

Simulating LAST to Improve Peri-anesthesia Nursing Knowledge

Team Leader: Christine Westphal MSN RN-BC

Advocate Christ Medical Center, Oak Lawn, Illinois

Team Members: Akram Abdoue MD, Bernadette Barsch MSN RN, Ann Cook BSN RN CAPA,
Debra Golen BSN RN CAPA, Grace Greco BSN RN CAPA, Jennifer Murphy BSN RN-BC,
Jennifer Olszowka BSN RN CAPA

Background Information: The use of local anesthetics to improve pain management and patient outcomes during the perioperative experience has been increasing. LAST is a rare, time sensitive, and potentially life-threatening complication of administering local anesthetics to patients. It is important that a LAST crisis is recognized and treated immediately to have better patient outcomes.

Objectives of Project:

1. Increase the perianesthesia nurse's knowledge and comfort level with LAST with an education presentation, simulation case study, and annual competency.
2. Provide resources for treating LAST, which include the American Society of Regional Anesthesia and Pain Medicine (ASRA) checklist for the treatment of LAST and access to lipid emulsion therapy

Process of Implementation: An evidence-based literature review was conducted to develop an educational presentation for the perianesthesia department. After the anesthesiologist reviewed and approved the presentation, a case study was developed for a high-fidelity simulation-based learning with debriefing session, which was mandatory for all nurses. The team partnered with pharmacy to make sure that lipid emulsion therapy was accessible in each department with the necessary supplies. The ASRA checklist was also displayed in the same location near the lipid emulsion therapy.

Statement of Successful Practice: There was 100% participation with the education roll out in the perianesthesia department. There was an improvement in a knowledge-based test and comfort rating scale pre- and post-intervention with an average of 58.4% to 93.8% and 4.8 to 8.4 (scale: 0-10), respectively. Shortly after the education, a patient in PACU presented with mild symptoms of LAST post nerve block with metallic taste, perioral numbness, and progressing to tremors. The nurse recognized the symptoms, notified anesthesia, and initiated treatment, which resulted in a positive patient outcome. The nurse stated that the education helped her recognize the LAST crisis, escalate, and treat the patient. A year later, a case study competency was developed and successfully completed by nursing to ensure sustainability of education.

Implications for Advancing the Practice of Perianesthesia Nursing: By implementing best practice through education and resources, the team was able to improve knowledge and comfort of the perianesthesia nursing staff in recognizing and treating LAST to improve patient outcomes.