI, and Research
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Problem and Significance: Albert Einstein Healthcare Network utilizes a shared governance model based upon a matrix design built along service lines. Nurses are challenged to increase EBP activities and struggle to differentiate between EBP, CQI, and research. Staff RNs and managers have diverse educational backgrounds, with few APNs. RNs often view research activities as valuable but disconnected from daily practice.

Purpose: The associate director of nursing for research (ADNR) is a CNS holding a joint appointment between the healthcare network and a local university. The ADNR is charged with promoting an agenda that (1) develops an understanding of research; (2) assists nurses with appreciating the unique values of EBP, CQI, and research; (3) encourages best practice; and (4) promotes professionalism.

Description of Project: The medical-surgical and critical care service line clusters were supported in efforts to identify practice priorities. Three projects were developed: Never Again Stories of Critical Care Nurses; Moral Distress of Acute Care Nurses; and Elders' Pain: A Program Evaluation Project. Steering committees of staff and administrators were formed for each project.

Methods: Each project is chaired by the ADNR. Steering committee members are responsible for critiquing the proposal and directing data collection activities. The Never Again Stories is a critical incident study involving interviews. The Moral Distress project uses survey methodology and will include RNs across a variety of clinical settings. Elders’ Pain project is designed to teach program evaluation and improve pain management of elderly inpatients. The ADNR also utilizes an annual newsletter, and attends a variety of meetings to voice consistent application of EBP and CQI principles.

Outcomes: RN project participation is hesitant as nurses are concerned about additional workload and are worried about their perceived inexperience with EBP, outcomes, and research. Steering committee membership has been popular and competitive. Shared governance cluster members are developing an understanding of the various aspects of EBP.