

**Evaluating the Impact of Perioperative Intravenous Acetaminophen Administration among
Bariatric Patients from Post Anesthesia Care Unit (PACU) Nurses' Perspective.**

Final DNP Scholarly Project Paper

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Abstract

Background: The Centers for Disease Control and Prevention reported that the prevalence of obesity among US adults in 2015 to 2016 was 39.8% and affected an estimated 93.3 million US adults, and 42.4% between 2017 and 2018 (Hales et al., 2020).

Problem: Changes in cardiovascular and respiratory physiology predispose morbidly obese patients to increased risk when treating them with opioids as a result of drug-induced respiratory depression and upper airway obstruction (Rodriguez, 2018, Domi & Laho, 2012). Intravenous Acetaminophen administration in the perioperative period has been shown to help with pain control, reduced opioid requirements and the associated respiratory depression in the post-operative phase (Wang et al., 2015). The aim of this project is to evaluate the impact of perioperative intravenous acetaminophen administration among morbidly obese patients for bariatric procedures from post-anesthesia care unit (PACU) nurses' perspective after at least 6 months of its implementation.

Method: Post-implementation survey conducted among PACU nurses regarding firstly, the quality of the implementation process of the evidence-based practice (EBP) to assess for areas in need of reinforcement and secondly, the survey measured the overall impression of PACU nurses about the effect of perioperative intravenous acetaminophen in the post-operative phase among bariatric patients. The PACU nurses' impressions were guided by data from postoperative pain assessment tools, post-operative opioid requirement after perioperative IV acetaminophen administration and length of stay in the recovery area. It also took into consideration the frequency of interventions for opioid related respiratory distress/airway obstruction such as chin

lifts or insertion of airway to maintain spontaneous respiration. Data from questionnaires were analyzed to determine impact.

Interventions: Intervention was the administration of appropriate dosage of intravenous acetaminophen in the perioperative period and evaluating the effect postoperatively. Pain level assessed with numerical rating pain scale for verbal patients and Wong-baker faces pain rating scale for non-verbal patients during initial assessment in PACU.

Result: Post implementation survey of PACU nurses showed that 85.7% of Participants believe that perioperative intravenous acetaminophen is effective in postoperative comfort after bariatric surgery (moderately helpful 28.6% & very helpful 57.1%). 14.2% of participants believe that it is not helpful at all. It also showed a correlation between dissatisfaction with the implementation process and the belief that EBP is not effective.

Conclusion: The impact of pain medications/interventions on postoperative pain control has been measured mostly from responses elicited from individual patients either in their conscious or unconscious states. The PACU nurses are in a unique position to credibly evaluate the effectiveness of pain interventions affecting this patient population from their day to day experiences. Their initial postoperative assessment provides valuable information about the efficacy of pain control measures given preoperatively and intraoperatively prior to the patients' arrival in PACU, and has been very relevant for this evaluation.