Development and Evaluation of a Nurse Anesthetist-Directed Postoperative Nausea and Vomiting Protocol in a Community Medical Center

An Evidence-Based Scholarly Project

Submitted to the College of Health Professions

in Partial Fulfillment of the

Requirements for the Degree

Doctor of Nursing Practice

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Postoperative nausea and vomiting (PONV) is a frequent complication patients encounter after surgery in the post-anesthesia care unit (PACU). It is distressing, rated worse than pain, and is a feared component of the surgical experience. Additionally, PONV is associated with delayed recovery in the PACU and post-facility discharge. PONV also lends to unexpected hospital admissions and readmissions, pulmonary aspiration, wound dehiscence, and dehydration. As such, it is crucial to identify who is at risk for PONV and preemptively address this complication to the greatest extent possible, principally in the perspective of patient safety, comfort, and satisfaction. By adopting the standardized recommendations from the Society of Ambulatory Anesthesia (SAMBA), inclusive to the Apfel Simplified Risk Score (ASRS) and multimodal pharmacological intervention (MPI), it is deemed imperative to identify surgical patients who may benefit from early and prophylactic antiemetic intervention, as well as recognizing predisposing factors for PONV concerning these patients. Furthermore, ASRS and MPI implementations are proven to be cost-effective strategic methods for PONV patients undergoing general anesthesia. In alignment with this previously reported evidence in the literature, data will be collected, recorded, and analyzed to sequentially endorse ideal quality care, optimal patient outcomes, and concrete patient satisfaction scores; while concurrently promoting success in incidence-reduction of PONV, decreasing PACU length of stay (LOS), and conclusively executing a standardization of anesthetic practice. Ultimate results determined PONV was not eliminated; instead, PONV was reduced, demonstrating minimal patient interventions within

PACU stay. More concertedly, 68.5% of patients with an APFEL score of 2 and 3, indicating an increased risk for PONV, were treated with MPI-based methods and subsequently experienced no postoperative nausea or vomiting episodes in the PACU, yielding clinically significant data. In addition, the SAMBA recommendations showed an averaged 15-minute improvement in PACU LOS when comparing pre-implementation data to post-implementation data; indeed remarkable as PACU LOS should be ideally kept within an hour, yielding results of patient safety, patient satisfaction, and positive cost-effective outcomes.

Keywords: PONV, Apfel Simplified Risk Score, multimodal, prevention, general anesthesia