

## Maintaining Normothermia throughout the Perioperative Process to Ensure Better Surgical Outcomes at Connecticut Children's Medical Center

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**Purpose:** To deliver an education intervention to assess pediatric nurses' knowledge regarding maintaining normothermia throughout the perioperative period. The education focused on criteria to maintain normothermia using warming interventions during preoperative, intraoperative and postoperative warming surveillance.

**Rationale:** Hypothermic patients undergoing surgery have an increased risk for surgical site infection, increased blood loss, increased pain and discomfort after surgery, longer hospital stay, and other postoperative complications.

**Synthesis:** Patients receiving bundled perioperative care stipulated by clinical guidelines from Association of Operating Room Nurses, and American Society of Peri Anesthesia Nurses have lowered postoperative infections. Maintaining normothermia is new clinical intervention that has not been part of the perioperative care bundle. Children undergoing long surgical interventions, such as spinal surgery are at-risk for hypothermia which increases their risk of infection. Establishing a criteria for maintaining normothermia using forced warm air and passive thermal care, i.e. warm cotton blankets, socks, limiting skin exposure and warming of environment throughout the perioperative period may decrease the rate of postoperative infection.

**Methods:** We utilized a pre post survey design to assess any change in perioperative nursing staff knowledge of maintaining normothermia in the OR. Our clinical outcome measures included nurses' documentation of patient's temperature and their utilization of thermal interventions including forced warmed air systems in preoperative phase, intraoperative and postoperative phase passive thermal care. IRB Approval was received and educational intervention was delivered in March 2016.

**Results:** Pediatric perioperative nurses were asked to participate in education and then completed the pre/post surveys. Pre-education on thermal intervention, temperature documentation and number of postoperative surgical site infection for children undergoing surgical spinal fusion between April to June 2015 has been collected. Data collection is ongoing to collect comparative data of children undergoing surgical spinal fusions from April through June 2016. Preliminary data shows a lack of documentation of pre warming and warming intervention in 2015.

Discussion: There is a gap in thermal documentation. By increasing documentation and awareness of maintaining normothermia, nurses will be more likely to use and document warming methods. Maintaining normothermia is essential for supporting optimal child health by preventing surgical site infection and other post op complications.