

# Abstracts Presented at the 12th National Neonatal Nurses Conference and 15th National Mother Baby Nurses Conference Chicago, IL, September 6–8, 2012

These abstracts represent a broad range of neonatal and perinatal issues. By sharing this information, we hope to increase awareness of research and innovative programs within the perinatal health care community, and support evidence-based nursing practice. Some abstracts have been edited for publication.

---

## **PDA Ligation at the Bedside**

*Madalyn Decanq, BSN, RNC-NIC*  
*Susan Repking, APN-CNS, MSN, RNC-NIC*  
*Jodi Wendt, MSN, RNC-NIC*  
*Irene Wysocki, RNC-NIC*  
*Nicolette Shea, BSN, RNC-NIC*  
*Mital Desai, PharmD*

NORTHWEST COMMUNITY HEALTHCARE  
ARLINGTON HEIGHTS, ILLINOIS

**Background:** Northwest Community Hospital NICU obtained Level III status in December 2010 and utilized their existing partnership with a tertiary level children's hospital to perform bedside surgeries.

**Primary Objectives:** The primary objective was to establish a team of professionals to collaborate on the process of performing PDA ligations at the bedside. Prior to this, babies were transferred to a referral hospital for this procedure.

**Development of the Program:** The Lead-Out team consisting of NICU staff nurses and leadership collaborated with the tertiary level hospital surgeons to identify what was needed to perform the procedure at the bedside at Northwest Community Hospital. Neonatal intensive care nurses and operating room nurses were cross-trained at the tertiary center and PDA ligations at the bedside were observed by both teams. Evidence-based policies were written. Communication with supporting departments outlined individual roles and needs.

---

## **Focused Efforts Improve Infection Rates in the NICU**

*Lisa McGee, RN, MSN, CCNS*  
UNIVERSITY OF KENTUCKY  
LEXINGTON, KENTUCKY

The purpose of this endeavor was to decrease the rates of central line-associated blood stream infections (CLABSIs) and general infections in a large neonatal intensive care unit (NICU).

Data about infections, both from within the facility and from benchmarking with the Centers for Disease Control and the Vermont Oxford Network (VON), were reviewed and opportunities for improvement identified.

Working with the faculty physician champion for infection control, a multidisciplinary NICU Infection Control Group reviewed research and best practice recommendations from the literature, quality collaboratives, and regulatory and professional organizations. Utilizing rapid change cycles, practice changes were implemented. Those changes are identified.

To determine outcomes, CLABSI and general infection rates were monitored monthly. The unit results for infection were compared to VON data and data from the National Healthcare Safety Network. CLABSI rates as well as those for general infections, decreased. In 2011, the CLABSI rate decreased to 2.6 infections/1000 central line days from a rate of 4.6 infections/1000 central line days in 2010. Nosocomial infection rates decreased to 12.2 percent in 2011 from 31.4 percent in 2010.

Many of the implemented efforts remain in place because they have proven to be successful for the NICU in regard to decreasing infection rates.

---

## Atypical Presentation of Early Onset Group B Streptococcal Sepsis: A Case Report

*AnnMarie Barber, MS, MSN, CRNP*

CROZER CHESTER MEDICAL CENTER  
UPLAND, PENNSYLVANIA

Group B Streptococcus (GBS) is the leading infectious cause of morbidity and mortality among infants in the United States. According to the CDC, GBS causes approximately 1,200 cases of early-onset invasive disease per year. Early-onset disease usually presents within the first 24–48 hours of life and most commonly manifests as sepsis and pneumonia. Late-onset GBS disease typically occurs at 3–4 weeks of age and characteristically manifests as meningitis, occult bacteremia, or focal lesions such as osteomyelitis or septic arthritis. This is a case report of a term female infant, born to a GBS negative mother, who was diagnosed with GBS bacteremia and meningitis on day 2 of life. By day 4 of life the infant presented with clinical symptoms suggestive of osteomyelitis of the right hip. An MRI showed marked inflammation of the right femur and hip consistent with a diagnosis of osteomyelitis. Treatment for this infant consisted of drainage of fluid from the right hip joint and a 28-day course of IV antibiotics. This case is an example of an uncommon manifestation of early-onset GBS infection. It highlights the need for clinicians to remain vigilant with regard to atypical clinical presentations in any infant diagnosed with GBS disease.

---

## Prevention of Patient Injury: Nasal Erosion from Nasal CPAP Prongs in the NICU

*Mary De Ritter, MSN, RN, CNL*

ENGLEWOOD HOSPITAL AND MEDICAL CENTER  
ENGLEWOOD, NEW JERSEY

Continuous positive airway pressure (CPAP) is a non-invasive application for delivery of positive pressure and is routinely delivered nasally to neonates. Nasal CPAP and Bilevel positive airway pressure (Bi-PAP) are delivered via bi-nasal prongs. An increasing number of nasal erosions were identified in the NICU and a team was assembled to identify ways to prevent nasal breakdown associated with the delivery of nasal CPAP and Bi-PAP. We identified that the nasal septal injury was directly related to the traditional interface (Hudson Prongs™) that was used for CPAP and Bi-PAP delivery. Respectively, several causes were identified: (1) poor position, (2) lack of protective base, and (3) excessive pressure related to fit. These increased the risk of nasal septal damage. Therefore, the question was asked: “Is there an alternate interface capable of providing nasal CPAP/Bi-PAP for infants 28–40 weeks gestational age that will decrease the potential for nasal injury?” Using the Iowa model, the neonatal team (CNL, RT, RN, and neonatologist) developed a PICO question (Population, Intervention, Comparison, Outcome), a literature review was conducted, and an evidence-based practice change was initiated. An alternate interface, the RAM™ interface cannula (NeoTech, Valencia, California; was identified and introduced. A pilot study was initiated using the RAM™ interface cannula and data are currently being compiled. Our potential outcomes are: (1) elimination of nasal septal injury, (2) improved placement, and (3) decreased cost. A retrospective cost analysis has been conducted and a substantial reduction in cost has been noted.

---

## Establishing an NICU Ventilator-Associated Pneumonia Prevention Protocol

*Susan Repking, APN-CNS, MSN, RNC-NIC*

*Patti Searle, RNC-NIC*

NORTHWEST COMMUNITY HEALTHCARE  
ARLINGTON HEIGHTS, ILLINOIS

**Background:** Northwest Community Hospital NICU obtained Level III status in December 2010 and recognized the need for a comprehensive ventilator-associated pneumonia (VAP) NICU protocol as we proceeded to care for very low birth weight (VLBW) infants.

**Primary Objectives:**

1. Establish staff education needs regarding the care of an intubated VLBW infant on mechanical ventilation.
2. Develop a comprehensive NICU VAP protocol.
3. Educate staff regarding VAP and VAP prevention utilizing this protocol.

**Development of the Program:** VAP questionnaire was distributed to staff to determine knowledge base of NICU VAP prevention. Based on the variance in responses and inconsistent bedside practice, the need for an evidence-based comprehensive protocol and education of staff was recognized.

The Quality and Safety Taskforce researched and developed an NICU VAP protocol with staff input from Practice Council and Respiratory Therapy NICU manager.

Staff education was provided.

Audit tool was developed to use for shift to shift report and as a random audit tool to determine compliance with the new protocol.

Evaluation and outcomes of the project are currently being reviewed.

1st case piloted 5/2012.

---

## NICU Golden Hour: Best Practices

*Patricia Gawron, RNC; Susan Bentz, BSN, RNC;  
Ann Diaz, MA, BSN, NE-BC; Christine Gomez, US;  
Douglas Hardy, MD; Kathy Mahanke, BA, RRT;  
Lori Mickelsen, RNC; Sarah Molzan, BSN, RNC;  
Jose Perez, MD; Ann Prescott, BSN;  
Raquel Santana-Ortiz, RNC*

WINNIE PALMER HOSPITAL  
ORLANDO, FLORIDA

**Background:** The first hour of life for a premature or sick infant represents a time in which the infant faces many challenges that carry significant risk of short and long term injuries, lifelong developmental delay, and even death. In neonatology, the Golden Hour begins with birth and extends through the first 60–90 minutes of life. Objectives of the Golden Hour process are to implement a team-based application of consistent evidence-based care practices that have potential to improve these outcomes.

**Discussion:** Teams were established to review literature, current and best practices, and to create specific measurements for outcomes needed for improvement and developing education.

**Results/Outcomes:** 75 percent reduction in time for the infant to be admitted through the business office, 0.5° improvement in the temperature of infants upon arrival to the NICU and at one hour of life, an 8 minute decrease from birth to hyperalimantation initiation.

**Conclusion:** Collaborative efforts during the NICU Golden Hour can have a significant impact on short and long term outcomes. Application of best practices and improved communication contribute to decreasing iatrogenic stress and improving stabilization of fragile infants. We expect that team-based simulation training starting in 2012 will continue to improve patient outcomes.

