ICU Pain, Agitation, and Delirium Care Bundle

**PAIN**

Assess pain ≥4x/shift & prn
- Patient able to self-report → NRS (0-10)
- Unable to self-report → BPS (3-12) or CPOT (0-8)

Patient is in significant pain if NRS ≥ 4, BPS > 5, or CPOT ≥ 3

Treat pain within 30' then reassess:
- Non-pharmacologic treatment—relaxation therapy
- Pharmacologic treatment:
  - Non-neuropathic pain → IV opioids +/- non-opioid analgesics
  - Neuropathic pain → gabapentin or carbamazepine, + IV opioids
  - S/p AAA repair, rib fractures → thoracic epidural

**AGITATION**

Assess agitation, sedation ≥4x/shift & prn
Preferred agitation assessment tools:
- RASS (-5 to +4) or SAS (1 to 7)
- NMB suggest using brain function monitoring

Depth of agitation, sedation defined as:
- Agitated if RASS = +1 to +4, or SAS = 5 to 7
- Awake and calm if RASS = 0, or SAS = 4
- Lightly sedated if RASS = -1 to -2, or SAS = 3
- Deeply sedated if RASS = -3 to -5, or SAS = 1 to 2

Targeted sedation or DSI (Goal: patient purposely follows commands without agitation):
- RASS = -2 – 0, SAS = 3 - 4
- If under sedated (RASS >0, SAS >4) assess/treat pain → treat w/sedatives prn (non-benzodiazepines preferred, unless ETOH or benzodiazepine withdrawal is suspected)
- If over sedated (RASS <-2, SAS <3) hold sedatives until at target, then restart at 50% of previous dose

**DELIRIUM**

Assess delirium Q shift & prn
- CAM-ICU (+ or -)
- ICDSC (0 to 8)

Delirium present if:
- CAM-ICU is positive
- ICDSC ≥ 4

Assess delirium Q shift & prn
- CAM-ICU (+ or -)
- ICDSC (0 to 8)

Delirium present if:
- CAM-ICU is positive
- ICDSC ≥ 4

Objectives:
- Assess pain
- Assess agitation
- Assess delirium

Prevention Strategies:
- Identify delirium risk factors: dementia, HTN, ETOH abuse, high severity of illness, coma, benzodiazepine administration
- Avoid benzodiazepine use in those at ↑ risk for delirium
- Mobilize and exercise patients early
- Promote sleep (control light, noise; cluster patient care activities; decrease nocturnal stimuli)
- Restart baseline psychiatric meds, if indicated

Consider daily SBT, early mobility and exercise when patients are at goal sedation level, unless contraindicated
- EEG monitoring if:
  - at risk for seizures
  - burst suppression therapy is indicated for ↑ ICP

Treat pain as needed
- Reorient patients; familiarize surroundings; use patient’s eyeglasses, hearing aids if needed

Pharmacologic treatment of delirium:
- Avoid benzodiazepines unless ETOH or benzodiazepine withdrawal is suspected
- Avoid rivastigmine
- Avoid antipsychotics if ↑ risk of Torsades de pointes

Maintain daily SBT, early mobility and exercise when patients are at goal sedation level, unless contraindicated
### ICU PAD Care Bundle Metrics

<table>
<thead>
<tr>
<th>PAIN</th>
<th>AGITATION</th>
<th>DELIRIUM</th>
</tr>
</thead>
</table>
| • % of time patients are monitored for pain ≥4x/shift  
  • Demonstrate local compliance and implementation integrity over time in the use of ICU pain scoring systems | • % of time sedation assessments are performed ≥4x/shift  
  • Demonstrate local compliance and implementation integrity over time in the use of ICU sedation scoring systems | • % of time delirium assessments are performed Q shift  
  • Demonstrate local compliance and implementation integrity over time in the use of ICU delirium assessment tools |
| • % of time ICU patients are in significant pain (i.e., NRS ≥ 4, BPS ≥ 6, or CPOT ≥ 3)  
  • % of time pain treatment is initiated within 30" of detecting significant pain | • % of time patients are either optimally sedated or successfully achieve target sedation during DSI trials (i.e., RASS = -2 – 0, SAS = 3 – 4)  
  • % of time ICU patients are under sedated (RASS >0, SAS >4)  
  • % of time ICU patients are either over sedated (non-therapeutic coma, RASS <-2, SAS <3) or fail to undergo DSI trials | • % of time delirium is present in ICU patients (CAM-ICU is positive or ICDSC ≥ 4)  
  • % of time benzodiazepines are administered to patients with documented delirium (not due to ETOH or benzodiazepine withdrawal) |
| • % of time patients receive pre-procedural analgesia therapy and/or non-pharmacologic interventions  
  • % compliance with institutional-specific ICU pain management protocols | • % failed attempts at SBTs due to either over or under sedation  
  • % of patients undergoing EEG monitoring if:  
    - at risk for seizures  
    - burst suppression therapy is indicated for ↑ ICP  
  • % compliance with institutional-specific ICU sedation/agitation management protocols | • % of patients receiving daily physical therapy and early mobility  
  • % compliance with ICU sleep promotion strategies  
  • % compliance with institutional-specific ICU delirium prevention and treatment protocols |

NRS = Numeric Rating Scale; BPS = Behavioral Pain Scale; CPOT = Critical-Care Pain Observation Tool; nonpharmacologic therapy = relaxation therapy, especially for chest tube removal; IV = intravenous; AAA = abdominal aortic aneurysm; NMB = neuromuscular blockade; RASS = Richmond Agitation and Sedation Scale; SAS = sedation-agitation scale; brain function monitoring = auditory evoked potentials (AEP), Bispectral Index (BIS), Narcotrend Index (NI), Patient State Index (PSI), or State Entropy (SE); DSI = daily sedation interruption (also referred to as Spontaneous Awakening Trial [SAT]); ETOH = ethanol; nonbenzodiazepines, propofol (use in intubated/mechanically ventilated patients), dexmedetomidine (use in either intubated or nonintubated patients); SBT = spontaneous breathing trial; EEG = electroencephalography; ICP = intracranial pressure; CAM-ICU = Confusion Assessment Method for the ICU; ICDSC = ICU Delirium Screening Checklist.