Forced Air Warming Gowns to Prevent Unintentional Surgical Hypothermia
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Problem:
Failure to maintain surgical patient normothermia.

Evidence:
Completion of a literature search indicated strong correlation between hypothermia and negative patient outcomes and support for surgical patient pre-warming for hypothermia prevention. Warmed cotton blankets were the current standard, but maintained warmth for only ten minutes. Minimal evidence was present regarding use of, or effectiveness of, forced-air gowns on hypothermia prevention.

Strategy:
We expanded the Surgical Care Improvement Project guidelines for maintenance of colorectal patient normothermia to all surgical patients receiving general or spinal anesthesia. Data collection on 189 patients using warmed cotton blankets provided a baseline for measuring and describing our peri-operative hypothermia rate. The comparison data was supplied by 239 patients using forced-air warming gowns.

Practice Change:
Forced-air warming gowns, rather than warmed cotton blankets, are now used on all patients receiving general or spinal anesthesia.

Evaluation:
Patient temperature measured pre-operatively; intraoperatively (lowest temperature) and post-operatively. Forced-air warming gown trial achieved 19% reduction in total hypothermia rate (14% minor surgery patients, 26.5% major surgery patients).

Results:
• Achieved 100% normothermia compliance for surgical patients since implementation
• Reduction in peri- and post-operative linen usage
• 26% reduction in surgical-site infections
• Associated cost-savings over $250,000
• 4%/patient cost reduction
• Patient satisfaction reflects pleasure with increased autonomy in temperature control.

Recommendations
• Continue to monitor surgical-site infection rates.
• Consider research projects to determine the effects of use of forced-air warming on
  o blood product administration
  o pain medication usage
  o length of stay in post-anesthesia care unit
Lessons Learned
Pre-operative warming using a forced-air warming gown
• maintained patient normothermia
• decreased surgical-site infection rates and linen usage
• increased patient comfort.

Bibliography