

Poster Session II
#9

Pain Management of Ventilated Premature Infants through Regular Reassessment Policy in the Neonatal Intensive Care Unit (NICU) – Reconsidering Practice

Annie J. Rohan, PhD, PNP/NNP-BC, Columbia University, Stony Brook, NY ~ Mary W. Byrne, PhD, MPH, NP, FAAN, Columbia University, New York, NY

Purpose: Premature infants endure hundreds of painful procedures during initial NICU hospitalization. Analgesics have demonstrated effectiveness in reducing pain scores. The Joint Commission standard requiring hospitals to provide regular reassessment to improve the detection and treatment of patient pain is typically implemented in NICUs through pain assessment scheduled with recording of vital signs. This study evaluates the association of frequency and treatment of procedural pain in ventilated premature infants with pain scores assessed under a regular reassessment policy. Framework: Imogene King's "Theory of Goal Attainment" provides a framework to consider the goals of effective pain management, the function of the nurse in achieving these goals, and direction to improve the quality of pain management practice.

Methods: After IRB approval, retrospective chart review was conducted for all premature ventilated infants during ten 24-hour periods in one tertiary care NICU. Neonatal Pain, Agitation and Sedation Scale (N-PASS) scores were assessed at eight scheduled times a day. This 5-item, 10-point scale includes behavioral measures and one gestational age component. Frequency and types of painful procedures, analgesic use, and pain scores were recorded and data entered into PASW 18 for descriptive and correlational analysis.

Results: Convenience sample comprised 64 ventilated premature infants with mean gestational age 28.3 wks, mean birth weight 1219 grams, mean age at data collection 15 days. Data included 503 pain scores (mean 8/patient day) and 451 painful procedures (mean 7/patient day). Correlation for frequency of painful procedures and average total daily pain score was weak and non-significant ($r=0.147$; $p=0.246$). The few elevated pain scores ($n=11$; 1.4%) were not significantly associated with analgesic administration ($p=0.5$ by Fisher's Exact test). No analgesic was administered in 84% of patient days ($n=53$) during which 81% of the painful procedures occurred ($n=364$).

Conclusions: Pain scores acquired with regular reassessment do not capture exposure to procedural pain. Scheduled pain scores were rarely elevated, and elevated scores were rarely associated with analgesia. Many painful procedures continue to occur in NICU without analgesia. Further research is indicated to explore the limited utilization of analgesics in NICU despite their availability as well as NICU pain assessment policies.