

**BIG SURGERY, LITTLE PAIN: PARTNERING WITH PATIENTS TO MINIMIZE TOTAL
KNEE ARTHROPLASTY POST-OPERATIVE PAIN**

Primary Investigators: Toni Milne, RN, CPAN, Teresa Cook, RN

Texas Health Huguley Hospital, Fort Worth, Texas

Co-Investigator: Tammy Chastain, CRNA

BACKGROUND INFORMATION: Adult patients who received a total knee arthroplasty (TKA) experienced inadequate pain management with titrated intravenous opioids post-operatively in the Post Anesthesia Care Unit (PACU). Patients required heavy dosing at frequent intervals to achieve minimal pain relief and these interventions were deemed ineffective.

OBJECTIVES OF PROJECT (PICO): In patients who receive a total knee arthroplasty, will the use of single injection peripheral nerve blocks, compared to titrated intravenous opioids, effectively manage immediate post-operative pain?

PROCESS OF IMPLEMENTATION: An EBSCO search of orthopedic, peri-anesthesia, and perioperative journals was completed. A review of the literature on pain management strategies for TKA surgeries recommended the utilization of peripheral nerve blocks. PACU nurses and anesthesia providers collaborated to facilitate the administration of single injection peripheral nerve blocks in the PACU setting, post TKA. Interval data was collected on all patients who received a TKA during July and August of 2014 using the 0-10 Numeric Pain Scale. Patients evaluated their pain levels before and after peripheral nerve block administration.

STATEMENT OF SUCCESSFUL PRACTICE: The use of peripheral nerve blocks resulted in decreased patient reported pain scores immediately post TKA in 87.5% of the cases evaluated. Based on those scores, post-operative pain was decreased by an average of 38%. Post-operative use of peripheral nerve blocks is an effective means of managing immediate pain after a total knee arthroplasty.

IMPLICATIONS FOR ADVANCING THE PRACTICE OF PERIANESTHESIA NURSING: After concluding that peripheral nerve blocks effectively manage post-operative TKA pain, it would be prudent to evaluate the efficacy of peripheral nerve blocks injected pre-operatively versus post-operatively. Another consideration is to determine if a multi-modal approach using peripheral nerve blocks in conjunction with titrated intravenous opioids, oral opioids, and/or adjuvant medications would be beneficial.