Collaborative Regional Benchmarking Group

(North of England, North Yorkshire & Humber and West Yorkshire)

Best Practice Guidance – Pain Management

These recommendations are bound by the current evidence and best practice at the time of writing and so will be subject to change as further developments are made in this field.

Aim

All patients will receive adequate and appropriate assessment and treatment of their pain, according to their individual needs, optimising comfort and minimising adverse effects.

Introduction

The International Association for the Study of Pain defines pain as "unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage".[1] Most critically ill patients will likely experience pain during their Critical Care stay [2] and identify it as a great source of stress.[3] However, many critically ill patients may be unable to self-report their pain (either verbally or with other signs) because of an altered level of consciousness, the use of mechanical ventilation, or high doses of sedative agents or neuromuscular blocking agents.[4] Yet, the ability to reliably assess patient's pain is the foundation for effective pain treatment. As the International Association for the Study of Pain also states, "the inability to communicate verbally does not negate the possibility that an individual is experiencing pain and is in need of appropriate pain-relieving treatment".[1]

The negative physiologic and psychological consequences of unrelieved pain in ICU patients are significant and long-lasting. For many years, ICU patients have identified pain as their greatest concern and a leading cause of insufficient sleep.[5]

The stress response evoked by pain can have deleterious consequences for ICU patients. Increased circulating catecholamines can cause arteriolar vasoconstriction, impair tissue perfusion, and reduce tissue-oxygen partial pressure.[6] Other responses triggered by pain include catabolic hypermetabolism resulting in hyperglycemia, lipolysis, and breakdown of muscle to provide protein substrate.[7] Catabolic stimulation and hypoxemia also impair wound healing and increase the risk of wound infection.

Unrelieved acute pain in adult ICU patients is ubiquitous and far from benign, with both short- and long term consequences. Adequately identifying and treating pain in these patients require focused attention.

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[1] *International Association for the study of Pain (IASP)* **Pain Terms: A list with definitions and notes on usage, recommended by the IASP subcommittee on taxonomy**. *Pain 1979; 6:249*

[2] *Erstad BL, Puntillo K, Gilbert HC, et al:* **Pain management principles in the critically ill**. *Chest 2009; 135:1075–1086*

[3] *Hweidi IM:* **Jordanian patients' perception of stressors in critical care units: A questionnaire survey.** *Int J Nurs Stud 2007; 44:227–235*

[4] *Shannon K, Bucknall T:* **Pain assessment in critical care: What have we learnt from research**. *Intensive Crit Care Nurs 2003; 19:154–162*

[5] *Jones J, Hoggart B, Withey J, et al:* **What the patients say: A study of reactions to an intensive care unit.** *Intensive Care Med 1979; 5:89–92*

[6] *Akça O, Melischek M, Scheck T, et al:* **Postoperative pain and subcutaneous oxygen tension**. *Lancet 1999; 354:41–42*

[7] *Hedderich R, Ness TJ:* **Analgesia for trauma and burns.** *Crit Care Clin 1999; 15:167–184*

Assessment

It is essential that pain in Critical Care patients be assessed routinely and repetitively in a manner that is efficient and reproducible. No objective pain monitor exists, but valid and reliable bedside pain assessment tools that concentrate primarily on patients' behaviours as indicators of pain do exist. Recent studies have demonstrated that implementing behavioural pain scales improves both ICU pain management and clinical outcomes, including better use of analgesic and sedative agents and shorter durations of mechanical ventilation and Critical Care stay.[8]

A patient self-report of pain is considered the "gold standard," and clinicians should always attempt to have a patient rate his or her own pain first. Appendix 1 is an example of a horizontal numeric rating scale 0–10 visually and is the most valid tool to use for patients to self-assess their pain. The Critical-Care Pain Observation Tool (CPOT) (Appendix 2) is the most valid and reliable tool to assess pain scales in critically ill ventilated patients. Pain should be assessed a minimum of 4hourly but more frequently if required. Appendix 3 is an example of a pain scale that can be used with dementia patients and patients that can't communicate.