---

### **An Evidence-Based Approach to Minimizing Oxygen Injury in Neonates**

*Treza James, MS, NNP-BC*  
*Rose Viscardi, MD*  
*Angela McGinnis, MS, RNC-NIC*  
*Shuyun Cao, RN, CCRN*  
*Carol Summers, BSN, RNC-NIC*  
*Francine Jones, BS, RRT*

UNIVERSITY OF MARYLAND MEDICAL CENTER  
BALTIMORE, MARYLAND

The Neonatal Intensive Care Unit (NICU) at an urban, academic medical center actively participates in the Vermont Oxford Network (VON) in order to compare clinical outcomes of our patients to other like NICUs across the country. In 2009, a review of data indicated that there were higher rates of retinopathy of prematurity (ROP) and increased severity of disease in our NICU compared to national benchmarks. A multidisciplinary team was formed to analyze the outcomes, review the literature for best practices, and develop an evidence-based guideline. Within ordered parameters, nurses were responsible for managing the administration of oxygen. The team collectively developed an "Oxygen Target Guideline" and compliance with maintaining pulse oximetry limits was tracked and discussed at monthly meetings. After the first year of guideline implementation, the number of cases of severe ROP in the NICU drastically decreased. Furthermore, the outcomes from 2010 and preliminary results from 2011 indicate that the number of babies without any ROP has doubled and there were no cases of "severe" ROP. The team did not stop evaluating practice and outcomes at this point, however. In fact, new research findings called for a re-evaluation of oxygen saturation limits, and as a result, the team revised the guidelines. Outcome data related to ROP and severity of disease continues to be tracked quarterly.

---

### **Diverse Nursing Roles of a Centralized Respiratory Syncytial Virus Prophylaxis Program**

*Rosemarie Paulley, BN*  
*Kristal Sneesby, RN*  
*Sheila Hutton, BN*

CHILDREN'S HOSPITAL IN WINNIPEG  
MANITOBA, CANADA

The Manitoba Respiratory Syncytial Virus (RSV) Prophylaxis Program is a centralized provincial program in Manitoba, Canada, responsible for the passive immunoprophylaxis of infants at significant risk for hospitalization due to RSV infection. The Program is unique because of the diverse roles of the program nurses, who are responsible for the coordination of a geographically expansive region, as well as a diverse patient population.

Although the nurses' role is labeled as coordinator, the role of the program nurses is more than coordination and includes the following core nursing roles: patient advocate through the identification of

at-risk, isolated communities, patient populations, and patients who would benefit from the program; interdisciplinary collaborator with ongoing involvement with nurses, physicians, pharmacists, and other health care providers locally, provincially, and nationally; proficient manager in supervising the evidence-based and cost-effectiveness of an expensive therapeutic agent; and ongoing educator of patients and their families enrolled in the Program while in hospital and community-based, as well as urban and rural health care providers about RSV and the important non-pharmaceutical methods to prevent RSV infection.

The poster presentation elaborates the nurse coordinators' roles.

---

### **A Breath of Fresh Air: Building a Quality Collaborative to Improve Chronic Lung Disease**

*Donetta Setters-Leach, RNC, BSN*

MIAMI VALLEY HOSPITAL  
DAYTON, OHIO

Chronic lung disease (CLD) continues to be a major morbidity of the premature infant. CLD is a complex disease stemming from multifactorial risk factors. Our goal, as the healthcare team caring for these premature infants, is to identify those factors and attempt to reduce or even eliminate these risks in order to prevent CLD. A collaborative medical team in our unit decided to begin with a small test of change to begin reducing the risk of CLD. A Resuscitation Checklist, which is recommended by the NRP Guidelines, was created and implemented. The checklist included assigned roles for team members, predelivery equipment checks, and resuscitation goals. This process mimics the aviation profession, as a system for safety. The Resuscitation Team used the checklist on select deliveries of premature infants <33 weeks gestation, revising the checklist several times to improve the process. By reducing the risk of CLD at delivery, we have established a foundation that allows us to identify, track, and reduce the risks of CLD throughout the neonatal intensive care unit stay.

---

### **Is Milk Being Delivered at the Right Temperature? Nurses' Perceptions Compared to Actual Practice in the NICU**

*Phyllis Lawlor-Klean, MS, RNC, APN/CNS*  
*Jennifer Perkins, BSN, MS, BC-NIC*  
*Jeanne Wiesbrock, BSN, MS, IBCLC*

ADVOCATE CHRIST MEDICAL CENTER/  
HOPE CHILDREN'S HOSPITAL  
OAK LAWN, ILLINOIS

Evidence suggests that milk may be tolerated better when fed at body temperature (BT), yet there have been no studies reporting actual milk temperature at time of delivery to the infant.

The purpose of this study was to compare nurse perception to actual temperature of milk fed to NICU infants.

In three Midwest NICUs, a convenience sample of milk episodes was evaluated after milk was warmed using a standard method. Actual milk temperature tested using an infrared thermometer was recorded along with milk type, delivery method, and nurses stated milk temperature. The actual temperature was compared to the nurse's perceived temperature, standard room temperature (24 degrees C) and BT (37 degrees C) using a *t*-test.

Analysis of 419 milk temperatures revealed a range of temperature from 22–46.4 degrees C. Milk delivered in syringes (N = 196, M = 30.4

degrees C  $\pm$  2.6) was significantly different from that delivered in bottles (N = 223, M = 31 degrees C  $\pm$  3.1). The actual temperature and the nurse perceived temperature were significantly lower than BT ( $p = .000$ ) and significantly higher than room temperature ( $p = .000$ ).

Current warming methods yield wide variation in milk temperature. Nurses' responses of ideal and perceived temperature were not consistent with actual temperature at milk delivery. Change in practice and education are needed for nurses to maintain consistency in infant feeding.

---

### **Increasing Human Milk Feedings in the Neonatal Unit**

*Diane Youmans, RN, MSN, C-NIC, C-NPT;  
Elizabeth Salley, RD; Beth Paske, BSN;  
Holly McSpadden, IBCLC; Christina Ulm, IBCLC;  
Wendy Nichols, RN, IBCLC; Cynthia Hendry, BSN;  
Eleanor Eades, MD; Patricia Barrett, MA*

MEMORIAL UNIVERSITY MEDICAL CENTER  
SAVANNAH, GEORGIA

The American Academy of Pediatrics and Healthy People 2020 both support feeding practices that increase human milk feeding rates and rates of exclusive breast (human) milk feeding for the first six months of life. The health benefits of providing human milk for preterm infants include decreased incidence of infection, fewer hospital readmissions, decreased incidence of necrotizing enterocolitis, and retrolental fibroplasia. Human milk feeding rates at discharge for the neonatal intensive care patients at Memorial were well below the national benchmark rates, averaging 30–40 percent compared to 60–66 percent (Pediatrics Medical Group Quality Indicator). Although most mothers will supply breast milk to their infants in the early days of NICU admission, few were still providing milk by discharge. The overall goal of this Performance Improvement Project was to increase the percentage of NICU infants discharged home on human milk feedings. A multidisciplinary team was formed to look at current practice, including nursing knowledge and parent education, and to identify barriers interfering with maternal lactation continuation. At the conclusion of one year of focused change, human milk feeding rates are averaging 50 percent. However, mothers continue to report inconsistent support from the staff in transitioning to feeding at the breast versus feeding pumped milk.

---

### **Safe Administration of Breast Milk in the Neonatal Intensive Care Unit, Utilizing the Electronic Medical Record**

*Linda Juzbasich, MSN, RNC-NIC  
Carol Hand, MHA, RNC-NIC  
Robert Stavis, PhD, MD*

MAIN LINE HEALTH SYSTEMS  
DEVON, PENNSYLVANIA

*Disclosure: Ms. Juzbasich is a consultant and NICU Resource Nurse for Main Line Health and Nursing consultant for Grand Rounds Software collaborated to develop the improved breast milk safety features.*

Breast milk provides optimal nutrition for newborn infants, and promotes maternal-infant bonding. Expressed breast milk (EBM) typically is given to NICU infants until the infant is strong enough to breastfeed. A typical NICU may give thousands of EBM feedings per year, presenting management challenges in identifying, storing, and

administering EBM. Administration of a mother's EBM to another mother's baby has been recognized as a common NICU error. In 2003, we developed a barcode-based process to match EBM to the patient utilizing the NICU electronic medical record (EMR), and have documented over 200,000 breast milk feedings in the system. We have successfully reduced the error rate of EBM misidentification, and during this period of time, only a single error was recognized.

The error involved a container of another mother's breast milk that was inadvertently sent home with an infant at discharge, and later fed to the infant by the parent. In collaboration with nursing, physicians, parents, and the EMR vendor, a safety initiative was developed to address and expand the identification processes surrounding breast milk management and administration. Since the patient safety initiative was initiated in December 2009, no further breast milk errors at discharge have occurred.

---

### **Getting Out of the Driver's Seat: Implementation of an Infant-Driven Feeding Protocol in a Level III NICU**

*Krystyna Toczylowski, RN, MSN  
Christine Perdon, RN, BSN, IBCLC*

HACKENSACK UNIVERSITY MEDICAL CENTER  
HACKENSACK, NEW JERSEY

Effective oral feeding is often the last challenge infants must master before discharge. Studies show that when feeding is changed from a scheduled and volume-driven approach to an infant-driven process, infants can attain full oral feeding earlier, resulting in a shorter length of stay.

A multidisciplinary team aimed to implement infant-driven feeding based on nursing assessment in a Level III NICU. Key elements in the change process included development of clinical guidelines, implementation of evidence-based objective assessment tools, education and partnerships with parents, documentation changes and continual assessment of successes and barriers. After implementation, a qualitative method via semi-structured interviews of staff and parents was used to gather a deeper understanding of the effects of the change.

Infants less than 32 weeks gestational age at birth who followed the infant-driven protocol showed a 2–3 day decrease from the first oral feeding to discharge. This decrease in length of stay results in a significant cost saving and increased parent satisfaction.

Infant-driven feeding is a paradigm shift that requires a change in thinking. It takes time to change the feeding culture and build "trust" that this feeding method is safe and effective.

