Implementation of the Critical Care Pain Observation Tool (CPOT) in a combined Medical-Surgical/Cardiovascular Intensive Care Unit

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Introduction

- 2018 PADIS Guidelines (SCCM)
- A need was identified to implement the ABCDEF ICU Liberation Bundle
- Addressing the first element of the bundle, letter “A”, focus was laid on improving the assessment, prevention, and management of pain for critically ill patients admitted to the intensive care unit

Background & Significance

- To successfully manage and prevent pain, an appropriate and reliable assessment of pain is necessary.
- Institution acute pain protocol and EMR lack the use of a behavioral pain scale, which is included in the recommendations and standards of care proposed by the Society of Critical Care Medicine (SCCM) and the American Association of Critical-Care Nurses (AACN)
- Developed to incorporate behavioral and physiologic signs into the pain assessment of the critically ill patient

Methodology

Combined ICU of a New Jersey Magnet community hospital

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Quality improvement initiative

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Practice change model: Plan-Do-Study-Act

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3-month intervention period

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Education program detailing the ICU Liberation Bundle and CPOT

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CPOT built into electronic ICU patient assessment flowsheet

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Comprehensive retrospective chart review

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Post-implementation online RN survey

Critical Care Pain Observation Tool (CPOT)

Indicator	Description	Score	
Facial expressions	No muscle tension observed	Relaxed, neutral	0
	Presence of frowning, brow lowering, orbit tightening and levator contraction or any other change (e.g. opening eyes or tearing during nociceptive procedures)	Tense	1
	All previous facial movements plus eyelid tightly closed (the patient may present with mouth open or biting the endotracheal tube)	Grimacing	2
Body movements	Does not move at all (doesn’t necessarily mean absence of pain) or normal position (movements not aimed toward the pain site or not made for the purpose of protection)	Absence of movements or normal position	0
	Slow, cautious movements, touching or rubbing the pain site, seeking attention through movements	Protection	1
	Pulling tube, attempting to sit up, moving limbs/thrashing, not following commands, striking at staff, trying to climb out of bed	Restlessness/Agitation	2
Muscle tension	No resistance to passive movements	Relaxed	0
Evaluation by passive flexion and extension of upper limbs when patient is at rest or evaluation when patient is being turned	Resistance to passive movements	Tense, rigid	1
	Strong resistance to passive movements or incapacity to complete them	Very tense or rigid	2
Compliance with the ventilator (intubated patients)	Alarms not activated, easy ventilation	Tolerating ventilator or movement	0
	Coughing, alarms may be activated but stop spontaneously	Coughing but tolerating	1
OR	Asynchrony: blocking ventilation, alarms frequently activated	Fighting ventilator	2
Vocalization (extubated patients)	Talking in normal tone or no sound	Talking in normal tone or no sound	0
	Sighing, moaning	Sighing, moaning	1
	Crying out, sobbing	Crying out, sobbing	2
Total			0–8

Gélinas C, Fillion L, Puntillo KA, et al. Validation of the critical-care pain observation tool in adult patients. Am J Crit Care. 2006; 15(4): 420–427, indexed in Pubmed: 16823021. Table 1. Available at: http://ajcc.aacnjournals.org/content/15/4/420.short
CPOT Polish Translation: 16.10.2016, Katarzyna Kotfis MD, PhD

The CPOT is a reliable pain assessment tool for use among critically ill patients unable to self-report pain.

References

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Contact Information

Results

- Continued use of the gold standard verbal (0-10) scale as well as frequent use of the CPOT
- No change in pre- and post-intervention pain values obtained from using the verbal (0-10) pain scale (Mean=2.69, Std. Deviation=2.993)
- Mean CPOT score of 1.23 (Std. Deviation=1.973)
- 8% decrease in administration of PRN analgesics
- 1.1% increase in acute pain protocol compliance
- 0.19 days increase in ICU length of stay
- RN staff report ease of use, improved workflow, accurate reflection of patients’ pain, and improved interdisciplinary ICU team communication.

Discussion

- Despite a decrease in administered PRN analgesics, results reflect a consistent practice of utilizing PRN analgesics when indicated.
- Increased protocol compliance mirrors previous CPOT validation studies
- RN staff can now utilize an evidenced-based tool in conjunction with other critical care principles to measure pain and improve the delivery of care in the ICU

Implications

Clinical Practice & Healthcare Policy

Quality

Patient Outcomes

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