BABY IT’S COLD OUTSIDE: AN ANESTHESIOLOGY SAFETY INITIATIVE

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Introduction

- Hypothermia has been linked to:
  - Poor wound healing
  - Surgical wound infections
  - Bleeding diastheses
  - Prolonged hospitalization
  - Multidisciplinary approach needed to avoid temperature fluctuations
  - Children’s Hospital Neonatal Consortium’s Safe Transitions & Euthermia in the Perioperative Period in Infants & Neonates (STEPP-IN)
  - Multicenter multidisciplinary standardized checklist and handoff tool
  - Goal to avoid unintended errors and improve patient safety via:
    - Communication
    - Team approach
    - Innovative protocols

Methods

- NICU patients from 6/1/13-8/1/16 at risk for perioperative hypothermia (<36 C)
- Standardized practices:
  - Raising the OR temperature
  - Chemical mattresses for transport
  - Wearing a hat
  - Communication checklists between team members: NICU RN to OR RN, NICU team to anesthesia team, OR RN to NICU RN, anesthesia team to NICU team
  - Preoperative, intraoperative, & postoperative temp measurements recorded
  - Five-point satisfaction surveys distributed to anesthesiologists, surgeons, OR nurses, neonatologists, NICU nurses, & respiratory therapists to assess handoff tool effectiveness

Results

- NICU patient perioperative hypothermia rates decreased after handoff checklist was instituted
  - Percentage of patients with hypothermic initial OR temps decreased from 41% to 19%
  - Percentage of patients with hypothermic temps upon leaving the OR decreased from 24 to 9.6%
  - Percentage of patients with hypothermic postoperative temps decreased from 8.6% to 3.4%
  - Provider satisfaction with transitions of care improved from 48% to 89%
  - Use of checklist resulted in decrease in communication errors from 33% to 14.3% & improved patient care

Discussion

- Handoff tools such as STEPP-IN initiative have been instrumental in improving patient care & minimizing medical error
- Studies have demonstrated a connection between inadequate communication during patient sign-out & adverse patient outcomes
- In STEPP-IN initiative we used goal of euthermia in NICU patients to decrease incidence of hypothermia & improve the perioperative process

Key Points

- Standardization of transitions of care through handoff checklists resulted in improved patient care, fewer communication errors, & better medical provider satisfaction

Tables

- % Hypothermia at First OR Temp
- % Hypothermia at Last OR Temp
- Outcome: post op Hypothermia < 36°C

References

1. Lane-Fall (2014) Anesthesiology. 120(1): 218-29.