---

### **Does the Use of Human Milk Decrease the Incidence of Infection in Premature Infants While in the NICU**

*Julie C. Medas, RN, MSN, APRN-CNS  
J. Tessman, BSN, RNC-NIC; M.J. Novosel, RNC-NIC  
K. Saridakis, RN; C. Eggleston, MSM, RN  
S. Groh-Wargo, PhD, RD, LD  
P. Nash; R. Merheb, MD; M. Collin, MD*

METROHEALTH MEDICAL CENTER  
CLEVELAND, OHIO

Premature infants are at risk for several prematurity-related morbidities including those stemming from nutritional issues and infection. The benefits of human milk on both, in addition to other morbidities

and mortality continue to be validated in research, thus reinforcing best practice standards. We have hypothesized that premature infants receiving predominantly human milk are less likely to succumb to infections than those receiving predominantly formula feeding; a secondary aim is to determine dose effect. This research can lend additional evidence to health care professionals' repertoire as they convey risk and benefits, as well as necessary information to assist mother/parents in making an informed choice to provide human milk/breastfeed their premature infant. A retrospective chart review is in progress and will be complete by mid-July of all premature infants less than 1500 g birth weight admitted to the NICU between October 2009 and June 2012 and discharged no later than mid-July, 2012; data analysis will be complete by August 1, 2012.

---

## Reliability of the Premature Infant Oral Motor Intervention (PIOMI)

*Brenda Lessen, PhD, RN*  
*Clare A. Morello, BSN, RN*

CHILDREN'S HOSPITAL OF ILLINOIS AT  
OSF SAINT FRANCIS MEDICAL CENTER  
PEORIA, ILLINOIS

**Problem/Literature Review:** Recent multidisciplinary research continues to examine various types of oral motor therapy in preterm infants but none have formally tested the reliability of specific oral motor interventions. The premature infant oral motor intervention (PIOMI) is a five minute, pre-feeding intervention developed to improve feeding skills. As further research is planned, the reliability of the intervention needed to be tested. The purpose of this study was to determine the interobserver, interuser, and test-retest reliability of the PIOMI, as well as determining if the specific training program developed was sufficient enough to reach high reliabilities.

**Methodology:** The study was conducted at a Level III NICU using a purposeful convenience sample. A specific training plan was established, and a reliability rating tool was developed. Two observers rated three RNs performing the PIOMI twice each on premature infants.

**Data Analysis:** The PIOMI demonstrated overall high percent agreement for interobserver (97.57 percent), interuser (97.59 percent), and test-retest (97.58 percent) reliabilities. However, three specific steps of the 8-step intervention yielded weaker reliabilities, directing modifications of the training program.

**Interpretation:** Strong reliability is essential to assure that an intervention can be fully and properly implemented before translating evidence-based interventions into practice, and the importance of effective training to achieve high levels of reliability is discussed. This study suggests that with a specific training program the PIOMI can be reliably performed among different RNs (interuser) and by the same RN more than once (test-retest). Using the reliability rating tool the PIOMI can also be reliably rated by different observers (interobserver). With the reliability of the PIOMI documented and accurate training issues identified and corrected, further studies on its efficacy should be pursued.

---

## Premature Infant Oral Motor Intervention (PIOMI): Translating Interventional Research into Interdisciplinary Practice

*Brenda Lessen, PhD, RN*

CHILDREN'S HOSPITAL OF ILLINOIS AT OSF  
SAINT FRANCIS MEDICAL CENTER  
PEORIA, ILLINOIS

Translating interventional research into practice requires a multifaceted approach. Rogers' (2003) diffusion of innovations (DOL) model provides a framework within which to implement a new intervention into practice. The model asserts that the adoption of an innovation is influenced by the nature of the innovation and the manner in which it is communicated to users in a social system. The Premature Infant Oral Motor Intervention (PIOMI) was developed by a nurse researcher with expertise in neonatal science, in collaboration with an expert in oral motor therapy. The safety and efficacy of the new intervention was tested (Lessen, 2011), followed by a formal study on its reliability. Adoption of this innovative intervention must target several disciplines including medicine, nursing, occupational therapy, and speech-language therapy. The process of a neonatal intensive care unit adopting the PIOMI as the standard of oral motor therapy practice among disciplines is described using the DOL model, and the specific training program is presented, including its modifications after formal reliability testing. With the reliability of the PIOMI documented and accurate training issues identified and corrected, further studies on its efficacy should be pursued.

---

## Effect of Feeding Warming Method on Feeding Tolerance in the Preterm Infant Born at Less than 30-0/7 Weeks Gestation

*Bonnie Satinover, BSN, RNC-NIC*  
*Jeanne Wiesbrock, APN, IBCLC*

ADVOCATE LUTHERAN GENERAL CHILDREN'S HOSPITAL  
PARK RIDGE, ILLINOIS

**Introduction:** Traditionally in the NICU, infant feedings have been warmed in a warm water bath. Milk temperatures prior to feeding are not typically monitored. Limited studies have examined temperature of feedings and effects on feeding tolerance in the preterm infant. The purpose of this study is to examine effect and clinical significance of two feeding warming methods, water bath versus commercial warmer, on feeding tolerance in preterm infants born less than 31 weeks gestation.

**Methods:** Sample population will include eighty-six infants born less than 30 0/7 weeks gestation, and admitted to the study within 48 hours of birth. Subjects will remain in the study for a minimum of 28 days. Subjects will be assigned to a control (water bath) or experimental (commercial warmer) group using a randomized sampling scheme. After warming, and just prior to feeding, milk temperatures will be assessed and recorded. Feeding tolerance will be measured based on gastric residual volume and length of time required to achieve full feedings.

**Results:** This study is currently enrolling subjects.

**Conclusions:** Based upon the available evidence, the study investigators hypothesize that warming feeds to a consistent temperature range using commercially available milk warmers will improve feeding tolerance and decrease time to full feedings in preterm infants.

---

## Human Milk Fortification: *In Vitro* Effects of Protein Supplements

Debbie Fraser, MN, RNC-NIC<sup>1</sup>; Sarah Blleloch, BSc<sup>2</sup>  
Katelyn Mayba<sup>2</sup>; William Diehl-Jones, BScN, MSc, PhD<sup>2</sup>

ATHABASCA UNIVERSITY  
UNIVERSITY OF MANITOBA, WINNIPEG, MB

**Background:** We recently demonstrated that infants receiving >50 percent of feedings supplemented with Human Milk Fortifier (HMF) manifest elevated levels of oxidative stress (Friel, Diehl-Jones et al., 2011). The mechanism(s) underlying this effect is/are unknown. Furthermore, preterm infants commonly receive both HMF and protein supplements in enteral feedings, and there are many anecdotal reports of such supplementation practices being associated with gastrointestinal distress, including increased gastric residuals and constipation.

**Objectives:** (1) determine the physicochemical properties HMF and protein supplements in expressed breast milk (EBM); (2) investigate the effects of HMF and protein supplements on oxidative stress in an *in vitro* digestion/enterocyte model.

**Methods:** Clinically relevant combinations of EBM +/- Bene protein and/or Enfacare A+ were digested according to a previously validated two stage *in vitro* process (Diehl-Jones et al., 2010). Osmolarity, hydroperoxides, and peroxy nitrates were measured in the aqueous milk phase. The effects of the EBM treatments were also assessed in two enterocyte cell lines.

**Results/Conclusions:** As expected, fortification significantly increased the osmolarity of EBM, although these effects were negligible after digestion. Elevated reactive oxygen species (ROS) were not detected in EBM samples, although intestinal cells exposed to HMF +/- Bene protein had significantly-elevated levels of intracellular oxidation. The effects were abrogated in the presence of Enfacare A+. Our results support the hypothesis that HMF induces intracellular oxidative stress.

1. Athabasca University
2. University of Manitoba

---

## Using Qualitative Data to Improve the Rate of Direct Breastfeeding in the NICU

Marie Wise, RN, BSN, IBCLC  
Suzette Little, MS, RRT  
Karyn Catrine, MS, RD, LD  
Erin Pryor, MPH, RD, LD  
Amy Clayton, RNC

MIAMI VALLEY HOSPITAL  
DAYTON, OHIO

The intent of this project is to increase the number of mothers that are directly breastfeeding their NICU infants after discharge by 20 percent by December 2012. The current direct breastfeeding (DBF) protocol supports the mother in her efforts to directly breastfeed when the infant shows feeding readiness. Once oral feeding is initiated, infants are directly breastfed or gavage fed for a period of 72 hours. The amount of milk volume gavage is based on the time the infant effectively nursed at the breast. No bottles are given for the first 72 hours. Qualitative methods were used to investigate staff's and mothers' perspectives and experiences with the NICU direct breastfeeding (DBF) protocol. Methods used for this investigation included phone interviews with mothers and focus groups with the nursing staff.

Our investigation resulted in making improvements to our current DBF protocol. The next steps include revision of the DBF protocol and education for lactation consultants, staff, and parents for consistency and understanding.

---

## Breastfeeding Success in the NICU

Nancy Knowles-Tuell, RN, BSN, MA, CLC

ST. PETER'S HOSPITAL  
ALBANY, NEW YORK

**Background:** Breastfeeding (in the NICU) provides challenges and rewards. Feeding the infant breastmilk has been shown to reduce infant lengths of stay, decrease the incidence of necrotizing enterocolitis (NEC), and lessen the impact of illness.

**Purpose:** Education of the NICU staff as well as providing continued and consistent support by a Certified Lactation Counselor is expected to positively impact the initiation and discharge rates for providing breastmilk.

**Design:** The project was designed in 3 phases:  
Phase 1—Two RNs were sent to extended education. The Certified Lactation Counselor exam was taken and passed. Plans were discussed with timetables to begin building a lactation program in the NICU.

Phase 2—Retrospective data was received through closed chart audits. This was to establish a baseline and define current practice. Staff education began in this Phase and is ongoing.

Phase 3—Ongoing. Looking at concurrent data that is obtained through open chart audits; keeping logs with all (NICU) prenatal visits and all postnatal visits for every admission to the NICU.

**Conclusions:** As a result of the interdisciplinary education and direct support for the lactating mother, the premature newborn will be discharged home on breast milk.

---

## Heart for Bonding: A New Protocol of Care

Mary E. Parker, RN, MSN, CCRN  
Wanda T. Bradshaw, RN, MSN, NNP

DUKE UNIVERSITY MEDICAL CENTER  
DURHAM, NORTH CAROLINA

There is overwhelming joy when anticipating the birth of a baby. Families dream of the first touch, first kiss, and first feeding. With a congenital cardiac anomaly diagnosis, the anticipated perfect child is lost, and the family must deal with the stress of an unknown future. It becomes the responsibility of the healthcare team to evaluate and provide the necessary education and support the family needs to cope with this stress.

With early fetal diagnosis, there is time to establish a care plan that is family-centered, culturally-sensitive care that supports the family through this transition. The idea of a family-centered birth process for these potentially critical cardiac patients was met with resistance from medical and nursing staff responsible for the initial care during stabilization. The concerns that had to be addressed included the expected stability at birth, the safety procedures needed, and what family-centered activities could occur immediately following delivery.

Cardiology and Neonatology in collaboration with families of at-risk infants, now support family-centered care offering natural birth, supervised bonding, and breastfeeding promotion. Our standard of care is now family-centered best practice for a large portion of our patients and has grown to incorporate other high-risk infants.

---

## **Design and Implementation of an Interdisciplinary High-Risk Care Planning Process—One Family's Journey**

*Susan Duke, RNC, MScN*  
*Laura Robbins-Frank, MSN, RNC, AP*  
*Olga Lazala, PhD(c), APN, RNC-OB*  
*Peggy Biernat-Farell, MSN, RNC*

ADVOCATE GOOD SAMARITAN HOSPITAL  
DOWNERS GROVE, ILLINOIS

Perinatal services at this hospital are interdisciplinary in concept but not necessarily in delivery. Patients are referred to the Maternal Fetal Medicine Specialist for consultation and recommendations for care are made to the referring obstetrician; ideally this information will be on the prenatal record and available at the time of delivery. Subsequently a process was designed by which high-risk perinatal cases identified by the Maternal Fetal Medicine Service would be discussed and a plan of care developed in a scheduled monthly meeting. Additional team members are invited to participate on an *ad hoc* basis and are able to participate via telephone conferencing. This has been the most satisfying aspect for the obstetricians and other subspecialists that are needed, based on the cases being discussed. After the plan of care is established, family meetings are often set up with the perinatal team to review the plan of care and identify any modifications that are necessary. An algorithm of care was developed, and included the clear delineation of responsibilities. A standardized plan of care template was also developed and the meeting structure determined. This process has improved communication between disciplines and provided for seamless delivery of care to high-risk mothers and infants.

---

## **The Influence of Medical Complications, Personal Characteristics, and Social Factors on the Growth of Extremely Low Birth Weight Infants**

*Alice S. Hill, RN, PhD, FAAN*

THE UNIVERSITY OF TEXAS MEDICAL BRANCH  
AT GALVESTON GALVESTON, TEXAS

The survival rate for extremely low birth weight (ELBW) infants (750–1000 g) has increased, however a decrease in the proportion of infants with severe sequelae is not yet apparent. Because of the morbidities associated with the sequelae, it is important to know the influence of certain factors on the growth of ELBW infants.

The purpose of this study was to determine whether at 6 and 12 months, (1) a combination of medical complications, personal characteristics, and social factors affect growth outcomes of ELBW infants; and (2) maternal factors influence infant growth.

A correlational research design was used to examine the dependent variables of weight, length and head circumference through chart review at 6 and 12 months corrected age. Seventy charts with complete growth data were selected for the study.

Logistic regression demonstrated that socioeconomic status, bronchopulmonary dysplasia (BPD), and length of stay in the neonatal intensive care unit were predictive of growth percentiles; however, gender, race, prenatal care, maternal age, and parity were not predictive of growth percentiles.

In conclusion, growth percentile can be predicted at 6 and 12 months, and the growth percentile may be related to the predictive variable.

---

## **A Story of a Successful Partnership: The Clinical Nurse Manager and the Clinical Nurse Specialist**

*Kim Irvin, APN/CNS, RNC-NIC*  
*Tina Edwardson, BSN, RNC-NIC*

EVANSTON HOSPITAL  
EVANSTON, ILLINOIS

Nursing units in today's health care environment are characterized by patients and families with complex needs. A strong unit foundation and leadership team is vital to support the nurses as they provide care. Two key players in the leadership of a unit can be the clinical nurse manager and the clinical nurse specialist. The poster will detail a successful partnership between these two roles in the daily operations of a Level III neonatal intensive care unit and how these two nurses can successfully complement each other and lead to a thriving unit. Unit projects in the areas of clinical practice, evidence-based practice, nursing education and professional development, and research will be described to demonstrate successful real life collaboration between these two roles. Projects to be highlighted include: review of the unit response to an increased rate of central line-acquired blood stream infections, the unit's transition to a closed suctioning system, planning and implementing the unit's yearly education plan, and overview of the unit's current nursing research projects. Outcomes including nurse satisfaction data and unit turnover rates will be described. Finally, a model highlighting the successful elements of this partnership and implications for these elements in nursing practice will be provided.

---

## **Implementing a Patient and Family-Centered Care Neonatal Nursing Practitioner Training Program within the DNP**

*Rosemary C. White-Traut, PhD, RN, FAAN*  
*Catherine Theorell, RNC, PhD, ANP, NNP*

UNIVERSITY OF ILLINOIS AT CHICAGO  
COLLEGE OF NURSING  
CHICAGO, ILLINOIS

The goal of the proposed training program is to create an advanced practice neonatal nurse practitioner specialty to the Doctor of Nursing Practice (DNP) at the University of Illinois at Chicago College of Nursing (CON). The neonatal nurse practitioners (NNPs) will be prepared within the framework of patient- and family-centered care (PFCC) to care for neonates, infants, and their families, particularly those in community-based referral centers serving rural and medically underserved areas. Our vision is to develop advanced practice NNPs who will lead interdisciplinary teams of providers in PFCC in Illinois, establishing a national model.

Currently, there is a paradigm shift in health care from a traditional hierarchical system-centered approach to a PFCC approach that encourages patients and families to partner with health care providers with the goal of improving outcomes. Educators of advanced practice nurses are compelled to create a training program that will prepare highly-skilled practitioners who are experts in understanding PFCC to guide practice and improve health care outcomes.

There is an enormous need to support families through the myriad of physical, psychological, spiritual, and economic changes associated with high-risk infant care, while supporting them in making complex and difficult decisions. DNP-NNPs fully trained in PFCC are well

suiting to partner with families while providing comprehensive, culturally appropriate, and coordinated health care to infants who are facing life-threatening acute or life-disabling chronic illnesses, and during end-of-life transition.

---

### **Using Conflict Resolution, Ethics, and Communication Skills to Enhance Excellence in Nursing Practice and Transform Unit Culture**

*Marianne Cummings, RN, MS; Martha Jurchak, RN, PhD;  
Judith Panzieri-Hill, RN, BSN;  
Sara Dickson, RN, BSN; Sarah Perreault, RN;  
Julianne Mazzawi, RN, MS  
Deirdre Green, RN, MS; Kathleen Murphy, RN, MS, PNP*

BRIGHAM AND WOMEN'S HOSPITAL  
BOSTON, MASSACHUSETTS

What is the relationship between the Code of Ethics for nurses and creating a healthy, respectful work environment? This poster shows our work in a Neonatal ICU to address this question. We describe the process of problem identification and naming; idea development and the connection to the Code of Ethics for Nurses; group work of forming and identifying the aims, skill development, and unit communication; and building the sustaining structures that have supported change. Key features included (1) early establishment of a working group on Conflict Resolution with open membership, (2) Developing guiding principles (e.g. "What you permit, you promote") to which we agreed to hold ourselves and each other accountable, (3) A staff survey to identify common issues, (4) Facilitated discussions to regularly debrief breakdowns in enactment of guiding principles, (5) Use of outside resources such as books, readings, and communication improvement seminars. We report quantitative and qualitative outcome measures of impact, including employee opinion survey data, environmental changes to improve staff satisfaction, and increased involvement and interest in conflict resolution group meetings. We offer narratives about how this work influences nurses' practice. Finally, we describe our sustainability work to maintain the changes we have enacted and describe the next steps in evolving the work.

---

### **Bedside Shift Report: A Strategy to Improve Communication, Patient Safety, and Parent Satisfaction**

*Lori King, MS, RNC-NIC;  
Nakia Green, BSN  
Finette Louis, MPH, RN*

ST. JOSEPH'S WOMEN'S HOSPITAL  
TAMPA, FLORIDA

Shift report is a valuable opportunity for nurses to share critical information related to patient care and progress. Traditionally, nurse-to-nurse report in the neonatal intensive care unit has consisted of a brief review of the infant's medical history followed by a retrospective of any events that occurred or tasks that were completed during the previous shift. Additionally, parental participation during change-of-shift report has long been markedly restricted, if permitted at all. Weaknesses in this conventional approach result in less than optimal outcomes: faulty communication, unrecognized patient safety concerns, and parent dissatisfaction.

Given the limitations of our previous practice, the NICU at St. Joseph's Women's Hospital has implemented the practice of bedside shift report. The report framework has been modified to ensure consistent transfer of relevant information using Situation-Background-Assessment-Recommendation (SBAR) format. At the bedside, the exchange between nurses allows for the opportunity to verify patient identification, perform a baseline assessment, and ensure the availability of emergency equipment. Parents now participate in the process by sharing information and assisting with decision making. Adopting this cultural change has been beneficial but challenging. Identification of early adopters, effective preparation of team members, and opportunities to role play helped facilitate the successful implementation of this project.

---

### **An Exploration of Moral Distress in the NICU**

*Jan Thape, MSN, RNC-NIC*

CHILDREN'S HOSPITAL OF THE KING'S DAUGHTERS  
NORFOLK, VIRGINIA

Moral distress as described by Jameton (1984) is a "psychologic disequilibrium"—when nurses are conscious of the morally appropriate actions but cannot carry them out because of obstacles. These may include cultural/societal values, lack of time, the medical power structure, and the pressure to control health care costs (Corley 2005). This "distress" contributed to a perceived "stressful work environment" causing staff dissatisfaction, frustration, anger, and ultimately the decision to leave nursing.

Our 72 bed NICU cares for not only critically ill term infants but also a large percentage of extremely low birth weight (ELBW) infants, especially those less than 750 g. We have recently experienced a "Perfect Storm"—a large turnover rate, an increase in hiring of inexperienced nurses, and a simultaneous peak in our census and acuity. Nurses verbalized, "It hurts my heart to come to work sometimes."

Mary Corley PhD, RN, developed a 32 item scale to measure the intensity and frequency of moral distress in ICU nurses. It has been used to assess moral distress in neonatal intensive care nurses. We used the tool to assess the scope and severity of moral distress experienced by our nursing staff.

Our moral distress intensity scores averaged 3.96—characterized as high intensity. The average moral distress frequency score was 2.98, a moderate frequency score. These scores indicate moral distress is a significant problem. We have convened a group to analyze the results and devise a strategic plan for ameliorating the distress.

These results can contribute to a profession-wide focus on strategies to prevent moral distress from becoming problematic.

---

### **Small, Rural Hospital Makes a BIG Difference**

*Christina Hughes, RNC-OB, ASN  
Peggy Findley, RNC-OB, MSN*

SCHNECK MEDICAL CENTER  
SEYMOUR, INDIANA

Schneck Medical Center is a rural, non-profit hospital located in Seymour, Indiana, between Indianapolis, Indiana, and Louisville, Kentucky. Prior to 2005, the county had limited Child Passenger Safety services available. Schneck Medical Center, in keeping with evidence-based practice, decided to create a Child Passenger Safety Program. Beginning with only two certified Child Passenger Safety Technicians,

Schneck has expanded to become one of the most comprehensive, multidisciplinary programs in Indiana with 23 technicians checking over 600 child restraints annually. It includes offering to check every newborn car seat prior to going home, providing a car seat checking station for the community, collaborating with other community agencies, performing car seat safety challenges for premature infants, and providing Car Seat Safety Technician classes for Schneck employees and others in Southern Indiana.

---

### **Ten-Minute Technology Talks: A Simple Strategy to Enhance Use and Comfort Level with Technology to Support Education, Research, and Practice**

*Annette Carley, RN, MS, NNP-BC, PNP-BC*

UCSF SCHOOL OF NURSING  
SAN FRANCISCO, CALIFORNIA

**Background:** Digital media literacy and non-traditional learning models are challenges facing educators today. Nursing educators are expected to transition to teaching methods that incorporate technology. Trends such as simulation-based and online learning require modified methods to address multiple expectations. Sufficient user support must be provided to establish proficiency with evolving strategies, though available resources may limit this support. Technologies can be used in education, research, and clinical practice. Strategies such as tablet computers and smartphones can enhance access, storage and transmission of data. Web/videoconferencing and content recording such as podcasting may enhance dissemination. Social media such as Facebook® can be used to support collaboration. Though users may feel motivated to use these strategies, they may feel inadequately prepared as well.

**Methods/Procedure:** This presentation showcases an approach to introduce and support technology-based strategies. A recurring agenda item was built into monthly faculty meetings. Faculty suggested topics and a core group was enlisted to showcase exemplars such as e-portfolios, audience response, and content capture.

**Outcomes/Conclusions:** This strategy has been well received by faculty, who will be surveyed to determine ongoing plans. It is anticipated that this support and development strategy can have wider application to intra-and-inter-professional colleagues to complement teaching, research, and clinical activities.

---

### **Evaluation of Knowledge Retention in Perinatal Nurses: Is Traditional Didactic Education or Self-Study More Effective?**

*Mindy Spencer, RNC-NIC*

*Jennifer Bradley, MSN, RNC-OB, FNP-C*

PHOEBE PUTNEY MEMORIAL HOSPITAL  
ALBANY, GEORGIA

**Purpose:** To evaluate knowledge retention of perinatal nurses and determine whether traditional didactic education or a self-study program is more effective.

This program was developed by perinatal outreach educators from a Level III regional perinatal center (RPC) to provide a comprehensive and robust training program geared toward the perinatal nurse. The program consisted of four nurses from a rural hospital with limited exposure to high-risk perinatal cases. Prior to beginning the program,

researchers assessed nurses' comfort in the perinatal setting utilizing a Likert-style, comfort scoring tool. To assess knowledge, a comprehensive test was developed covering perinatal nursing. In Phase I the participants were divided into two groups, one completing self-study modules and the other attending traditional, classroom-style didactic sessions. Both groups also participated in hands-on skills including simulation learning. Upon completion of 13 weeks of course work, the participants entered Phase II of the program, spending a total of 2 weeks clinical time at the Level III RPC, with outreach educators serving as preceptors. After finishing Phase II, nurses completed the post-test and comfort scoring tool. The increase in the average test score was identical in both groups. However, there was a significant improvement in comfort levels of the nurses completing the self-study modules as opposed to those completing didactic education.

---

### **Neonatal Nursing in China**

*Fei Hu, RN*

*Elizabeth Talaga, MSN, ARNP, RNC-NIC, CNS-BC*

BAO'AN MATERNITY AND CHILD HEALTH HOSPITAL  
SHANDS HOSPITAL AT THE UNIVERSITY OF FLORIDA  
GAINESVILLE, FLORIDA

The care of premature and sick infants in neonatal intensive care units in China is a relatively new phenomenon. Practices that are routine in the United States, such as the use of artificial surfactant and open parent visitation, are generally rare in the Chinese environment. Though there are some similarities in basic treatment and equipment, resources such as Pharmacy and Respiratory Therapy support and experienced neonatal nurses, are significantly more limited. There is little funding for advanced neonatal intensive care, and even in large centers where mechanical ventilation and total parental nutrition may be available, the cost is prohibitive for families.

Even with all of these limitations and challenges, there is a growing cadre of neonatal intensive care specialty nurses and physicians who are dedicated to improving care for small and sick infants. The purpose of this presentation is to discuss the current scope and cultural views of neonatal care in China, the similarities and differences between Chinese and American neonatal care, and the challenges facing neonatal nurses in their daily practice.

---

### **NICU International Nurse Fellowship Program**

*Elizabeth Talaga, MSN, ARNP, RNC-NIC, CNS-BS*

*Fei Hu, RN*

SHANDS HOSPITAL AT THE UNIVERSITY OF FLORIDA  
GAINSEVILLE, FLORIDA

The world is becoming a smaller place. A growing number of American nurses now travel extensively and participate in international mission programs, bringing the expertise of United States health care to underserved areas. However, there are fewer opportunities for international nurses who live in underserved countries to participate in health care programs in the United States.

Neonatal nursing in China is in its infancy. Resources, including experienced neonatal nurses, education, and leadership opportunities, are scarce. There is little exposure to the kind of advanced neonatal care that is routine in the United States though increasingly smaller and sicker infants in China are receiving this care. The NICU International Nurse Fellowship Program was designed to offer advanced education

and skill development to Chinese nurses who would then be able to affect the delivery of neonatal care in their own neonatal intensive care units in China. The Fellowship curriculum includes elements of clinical neonatal nursing care, research, quality improvement, and leadership development skills. The purpose of this presentation is to outline the components of this program and some challenges related to developing international professional relationships.

---

### **Effects of the Maternal Education Program for Immigrant Women on their Maternal Role Confidence, Parenting Stress, and on their Newborn Infants' Growth in Korea**

*Sanguen Oh, PhD, RN, KHN; Jinhee Lee, PhD, RN*  
CHONNAM NATIONAL UNIVERSITY  
KOREA

Immigrant women experience both difficulty in communication and cultural differences as well as feel emotional constraint after delivery in Korea. These experiences have negative effects on postpartum adaptation and child caring. This quasi-experimental study was performed to investigate the effect of a maternal education program for immigrant women on their maternal role confidence, parenting stress, and on their newborn infants' growth. Thirty primiparas and their infants (control group, n = 15 and experimental group, n = 15) from four hospitals in Korea, 2008, were enrolled in the maternal education program after giving informed consent. This program consisted of individual education and demonstrations using a booklet and CD. Teaching was done before discharge from hospital, at two home visits, and during four telephone counseling sessions after discharge from the hospital. The maternal role confidence was significantly higher and the parenting stress was significantly lower in the experimental group than in the control group. The newborn infants' weight, length, head circumference, and chest circumference were not significantly different between the control group and the experimental group. These results suggest that the application of the maternal education program improved maternal role confidence and decreased parenting stress. Therefore, the maternal education program for immigrant women can be used as an effective nursing intervention.

---

### **Delphi Survey of Risk Factors for Neonatal Skin**

*Debbi Vance, RNC-NIC, MSN*  
*Sharon Demel, MSN, CNS, RNC-NIC*  
*Kenn M. Kirksey, PhD, RN, MSN, ACNS-BC*  
*Karen Hollis, BSN, RN, CWON*  
*Vickie S. Simpson, MSN, BA, RN, CCRN, CPN, CPHQ*  
SETON HEALTHCARE FAMILY  
AUSTIN, TEXAS

Premature infants are at increased risk for skin breakdown and pressure ulcers because of the immaturity and fragility of their skin. According to Gray (2004), the few tools found in the literature for assessing a premature infant's skin are not reliable or valid. Part of the problem is that they are based on tools developed for the adult population. The development of pressure ulcers in children has been studied less than in adults, and has been studied even less in infants. A practical list of risk factors based on premature and newborn skin would guide bedside nurses to focus interventions on the infants at the most risk for skin breakdown. As a part of the development of a comprehensive

neonatal skin care package, the author conducted a Delphi study using bedside nurses, wound care nurses, and respiratory therapists caring for NICU infants as grassroots experts to develop a list of risk factors. The risk factors have been compiled into a neonate-based tool for skin risk assessment. The next step in this research will be to test the tool in several NICUs.

---

### **Staff Educational Interventions in Abating Noise in the Neonatal Intensive Care Unit**

*Ani Jacob, DNP, RNC-NIC*  
*Marilyn Lotas, PhD, RN*  
*Regina Spinazzola, MD*

NORTH SHORE LONG ISLAND HEALTH SYSTEM  
NEW HYDE PARK, NEW YORK

High noise levels in the neonatal intensive care unit (NICU) have long been identified as detrimental to the growth and development of preterm infants. Use of high-technology equipment in the NICU has created an environment with a high noise level. In addition, various human activities in the unit significantly contribute toward increased noise levels.

**Purpose:** To evaluate whether there is a reduction in the environmental noise levels in the NICU through a multifaceted educational program.

**Method:** A pretest-posttest methodology using the same sample was used to measure the noise levels in four NICU nurseries. Forty-six nurses participated in the study. Noise measurements were taken before and after the educational intervention.

**Results:** Lack of physical space was identified as the most common barrier in keeping the NICU quiet (>80 percent). The majority of the RNs (95 percent) indicated their intent to change practices that could then decrease NICU noise levels. There was no difference in the knowledge level of RNs and noise levels in the NICU before and after the educational session.

**Conclusion:** There was no significant decrease in decibel levels before or after the educational intervention. The NICU census was not comparable during the pre- and post-measurement period. This may have affected the findings.

---

### **Formation of the Sleep-Wake Rhythm of Low Birth Weight Infants Who Have Received Developmental Care**

*Tomiko Nakajima, RN, PhD*  
*Keiko Ohmi, RN*

JICHI MEDICAL UNIVERSITY, SCHOOL OF NURSING  
SHIMOTSUKE CITY, JAPAN

Developmental care has been implemented in NICU to support the development of low birth weight infants. However, the cause of a minor developmental disability after growth has been reported and it is necessary to identify a particular outcome. For this reason, the purpose of this study was to determine the formation of infants' sleep-wake rhythm, which is indicative of the outcomes of developmental care.

Continuous actigraphy monitoring was performed over a three day period on two infants who were 4–5 months corrected age. Cycle mesor (adjusted mean rhythm), amplitude (half of the total predictable change in rhythm), acrophase (phase of the vertices of the rhythm),

total sleep time (minutes), and percent sleep (%) were calculated and compared using one to three days of data.

As a result, the sleep-wake rhythm of low birth weight infants has been tuned to the surrounding environment with a 24-hour period. On the other hand, there are individual differences in diurnal variation that may need adjusting to the rhythm of daily life.

---

## The Change of Central, Peripheral, and Axillary Temperatures of Late Preterm Infants at Birth

*Kaoru Yachi, RN  
Keiko Shimada*

KANAZAWA UNIVERSITY HOSPITAL GRADUATE  
SCHOOL OF MEDICAL SCIENCES  
JAPAN

**Purpose:** To review the present care of controlling the body temperature by measuring the axillary temperature of an infant. The measurement of central, peripheral, and axillary temperatures was made to identify the neutral-thermal environment of the late preterm infant at birth.

**Method:** The measurement of central, peripheral, and axillary temperature of six late preterm infants at 4–12 hours after birth was made. Abdominal and foot temperature was collected every minute, and axillary temperature was measured every 2–3 hours. Data were analyzed by its means and standard deviation, and the patterns of temperature change for each infant was visually analyzed.

**Result:** The axillary temperature was 36.6–36.9°C (mean 36.8°C), central temperature was 36.90–37.18°C (mean 37.10°C). Strong correlation ( $r = 0.75–0.99$ ) was seen where central temperature was 0.3°C higher than the axillary temperature. The temperature difference was diverse among infants, ranging 0.47–1.87°C. The widest difference was seen in the case of asphyxia.

**Conclusion:** 1. The central temperature was 0.3°C higher than the axillary temperature. 2. The central and axillary temperature had a strong correlation. 3. The central and peripheral temperature difference was wider in an infant born with asphyxia, suggesting that it was due to the developed peripheral vasomotor tone of the late preterm infant.

---

## Use of a Micronutrient Containing Skin Barrier Paste Thickened with Silicone and Zinc Oxide, to Manage Damaged Pediatric Skin

*Roxana Reyna, BSN, RNC-NIC, WCC  
Qing Yu Christina Weng, BS*

DRISCOLL CHILDREN'S HOSPITAL  
CORPUS CHRISTI, TEXAS

**Disclosure:** Ms. Reyna is a consultant for Medline Industries, Inc. on pediatric and neonatal skin and wound care.

Infants are vulnerable to skin damage due to their thinner epidermis, frequent cleansing, and diaper use. Barrier preparations protect infant skin against friction, moisture imbalance, and other environmental factors, allowing natural maintenance of skin health. Barrier formulations derive their protective properties from petrolatum, which provides hydrophobicity. In state-of-the-art formulations, silicones and zinc oxide are used as medical grade viscosity enhancers to retain product. This IRB-approved study investigates the safety and efficacy of a micronutrient-containing barrier used on the pediatric perineal region when skin damage is particularly severe.

Clinicians assessed the skin condition of 11 pediatric patients in an acute care setting during each diaper change. Evaluations were made according to a standardized erythema scoring scale from 0 (normal) to 4 (non-intact). Pain was assessed as described in the Premature Infant Pain Profile (PIPP) and/or CRIES criteria. The evaluation period ranged from 2 to 14 days, with one subject withdrawn due to worsening condition. Out of the patients treated with the barrier, 82 percent experienced return to normal skin. Regression analysis was performed on 13 cases of use, and patients showed on average a 1 level drop in erythema score for every 1.8 days of treatment. These results suggest the product is safe and effective for use on pediatric skin.

---

## Revamping NRP Using Project Management Principles

*Ruth Fulton, RNC-NIC, RNC-MNN, IBCLC  
Constance Remmer, MSN, ARNP, CPNP, RNC-NIC*

SHANDS AT THE UNIVERSITY OF FLORIDA  
GAINESVILLE, FLORIDA

As NICUs across the country have begun to implement revisions to the Neonatal Resuscitation Program, there have been significant shifts in education processes and costs related to new testing practices and debriefing requirements. While smaller hospital programs may have been more able to adapt quickly and very large programs may have had more central resources, our mid-sized, University-based, perinatal program struggled to find adequate resources and strategies to make the meaningful program changes that were required.

To meet this challenge, we used a standard Project Management process to help with identification of realistic goals, program costs, barriers to program implementation, and resource management. As a result of this project process, we have been able to successfully provide an improved comprehensive and integrated program for all of the perinatal areas involved, while increasing our quality indicators for staff and instructors.

---

## Disaster Preparedness: Emergency Planning in the NICU

*Pamela Phillips, RNC-NIC, MSN*

GOOD SAMARITAN HOSPITAL  
SAN JOSE, CALIFORNIA

Several natural disasters and terrorist events in recent history have captured the attention of hospitals and government agencies. Examination of healthcare response plans following these events revealed unsettling patterns of disorganization and weaknesses that may delay response times and result in increased morbidity and mortality, especially in vulnerable populations.

As a result, several tools and resources have been developed to support hospitals in emergency preparation. However, these tools are most often prepared by emergency planning personnel with the goal of satisfying requirements of regulatory agencies. Little planning incorporates the expertise of the bedside nurse in the hospital unit. Clearly, hospital emergency management must evolve beyond simply satisfying regulatory requirements. However, there appears to be a scarcity of resources to guide individual hospital departments.

Good Samaritan Hospital has developed a plan to address this inadequacy in hospital emergency planning, which includes the creation of

a mobile emergency system and an Emergency Operations Plan (EOP) template. This system incorporates the development of emergency bedside backpacks, mobile disaster boxes, and a disaster documentation and forms go-kit. A multidisciplinary approach as well as ongoing equipment testing, inventory rotation, staff training, and exercising are all crucial to the effectiveness of this program.