ACTION: Pain should be assessed a minimum of 4hrly

3: Treatment

The choice of analgesia and the dosage depends on many factors and needs to be individual to the patient. The choice of analgesia can include opioids, NSAIDS, Paracetamol and regional anaesthetics. Enterally administered gabapentin or pregablin should be considered for treatment of neuropathic pain. The pain team should be consulted where available in complex cases.
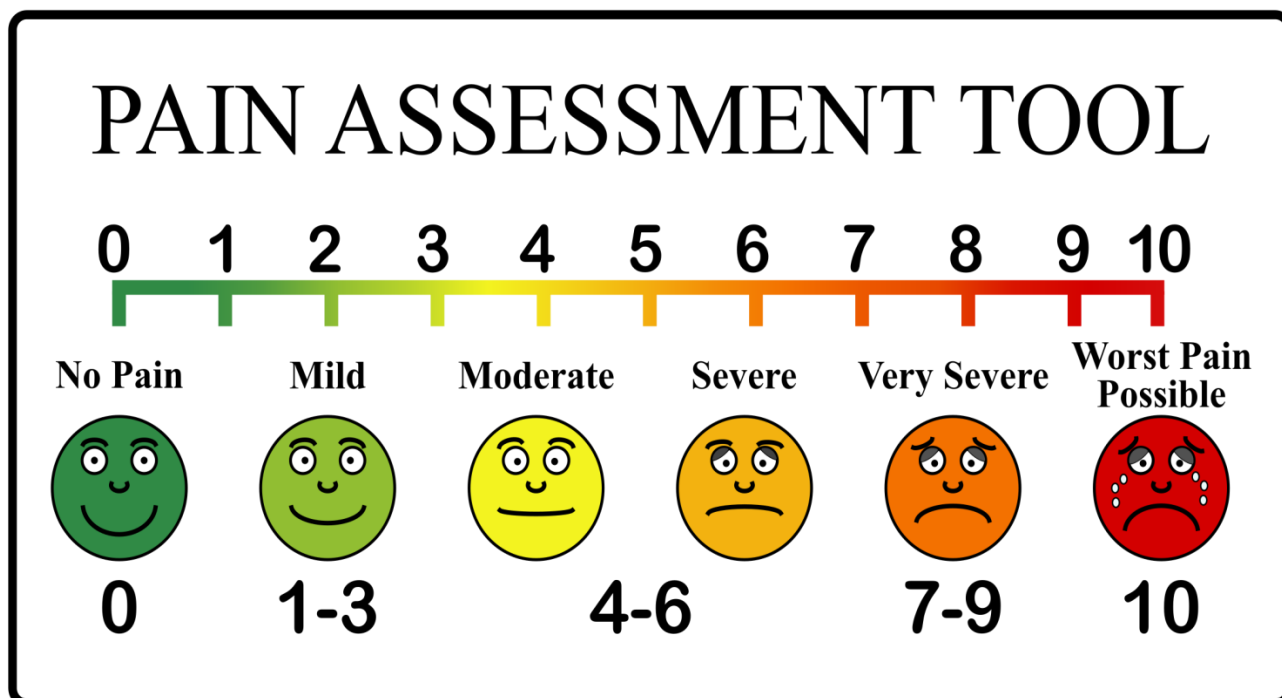
The administration of pre-emptive analgesia and/or non-pharmacologic interventions (e.g. relaxation) to alleviate pain in prior to invasive and potentially painful procedures in adult Critical Care patients is recommended.

ACTION: Analgesia should be prescribed and given as indicated by pain score.

