Less is More:

Early Extubation for Pediatric Cardiac Surgery Patients in the Pediatric Intensive Care Unit (PICU)

Melanie Sojka, APN, Grace Macék, APN, Cathy Humikowski, MD, Allison Thompson, PharmD, Annie Amin, MD, Monica Gonzalez, CNS, Kathleen Zielinski, RN, Julie Braun, RT


Background

• Early extubation is associated with fewer ventilator associated complications, reduced requirement of sedatives, earlier mobilization, and potentially decreased length of stay
• Current practice included:
  • Few extubations occurring in the first 24 hours
  • Initiation of continuous opioid drips in all patients
  • Variable post-op pain/sedation management leading to over-sedated patients and prolonged intubation times
  • Extubations occurring later in the day POD#1 (after rounds)
• No identification of “early extubation” candidates pre-operatively

Aims

• Reduced ventilation time (thus reduction in ventilator associated complications and faster mobility)
• Early de-intensifying (central line/chest tube/pacemaker wire removals)
• Consistency in pain/sedation management
• Identification of early extubation candidates

Lessons Learned

• Interrelated issues resulting in need for development of other guidelines:
  • Readiness for Extubation Guidelines
  • Nurse Driven Sedation/Opioid Decision Tree

The Intervention

• Interdisciplinary early extubation workgroup was formed
• Extensive literature search was performed
• Where data was lacking in literature, protocols from leading heart centers were utilized
• Guidelines created to aid in identification of patients and guide pain/sedation management
• Candidates identified at weekly interdisciplinary conference and communicated to team
• Order set created in EPIC reflecting and linking to guidelines (Currently in progress)

Results

• Expected results: increase percentage of “early extubation” patients (as defined by extubation by 8am on POD#1)
• Chart below shows historical percentage of patients extubated by 8AM POD#1

Next Steps

* 40% of the 2013 early extubations were AFTER the early extubation work group began creating guidelines
** Total excludes pacemaker implantation, minor procedures & NICU PDA closures

Contact: Melanie Sojka msojka@surgery.bsd.uchicago.edu