---

### **Late Preterm Infants: Providing Evidence-Based Care from the Nursery to the Outpatient Office**

*Patricia Newell-Helfant, RNC, MS, CPNP*

*Heather Keller, RN, MSN*

ST. PETER'S HOSPITAL

ALBANY, NEW YORK

The rise in late preterm infants in our healthcare system has our Women's and Children's Division challenged to decrease the rate of late preterm infants delivered for non-medical reasons. The maternal side instituted a strict policy on elective deliveries prior to 39 weeks. The Neonatal QI committee needed to look at opportunities for improvement in our outcomes in this population. Despite standardized physician orders, we noticed that there were inconsistent practices among our provider staff concerning which newborns went to the nursery or transferred to the NICU for care. There was misunderstanding among staff members and families in regard to the newborn that went to the nursery being treated as a "Well Baby." The previous practice was to try the nursery and if problems arise transfer to the NICU.

The nurse-led interdisciplinary team analyzed the literature and developed a practice guideline that provides a consistent plan of care for these newborns. This care plan is communicated to our pediatric clinics for infant follow-up.

Parent education was crucial in the success of our program because the late preterm infant will require more pediatric visits due to potential complications.

---

### **Team-Based Process Improvement to Decrease Caesarean Section Infections**

*Jane Lamp, MS, RN-BC, CNS*

*Marcia Waibel, MBA, MT, CIC*

RIVERSIDE METHODIST HOSPITAL

COLUMBUS, OHIO

**Issue:** In late 2010, a multidisciplinary team was assembled to investigate an increase in caesarean section infections and make recommendations for process improvement through infection prevention measures.

**Project Description:** Representatives from all aspects of Women's Health (including Labor & Delivery and the mother/infant Family Care Unit), Quality and Patient Safety, and Infection Prevention used a combination of the 7-Step Process and Lean Six Sigma to identify opportunities for improvement in preventing caesarean section surgical site infections. Current State Process mapping was performed to highlight and define gaps in consistent patient care. Standard Work was developed to help standardize practice and eliminate variation among caregivers. Summary recommendations were then made to the sponsoring committee and all stakeholders. Finally, ongoing process and outcome metrics were defined to measure project success and maintain improvements.

**Results:** After implementation of standardized practice and additional infection prevention measures, the caesarean section infection

rate for calendar year 2011 dropped to 0.49 per 100 procedures, a 45 percent decrease from the 2010 infection rate of 0.88.

**Lessons Learned:** Standardizing patient care is key to the prevention of surgical site infections. The caesarean section patient population is particularly challenging, as these surgeries are often unscheduled and sometimes emergent procedures that do not always allow for lengthy pre-surgical interventions. In addition, sustaining the improvement is often more challenging than the initial project launch. Process and outcome measures are vital tools to measure normalized deviance from standard practice.

---

### **Stork Support: A Hospital-Based Program to Navigate Women through Pregnancy**

*Emily Hirsch, MSN, MHA, RNC-NIC*

*Megan Fisher, BSN*

*Rhonda Lewis, RNC-MNN*

UPMC HAMOT WOMEN'S HOSPITAL

ERIE, PENNSYLVANIA

**Introduction:** Stork Support provides women with comprehensive and evidence-based education during the antenatal and postnatal periods. Mother/Baby nurses provide guidance related to pregnancy, infant care, and post-partum care. A minimum of five contacts are made through 1:1 conversation and support. Women are encouraged to make informed decisions about topics such as: elective induction, labor management, infant care, and breastfeeding.

**Methods:** Program objectives were developed, key team members identified, and program design was created. Program objectives: reduce smoking pre/post pregnancy, increase breastfeeding rates, decrease low birth weight rates to 7 percent among program enrollees, and enable women to make informed decisions. Additional objective added November 2011: Decrease the number of elective deliveries prior to 39 weeks gestation.

**Outcomes:**

- 564 women enrolled
- 15 of 20 smokers reduced or quit smoking.
- 98 percent breastfed
- 5 percent of infants born with low birth weight <2,500 g.
- 100 percent of the women stated that the program assisted them in making informed decisions

**Conclusion:** The program has influenced women to make healthy choices during pregnancy as reflected in the outcomes.

**Next Steps:** Ongoing data collection to monitor pregnancy outcomes. Measure the number of elective deliveries prior to 39 weeks gestation.

---

### **Navigating the Road to OB/Neonatal Simulation Team Training**

*Nellann Nipper, RNC, NNP-BC*

*Cheryl Moore, BSN, RNC-OB*

UPMC HAMOT WOMEN'S HOSPITAL

ERIE, PENNSYLVANIA

With the completion of a new onsite Perinatal Simulation Lab in our Women's Hospital, we now had the opportunity to develop OB/Neonatal simulations to improve team communication and technical and behavioral skills necessary in a crisis situation. The real challenge for

us was to determine which emergency drills to replicate as a simulation, which provided realistic emergency response with defined responder roles that mirrored our institutions policies, procedures and standards of care. We needed to define the objectives, performance measures and necessary competencies and skills required for each simulation. One of the most important aspects was focusing on teamwork among staff members to promote appropriate decision making, define leadership and to improve communication skills to ensure positive patient outcomes.

---

### **Third Time is a Charm: Finally!! Successful Transition to Couplet Care**

*Rhonda Rychlik, RN, BSN*

NOVANT HEALTH-PRESBYTERIAN HOSPITAL  
CHARLOTTE, NORTH CAROLINA

Since its origin in the early 1900s, the design for patient care had been traditional postpartum nurses taking care of mothers and nursery nurses taking care of infants. Once in 1989 and again in 1996, the transition to couplet care was attempted. The first attempt lasted only 3 days and the second, 2 months. Then in 2008, in an effort to follow evidence-based practice, a magical journey began. With an understanding of the commitment needed to succeed, the nurse manager and a team of nurses began planning. Change is hard and there were many challenges with physicians and senior nurses. Not only was the model of care going to change but the culture on the unit had to change as well. A team of staff members visited five hospitals over the next year that were successfully practicing mother baby nursing. Discussions and planning began at the unit level with staff and physicians through shared governance. After 18 months of cross training and many pilots, couplet care began March 2011 and is continuing to grow stronger. We have experienced higher patient and staff satisfaction scores as a result. Early employee engagement, planning, communication, and collaboration were the keys to success.

---

### **Creating a Magnet Mother Baby Unit: Engaging Staff and Patients in Redesign of a New Postpartum Inpatient Unit: Discovering Great Accomplishments and Lessons Learned**

*Julie Tagi, RN, BScN, MN*

*Raylene Macleod, RN, BScN, IBCLC, PNC(c)*

*Dina Da Rosa, RN, BScN*

*Susan Guest, RN, MN, IBCLC, LCCE*

MOUNT SINAI HOSPITAL  
TORONTO, ONTARIO, CANADA

As a tertiary hospital in downtown Toronto with approximately 7000 births/year, the hospital has undertaken the redevelopment of a new Women's & Infants Health Center of Excellence through an expansion of a six story addition onto our existing building while still remaining operational. Our new Mother & Baby Unit moved into its new location only four weeks ago and it has been a tremendous success. This poster will highlight the engagement model used to optimize staff and patient engagement in the redesign of the space, the advantages in redesign using a bottom-up approach aligned with Magnet principles, and the tangible benefits seen in spatial design and process mapping. The engagement continued

throughout the design phase into the transition phase to amending processes post-move and developing unit council forums to turn concerns into strategies for success. Lessons learned will also be shared to alert those planning or undergoing redevelopment to continue optimizing the design and planning of postpartum inpatient units. Preliminary pre-occupancy and post-occupancy data will also be shared to evidence the success of the engagement model in the design of this new space.

---

### **Creating a Win-Win Solution: Optimizing Family-Centered Care while Decreasing Length of Stay**

*Julie Tagi, RN, BScN, MN*

*Raylene Macleod, RN, BScN, IBCLC, PNC(c)*

*Dina Da Rosa, RN, BScN*

*Susan Guest, RN, MN, IBCLC, LCCE*

MOUNT SINAI HOSPITAL  
TORONTO, ONTARIO, CANADA

This poster presentation will provide an overview of one of the creative solutions used to decrease patient length of stay for mother and baby while optimizing family-centered care and facilitating best practice in the care of the mother baby dyad. As a hospital that delivers approximately 7000 babies a year, our tertiary Women & Infants' Center of Excellence had one of the highest "length of stay" in the greater Toronto area. The "Care by Parent" model has decreased our length of stay considerably for postpartum mothers, while ensuring that the mother infant dyad is not unnecessarily separated when the infant's stay is extended for medical reasons. This collaborative, inter-professional approach was very successful at many key metrics. This poster presentation will provide an overview of the model, challenges and benefits that the team has overcome at implementing this model, and the positive metrics measured post implementation of the care by parent model. It also demonstrates successful collaboration across the hospital and has enabled families to stay with their infants, at a critical time of transition as a family.

---

### **An Unusual Journey for Patient Safety: The Partnership between a Level I Community Hospital and a Level III Birthing Center**

*Mary Haynes, RNC, BSN*

*Connie Garrison-Isler, MSN, RNC-LRN, NE-BC*

*Linda Newhouse, MSN, RNC, WHNP*

*Alicia O'Mealia, RN, BSN*

GRADY MEMORIAL HOSPITAL  
DELAWARE, OHIO

A small community hospital identified several opportunities to improve patient outcomes in the obstetric population. They worked in collaboration with their health care system's Level III birthing center to standardize nursing practice and improve patient outcomes. This collaborative effort brought the experience and resources of the Level III facility into the community hospital.

The first step in merging these programs was to standardize nursing education and validate nurse competency. To assure compliance, policies and procedures were reviewed with those used at the Level III facility and with maternity licensure requirements. Remote monitoring

was put in place to enhance peer review and peer coaching. Nursing staff from the Level III facility provided mentoring during night shift at the Level I facility. Staff nurses at the community hospital rotate on a quarterly basis to the Level III facility gaining experience in higher acuity patients. A multi-disciplinary committee from both facilities meets monthly reviewing all high-risk patients seen at the community hospital.