*** Guidelines adapted from **Clinical Practice Guidelines for the Management of Pain, Agitation, and Delirium in Adult Patients in the Intensive Care Unit** *www.ccmjournal.org*

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[8] *Arbour C, Gélinas C, Michaud C:* **Impact of the implementation of the Critical-Care Pain Observation Tool (CPOT) on pain management and clinical outcomes in mechanically ventilated trauma intensive care unit patients: A pilot study**. *J Trauma Nurse 2011; 18:52–60*

Numerical Rating Score (NRS)

PAIN ASSESSMENT TOOL

0 1 2 3 4 5 6 7 8 9 10

No Pain — Mild — Moderate — Severe — Very Severe — Worst Pain Possible

0   1-3   4-6   7-9   10

- o *Assess pain a minimum of 4 hourly but more frequently if required*
- o *Numerical Rating Score (NRS) score 0 – 10*
- o *0 = No pain 1-3 = Mild Pain 4-6 = moderate pain 7-9 = Severe pain 10 = worse pain imaginable*

Alternative language 1-10 pain assessment scales are available on the British Pain Society website.

Critical-Care Pain Observation Tool (CPOT)

Indicator	Description	Score	
Facial expression	No muscular tension observed	Relaxed, neutral	0
	Presence of frowning, brow lowering, orbit tightening, and levator contraction	Tense	1
	All of the above facial movements plus eyelid tightly closed	Grimacing	2
Body movements	Does not move at all (does not necessarily mean absence of pain)	Absence of movements	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	2
Muscle tension Evaluation by passive flexion and extension of upper extremities	No resistance to passive movements	Relaxed	0
	Resistance to passive movements	Tense, rigid	1
	Strong resistance to passive movements, inability to complete them	Very tense or rigid	2
Compliance with the ventilator (intubated patients)	Alarms not activated, easy ventilation	Tolerating ventilator or movement	0
	Alarms stop spontaneously	Coughing but tolerating	1
	Asynchrony: blocking ventilation, alarms frequently activated	Fighting ventilator	2
or			
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, range	**Sum each category**		**0-8**

Gélinas C, et al. *Am J Crit Care* 2006; 15:420–427.
Gélinas C, et al. *Clin J Pain* 2007; 23:497–505.

- o *Assess pain a minimum of 4 hourly but more frequently if required*
- o *CPOT score 0 – 8*
- o *Patient in significant pain if CPOT ≥ 3*

Abbey Pain Scale

For measurement of pain in people with dementia who cannot verbalise.

How to use scale : While observing the resident, score questions 1 to 6.

Name of resident : ....

Name and designation of person completing the scale : ....

Date : .... Time : ....

Latest pain relief given was...at.........hrs.

| Q1. | Vocalisation
eg whimpering, groaning, crying
Absent 0   Mild 1   Moderate 2   Severe 3 | Q1 | [ ] |

| Q2. | Facial expression
eg looking tense, frowning, grimacing, looking frightened
Absent 0   Mild 1   Moderate 2   Severe 3 | Q2 | [ ] |

| Q3. | Change in body language
eg fidgeting, rocking, guarding part of body, withdrawn
Absent 0   Mild 1   Moderate 2   Severe 3 | Q3 | [ ] |

| Q4. | Behavioural Change
eg increased confusion, refusing to eat, alteration in usual patterns
Absent 0   Mild 1   Moderate 2   Severe 3 | Q4 | [ ] |

| Q5. | Physiological change
eg temperature, pulse or blood pressure outside normal limits,
perspiring, flushing or pallor
Absent 0   Mild 1   Moderate 2   Severe 3 | Q5 | [ ] |

| Q6. | Physical changes
eg skin tears, pressure areas, arthritis, contractures,
previous injuries
Absent 0   Mild 1   Moderate 2   Severe 3 | Q6 | [ ] |

Add scores for 1 - 6 and record here ⇒ **Total Pain Score** [ ]

Now tick the box that matches the
Total Pain Score ⇒

0 - 2 No pain	3 - 7 Mild	8 - 13 Moderate	14 + Severe

Finally, tick the box which matches
the type of pain ⇒

Chronic	Acute	Acute on Chronic