

**THE INFLUENCE OF POSTOPERATIVE BODY TEMPERATURE ON SURGICAL OUTCOMES**

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**BACKGROUND:** Some consider postoperative hypothermia as a risk factor for postoperative wound infection. The seminal study that demonstrated this finding was performed in a limited number of patients undergoing a single operation (Kurz et al. NEJM 334; 1996). VA has used postoperative normothermia as a performance measure in the recent past. Our goal was to evaluate the influence of postoperative body temperature on multiple surgical outcomes in a wide variety of patients.

**METHODS:** We performed a retrospective review of prospectively-collected data on patients who underwent surgery at a single VA medical center. Preoperative, intraoperative, and postoperative temperatures were collected prospectively. All patients were entered into the NSQIP database and therefore, clinical data for 30 day outcomes and patient risk stratification was accomplished using NSQIP methodology. Multivariate logistic and linear regression analysis was used to analyze the influence of postoperative body temperature on the outcomes of mortality, morbidity, infection rate, and length of stay (LOS).

**RESULTS:** We evaluated 977 patients who underwent operations in the surgical specialties of General, Orthopaedic, Otolaryngology, Thoracic, Urology, and Vascular Surgery. The mean postoperative temperature was  $96.7 \pm 1.4$ oF. Overall, mortality rate was 2.4%, morbidity rate was 11.8%, infection rate was 2.5%, and LOS was 4.1 days. Postoperative temperature did not influence any outcome except for LOS ( $p < 0.05$ ) wherein for every degree below 96.7 oF, LOS increased by 1.5 days.

**CONCLUSIONS:** In this study of nearly 1000 patients, we found no evidence to support postoperative normothermia as an important goal in terms of reducing the incidence of adverse postoperative outcomes. Interestingly, despite no effect on morbidity or mortality, we observed that hypothermia increased LOS although the mechanism is unclear. Nonetheless, we believe that our findings do not support the use of postoperative normothermia as a VA performance measure.