As a result of this collaboration, assessment of the high-risk patient has improved. Communication between all disciplines has been enhanced. Associate, physician, and patient satisfaction has increased. Ultimately, there has been no sentinel or serious safety events.

---

### **Crossing Boundaries: Breastfeeding in the OB PACU**

*Janice Moryc, BSN, RNC, IBCLC*

*Catherine Phillips, MSN, RNC-OB*

*Bonnie Desko, BSN, RNC-OB*

*Katherine Nick, BSN*

*Karen Walker, RNC-MNN, IBCLC*

UPMC HAMOT MEDICAL CENTER

ERIE, PENNSYLVANIA

Women delivering by caesarean section may experience prolonged separation from their newborns, resulting in delayed breastfeeding. Exclusive breastfeeding in the hospital is a perinatal core measure with expectations that exclusivity numbers will increase. The Baby-Friendly Hospital Initiative's steps to successful breastfeeding, lists breastfeeding within the first hour of life as one of the steps having the greatest influence on breastfeeding.

Prior to implementation of this initiative, policies and staff attitudes that were barriers to early breastfeeding were identified. Providing evidence-based breastfeeding education specific for staff, and consideration of the operating and recovery room environment were key to change processes. Physicians received information, and gave support. Patient-focused care was "championed" by nurses and anesthesiologists. Nurses prioritized bonding in the OR from tasks that could be deferred. Lactation staff was utilized for breastfeeding challenges.

---

### **The Birth Experience is Influenced by Culture, with Supportive Care being Crucial for Birthing Women: From a Comparative Study Between Japanese and U.S. Primiparas**

*Ryoko Hidaka, RN, CNM*

PREFECTURAL UNIVERSITY OF HIROSHIMA

HIROSHIMA, JAPAN

**Purpose:** The purpose of this study is to compare birth experiences using epidural analgesia (EA) among Japanese and American primiparas to determine if cultural differences influence the quality of it.

**Methods:** This is a qualitative descriptive study applying a phenomenological approach. Thirteen Japanese and nine American primiparas participated in this study. Their interviews were thematically analyzed.

**Results:** Common themes for both: relief from pain and suffering, overall satisfaction due to good birth outcomes, and supportive care

from health care providers. Additional themes unique to Japanese women: experiencing little or no labor pain; enjoying the birth process; and thoughts about the traditional meaning of labor pain. Additional themes unique to U.S. women: the experience of tolerating labor pain and being rewarded with feelings of overwhelming joy, and being left with unsettled feelings around aspects of the experience.

#### **Conclusions:**

- EA provided relief and overall satisfaction.
- The timing of EA might have contributed to the quality of the birth experience.
- Some Japanese women feel ambivalence toward the use of EA because of the traditional meaning of labor.
- Some U.S. women feel ambivalence toward the use of EA because they might have done without it.
- Supportive care is crucial in both countries.

---

### **Safety First: Assuring Newborn Stability**

*Trisha Garner, RN, BSN, MHA*

*Tracy Hicks, RN*

*Angie Mauck, RN*

*Michelle Lamacchia, RN*

THOMASVILLE MEDICAL CENTER

THOMASVILLE, NORTH CAROLINA

Immediately following delivery is an optimal period of time for mothers and newborns to develop a closer attachment with one another through skin-to-skin contact. Although there is sufficient research regarding the importance of early bonding, our 28-bed Women's Center did not have a policy to indicate a time-frame for newborns to remain with their mothers post-birth to promote this time of connection while maintaining the best thermal environment for the newborn.

In July 2011, our Women's Center launched an initiative to promote bonding and to prevent newborn temperature instability during the bonding period by setting a goal that 90 percent of newborns will be assessed within 2 hours of delivery. Our plan involved establishing criteria for identifying newborns at an increased risk, education of staff around early bonding, and implementation of a 30-minute of age vital sign check and visual assessment.

In September 2011, compliance with newborn nursery admission assessment increased from 20 percent to 90 percent. We attribute these results to increased staff awareness of the importance of early contact with the mother and recognition of and interventions for newborns at increased risk.

---

### **The Late Preterm Infant**

*Lori Satran, RN, BSN, MS-L, IBCLC*

SCOTTSDALE HEALTHCARE MEDICAL CENTER

SCOTTSDALE, ARIZONA

Late preterm (LPT) infants are born at a gestational age between 34 weeks and 36 weeks 6 days. They have higher morbidity and mortality rates than term infants due to their relative physiologic and metabolic immaturity. By identifying the late preterm infant as a group that is at risk, we can provide them with quality and appropriate care.

Educating all OB/NICU/Peds staff regarding the risk factors associated with late prematurity we work to prevent readmission to the hospital and/or extended hospital stays. In November 2007, the journal, *Pediatrics* contained an article identifying these babies at greatest risk. They were called up until then “near term” meaning they were like term but smaller. Using a multidisciplinary approach, we created specific order sets, feeding guidelines, and parent and staff teaching directed toward these late preterm infants not requiring a NICU stay. Over the last 5 years, 9.48 percent of all infants born at SHC-S were late preterm. Of those infants, 78 percent never went to the NICU and remained on Couplet Care until discharge. Since the inception of the LPT initiative in 2008, we have decreased the readmission rate to our Pediatrics department by 45 percent. LPT infants are physiologically and metabolically immature. Their brains weigh only 2/3 of what a term newborn’s brain will weigh at 40 weeks gestation. We have satisfied our short term goals for readmission; but in 2011, 20 percent of the OT/PT/Speech caseload was LPT infants and children receiving therapies for language delays, feeding issues, sensory integration/modulation. Of that 20 percent, 60 percent of the LPT infants never went to the NICU and remained on Couplet. Does a NICU admission provide a cocooning effect?

---

### **Newborn Screening: A Lifetime of Impact from a Simple Heel Stick**

*Meagan Widener, RNC, BSN  
Lauren Fogel, RNC, BSN*

NOVANT HEALTH-FORSYTH MEDICAL CENTER  
WINSTON-SALEM, NORTH CAROLINA

Newborn screening (NBS) is state-required testing in which blood is collected and analyzed for genetic, metabolic, and hormonal disorders. If a disorder exists, interventions can be initiated to facilitate healthy growth and development for the infant. Even though the nurses in our Mother/Baby unit were knowledgeable about guidelines regarding NBS, errors in specimen preparation, collection, and submission still existed. These errors contributed to health care costs and delayed the detection of diseases. Earlier in 2011, our specimen rejection rate was 2.5 percent.

To improve our ability to follow evidence-based guidelines, our nurses were required to complete the NC State Laboratory of Public Health online training. A select team of nurses became experts in NBS. These nurses were provided with additional education on common mistakes when performing collections. New practices were implemented for collecting blood, for collecting guardian demographic information, and for drying the filter paper.

After implementing new measures, we conducted a three-month trial of new processes. Of the 1,297 samples sent to the State Laboratory, only three were rejected (0.23 percent), a 10 percent positive improvement from our previous rate.

The results of a properly collected NBS can save an affected newborn from lifelong disability, mental retardation, and sometimes death.

---

### **“Our Baby or Our Dog?! Can’t We Keep Both?” or “You Better Get Rid of that Cat Before it Suffocates Your Baby!”**

*Barbara McClaskey, PhD, APRN-CNS, RNC*

PITTSBURG STATE UNIVERSITY  
PITTSBURG, KANSAS

Pets have been shown to be of value to adults and children in regards to physical, social, and emotional benefits and the majority of households in the U.S. include at least one pet. However, there are some risks that may be associated with pets. There may also be rumors regarding pets and babies that should be discussed, such as the belief that a cat could suffocate a baby. The abstract will present information on how to prepare the family pet for a new baby. The importance of planning ahead including addressing how the other family members relate to the pet, desensitizing the pet to sounds and smells of a baby, considering whether the pet’s sleeping arrangements or litter box need relocated, and whether plans for feeding, care, or exercise of the pet will need altered. Information on the well-being of the pet and signs of stress will be addressed. Health and disease concerns will be included. The poster will provide an overview of information that should be provided to pet-owning parents as they prepare to take their newborn home. Information on a resource from the American Humane Association will be provided.

---

### **Retaining the Mother Baby Nurse: Beyond the Impossible Dream**

*JoAnn Lionarons, BS, RNC-OB, C-EFM  
Janice Miller, RNC, C-EFM*

ALBANY, NEW YORK

You can enter almost any nurses’ station in today’s health care environment and hear negativity, frustration, and moral distress from the nurses. This environment has devastating effects on patient care, patient safety, and recruitment and retention of staff, to name a few. The catalysts for this behavior are noted as: lack of true collaboration, inappropriate staffing, unskilled communication, ineffective decision making, lack of meaningful recognition, and poor leadership. All of these factors have a direct effect on patient satisfaction. As a nurse manager, it was my goal to defy the odds and create an environment in which everyone can thrive and achieve satisfaction. This takes a tremendous amount of courage, and commitment to respecting each and every person we serve—including employees.

We implemented the AIDET\* observation tool as a primary step of customer service and the Studor principles. We created a perinatal educator position to serve as a mentor to all staff. The creation of a comprehensive orientation folder has also shown tremendous value for new orientees.

The outcome of this project on patient satisfaction has proven its worth as demonstrated by the NRP Picker scores and Nurse Retention rates on this Mother/Baby unit which will be shared.

\* AIDET is a framework for staff to communicate with patients and their families as well as with each other. It stands for: Acknowledge, Introduce, Duration, Explanation, Thank You