Newborn Care

A Pilot Project to Improve Neonatal Peripheral Intravenous Site Assessment and Documentation

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Paper Presentation

Purpose for the Program

There is currently no consistent protocol described in the literature for documentation of the nursing assessment of neonatal peripheral intravenous sites. Most authors concur that hourly assessments are the minimum frequency and indicate what the assessment parameters should be; however, they do not discuss a protocol for documentation of the assessments. Multiple authors and professional nursing groups have identified that problems exist in the care of peripheral intravenous sites in neonates. This project attempted to determine if nurses in a neonatal intensive care unit (NICU) could conduct and document an hourly evidence-based focused assessment of neonatal peripheral intravenous sites.

An additional purpose of the project was to obtain input from direct care nurses before initiating a change in practice. Critical care nurses perform multiple hourly assessments and care interventions on each patient. Additional documentation of five measurement parameters may not be realistic to add to the workload of the direct care nurse. By having the nurses who participated in data collection provide feedback regarding the complexity or simplicity of the instrument, they were able to evaluate the potential value of the process and the instrument to their care.

Proposed Change

Many NICUs use a system of charting by exception for assessment of peripheral intravenous sites in neonates. This project introduced a documentation form that includes the five evidence-based parameters to indicate the status of the peripheral intravenous sites. It attempted to determine if an instrument on which to document the assessment was relevant to the practice of the NICU nurses providing care. The project also determined the time needed to perform and document the peripheral intravenous site assessment and if that time was considered reasonable by the NICU nurses providing care.

Implementation, Outcomes, and Evaluation

The documentation form was piloted in a large suburban NICU. The short-term goal of this pilot project was to determine if the instrument on which to document the assessment and the time to perform and document it was deemed reasonable by the nurses providing care. The nurses are still participating in the pilot project. Early data suggest that the tool may be helpful but nurses are unsure if all of the parameters are necessary for an adequate assessment.

Implications for Nursing Practice

It is hoped that this project will stimulate further study of the individual assessment parameters to determine if any or all of them in a tool format are valid and reliable in predicting infiltrations and extravasations, which would be useful in improving patient outcomes.

The Great Pretenders: Utilizing Evidence-Based Practice to Optimize Clinical Outcomes for the Late Preterm Infant

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Purpose for the Program

The late preterm infant faces many challenges associated with prematurity. In 2010, 99 late preterm infants (approximately 5% of the total birth volume) were born at Peninsula Regional Medical Center. Nearly 29% of these infants were admitted to the neonatal intensive care unit (NICU), and 12.8% were readmitted to the pediatric unit for complications associated with prematurity. The purpose of this program was to determine if adopting an evidence-based model of care utilizing the Association of Women's Health, Obstetric and Neonatal Nurses' Assessment and Care of the Late Preterm Infant Guideline will improve clinical outcomes and reduce late preterm infant neonatal intensive care unit admissions and readmissions to the pediatric unit.

Proposed Change

To adopt, institute, and practice Association of Women's Health, Obstetric and Neonatal Nurses' (AWHONN) clinical guidelines for every infant born between 34.0 and 36.6 weeks of gestation at Peninsula Regional Medical Center.

Implementation, Outcomes, and Evaluation

Data collection took place over a 6-month period to determine baseline rates of hypothermia,

hypoglycemia, respiratory distress, feeding difficulties, phototherapy, excessive weight loss, neonatal intensive care unit admissions, and readmissions to the pediatric unit. A multidisciplinary team developed the late preterm infant initiative utilizing AWHONN's clinical guidelines. Components of the initiative included policy and order set development, predelivery and predischarge education, and individualized feeding plans. Beginning March 22, 2011, all late preterm infants were admitted to the intermediate care nursery and cared for with a nurse-to-patient ratio of 1:3 to 4. All aspects of the clinical guidelines were utilized based on the individual needs of the infant. Data collection on these infants began May 1, 2011.

To date, 31 late preterm infants have been cared for under the new initiative. Eight of these infants were subsequently admitted to the neonatal intensive care unit (25.8%), and no infants were readmitted to the pediatric unit. The overall goal is to improve clinical outcomes while reducing admissions to the neonatal intensive care unit by 10% and readmissions to the pediatric unit by 5%, as compared with the 2010 rates.

Implications for Nursing Practice

As the primary bedside caregiver, nurses are extremely vested in their patients' outcomes. This initiative has led to an increased staff awareness of this population, their unique needs, and the challenges they face. This knowledge, coupled with the utilization of evidence-based care, translates into improved clinical outcomes for the late preterm infant. This initiative also has improved teamwork and communication and has fostered relationships between nurses and other health professionals. Family-centered care is at the core of obstetric nursing as well as this initiative. Providing care that enhances family bonding, empowers parents, and improves clinical outcomes increases patient and nurse satisfaction. In this era of rising health care costs and nonreimbursement for preventable readmissions, it behooves nurses to adopt practices that anticipate and prevent possible sequelae related to late prematurity.

Tackling Newborn Hypoglycemia in the Delivery Room: Utilizing Colostrum, Skin to Skin and State of the Art Policies

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Purpose for the Program

Newborn hypoglycemia in the delivery room is a widespread challenge. Most often infants who are breastfed and are temporarily separated from their mothers receive formula as a quick fix to increase blood glucose levels. This approach not only decreases breastfeeding success, but it also exposes the newborn to unstable levels of glucose because of the formula's stimulation of insulin production. Too many infants who are breastfed receive excessive amounts of formula within the first hour of life because their glucose values are checked before feeding, as soon as 15 to 30 minutes after birth. After witnessing a 40-minute-old newborn receive 40 ml of formula for a glucose level of 40, then promptly vomit, gag, and turn dusky, I decided it was time to act on my concerns that something was out of balance regarding the blood sugar/feeding issue.

Proposed Change

To attain stable glucose levels in babies who are breastfed by giving infants drops of colostrum, feeding them before labs are checked, and keeping them in continuous skin-to-skin contact. I had recently become an international board certified lactation consultant, and that new level of knowledge, coupled with my nursing experience, prepared me well for presenting my ideas to the administration. I also proposed that we establish ways to give colostrum to babies who were not ready to latch effectively. I wanted to rewrite the existing breastfeeding policy, have nurses adhere more vigilantly to our skin-to-skin policy, write a policy on prebirth hand expression of colostrum, and be a driving force to change many of the parameters of the newborn hypoglycemia algorithm.

Implementation, Outcomes, and Evaluation

We have successfully implemented a new hypoglycemia algorithm that accepts lower glucose values initially, has the newborn feed first, and then the first glucose level checked by 90 minutes of age. We have implemented widespread hand expression of colostrum, before and after childbirth, for all of our diabetic patients who are breastfeeding, and we have maintained continuous skin-to-skin contact as a norm. The outcomes to date have been a decrease in separation of the mother and baby, higher newborn glucose levels, higher patient satisfaction, and better success of breastfeeding.