Avoiding Pressure Injury in the Operating Room with Root Cause Analysis & Action (RCA²)

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BACKGROUND

• Surgery is one time when a healthy individual is placed at risk for pressure injury.
• Hospital Acquired Pressure Injury (HAPI) affects 2.5 million individuals in US acute care facilities each year, resulting in 60,000 deaths.
• Costs for treatment are estimated at $26.8 billion dollars.
• AHRQ reports HAPIs increased 6% from 2014-2017.

DESIRABLE STATE:

AORN GUIDELINE GAP ANALYSIS TOOL: POSITIONING THE PATIENT

• Recommendation 2: The perioperative RN should conduct a preoperative patient assessment to identify patients at risk for positioning injury.
• Recommendation 6: Perioperative personnel should identify potential hazards associated with positioning activities and should establish safe practices.
• Recommendation 18: The perioperative RN should collaborate with the perianesthesia RN to identify patient injury caused by intraoperative positioning.
• Recommendation 22: The health care organization’s quality management program should evaluate patient safety.

OUTCOMES

• The surgical population is aging and becoming more obese increasing risk.
• Shafipour et al. reported incidence rate of 18.96% in a meta-analysis of 9,527 surgical patients.
• The Association of PeriOperative Registered nurses (AORN) recommended practice for positioning as the standard of care.

METHODS

• Surgical cases lasting > 2 hours received head to toe skin assessment at the time of the OR and PACU handoff.
• Tracking tools were created and followed the patient to each department to ensure compliance with monitoring the patient skin across the health care system.
• Upon discovery of a pressure injury the OR and PACU staff would:
  • Measure the length, width and depth.
  • Take pictures for documentation and comparison during the healing process.
  • OR staff reviewed table and equipment involved with the case to determine the root cause of the injury.

A3 PROBLEM SOLVING

WHAT IS THE PROBLEM OR ISSUE?

• Perioperative patients are at risk for pressure injury due to intense and prolonged pressure during lengthy surgical procedures, exposure to friction and shear, and co-morbid conditions.
• Absence of HAPIS is an indicator of quality nursing care.
• Aims: Perform skin audits for 100% of surgical patients with cases over 2 hours. Implement real-time root cause analysis and action.
• Key metric: Skin integrity concerns captured in audit reports/number of surgical procedures.
• Hospital metric: Number of patients with pressure injury/total number of patients surveyed.

COUNTER MEASURES

• Scott Triggers risk assessment, Pre-op skin assessments
• Airway transfer for safe patient handling
• High Specification OR table pads
• Prophylactic dressings silicone to sacral, and lateral chest with bean bag use. Air cushion to sacral area.
• Offload heels with positioning device
• Do not use towel rolls, blanket rolls or IV bags for positioning.
• Pre-warming for high-risk patients and new hypothermia protocol.
• Moisture wicking drapes to control microclimate.

ACTION: VIDEO-ASSISTED THORACOTOMY (VATS)

• Implementation of pre-op skin assessment and risk assessment using Scott Triggers
• Pre-warming all patients prior to surgery
• OR room temperatures to remain at 68°F Prophylactic foam dressing placed on the lateral chest wall
• Monitor urinary output and report to anesthesia if low
• Maintain warming measures post-op until the patient is normothermic (≥ 36.1°C)
• Maintain open loop communication from pre-op to PACU

OUTCOMES

• Over 19,000 patients were screened since 2010
• Rate of Surgical HAPIs dropped from a high of 2.6% to zero by 2015
• Currently 46 months with zero HAPIs
• Creating an improved safety culture and implementing evidence based counter measures helped to eliminate patient harm and create high-reliability process improvement

CONCLUSION

• Using the Root Cause Analysis and Action (RCA²) model we advance lessons learned by investigating system failures. The goal of a successful process improvement is to:
  • Identify all the stakeholders - Patients, Perioperative RN, PerAnesthesia staff, Anesthesia, Surgeon and Wound, Ostomy and Continence nurses.
  • Collaborate to identify gaps in knowledge, skills and attitudes.
  • Integrate innovative practices and empower staff to make recommendations and implementation ideas for the prevention of a PPI.
  • Incorporate a team approach to real-time problem solving by using the Root Cause Analysis Tool.

Acknowledgments: