Educational improvements would include updated graphics, imaging and up-to-date surgical education to the Geisinger.org website. Distributing interactive, developmentally appropriate pamphlets, handouts, and access to smartphone apps to families prior to scheduled surgery prove to be beneficial.

AN EVIDENCED BASED PRACTICE APPROACH TO MALIGNANT HYPERTHERMIA (MH) EMERGENCY RESPONSE: A MULTIDISCIPLINARY QUALITY IMPROVEMENT INITIATIVE

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Introduction: Malignant Hyperthermia (MH) is a rare medical emergency that may occur after receiving anesthetics. The Malignant Hyperthermia Association of the United States advises all medical facilities to be prepared for prompt diagnosis and immediate treatment response, in order to prevent mortality and reduce morbidity.
Identification of the problem: Rush University Medical Center nursing care teams that work in areas prone to high risk /low volume MH events have not received consistent annual training regarding MH.
Purpose of the Study: Using a phased approach, to implement a sustainable, multidisciplinary, evidence based practice annual training program that increases staff knowledge, in order to appropriately respond to MH event.
Methods: Baseline knowledge of MH was obtained with a pre-survey developed by the investigator. Education in-services (Phase 1: FY 17) and online learning module (Phase 2:FY18) included the same content (MH overview, resources, and policy and procedure review) and were provided to nursing staff. A post-survey was given to staff immediately after all training. Pre and post surveys contained five questions and the same content.
Results: Phase 1 (n=136) prior to the education implementation, 20% of the staff met the survey passing score. Immediately post-education-100% received passing score. Long-term retention of knowledge decreased at 4 months with 48% receiving a passing score.
Phase 2 (n=437) pre-education 34.8% of participants achieved a passing score and 81.4% of participants achieved a passing score post online education.
Discussion/Conclusion: Live in-service (Phase 1) provided immediate, short-term improvement to MH crisis knowledge but long term retention of this knowledge was unsatisfactory.
Online education delivery method (Phase2) was less effective at improving MH crisis knowledge. Due to the ineffectiveness of online training, long term follow-up surveys were not performed.
Implications for perianesthesia nurses and future research: Further study is needed to determine the best approach to MH education. Phase 3 of this project will include: mandatory annual, hands-on drill training (utilizing a high fidelity simulator) with pre and post educational assessments. All members of the multidisciplinary team will partake in this training.

AN EXPLORATION OF POSTOPERATIVE DELIRIUM AND UNPLANNED PERIOPERATIVE HYPOTHERMIA IN SURGICAL PATIENTS

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Introduction: Postoperative delirium (POD) may impact 72% of surgical patients and has been associated with increased hospital length of stay, one-month mortality, post-acute discharge to long-term care, and a higher probability of developing dementia. These adverse events contribute to significant increases in healthcare costs.
Identification of the problem: Unplanned perioperative hypothermia (UPH) has been mentioned as a trigger for POD, but the relationship has been inadequately explored.
Purpose of the Study: The purpose of this study was to investigate associations between UPH and the incidence of POD among adults undergoing non-cardiac surgery.
Methodology: A retrospective, exploratory study using practice-based research methodologies was conducted. Data were electronically abstracted from a purposive convenience sample of medical records of all adult patients undergoing non-cardiac surgery from January 2014 to June 2017. Logistic regression predicting probability of POD conditional on UPH and other known and suspected associated variables was conducted. The analyzed dataset included 22,548 surgeries, of which 9% experienced documented POD.
Results: Mean age was 63.23 ($\pm$ 15.37); mean number of hypothermic minutes was 42.41 ($\pm$ 55.19). 44.7% of the sample was male and 91.4% received general anesthesia. Logistic regression indicated that a patient's ASA class was the strongest predictor of POD ($X^2 = 1207.11$, $df = 4$, inclusive of all ASA class terms). Of particular interest, a significant relationship between UPH and POD ($X^2 = 54.94$, $df = 4$, inclusive of all UPH terms) and a complex relationship among UPH, patient age, ASA class, and POD was also found.
Discussion: Surprisingly, UPH was found to be protective to the development of POD in the oldest of old. UPH, however, was a contributing factor to POD in the younger patient, particularly sicker patients, although assessment for and documentation of POD was missing in many younger patients.
Conclusion: There is a relationship between UPH and POD. Notably, there is also a complex relationship in the non-cardiac surgery population among UPH, age, ASA class, and POD.
Implications for perianesthesia nurses and future research: This study builds the science of perianesthesia nursing by identifying the relationship between UPH and POD. Further study is indicated to explore the physiology