

PRE-OPERATIVE WARMING: ARE WARM COTTON BLANKETS ENOUGH?

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Introduction: Hypothermia is a serious, yet preventable post-operative challenge. Post-operative hypothermia can lead to multiple complications including infection, poor wound healing, cardiac events, and death.

Identification of the Problem: Patients undergoing surgery are at risk for developing post-operative hypothermia resulting in increased susceptibility for complications. The practice of pre-warming patients is not standardized; research investigating this subject is limited and dated. Furthermore, available research focuses on the use of forced air warming equipment.

Purpose of the Study: This retrospective research study evaluated whether the practice of pre-warming patients with warm cotton blankets is sufficient to prevent hypothermia in PACU. Forced air warming equipment is expensive. Additionally, concerns have been raised regarding blowing circulated air as a causative factor in surgical site infections. This study was conducted to determine if patients maintained normothermia without the use of these devices pre-operatively.

Methodology: The setting was the Same Day Surgery and PACU of three facilities in one healthcare organization in the Midwest. The study sample included 3873 patients, divided into three surgical procedures/approaches: DiVinci robotic, open abdominal surgery, and Total Joint Replacement surgery. A quantitative, retrospective study was conducted to determine whether using warm cotton blankets pre-operatively would maintain normothermia throughout the surgical experience. In addition, the effect of using intraoperative active warming methods was explored.

Results: The findings confirm that warming patients pre-operatively with warm cotton blankets as per the practice is adequate for maintaining post-operative normothermia. Of the 3873 patients, only 29 had a temperature below 96.8 on arrival to PACU, 19 /29 were caesarian sections. Use of the forced air warmer intraoperatively resulted in a 0.2057-0.3461 degree increased in post-operative temperature.

Discussion: Unplanned hypothermia can result in significant post-operative sequel. ASPAN guidelines encourages the practice of pre-warming patients however, the practice is not standardized. Maintaining normothermia with warm cotton blankets is cost effective, for prevention of complications.

Conclusion: Results of this study suggests, with 95% certainty, patients with a pre-operative temperature of 97°F have between 2.18% and 5.07% of presenting with a post-operative temperature below 96.8°F.

Implications for perianesthesia nurses and future research: Warm cotton blankets pre-operatively are sufficient. Future research specifying a wider demographic, using multiple hospitals and specific surgical procedures.