ICU Pain/Agitation/Delirium Reference

Goal of Sedation/Analgesia

1. Pain level <3 using Visual Analog Scale or Cognitively Impaired Scale
2. No delirium according to the Modified Confusion Assessment Method for the ICU (CAM ICU)
3. Richmond Agitation Sedation Scale (RASS) of 0 to -2.

Assess patient's sedation and pain level every four hours.

Begin awakening trials for Midazalam and Lorazepam continuous infusions at 4:30am daily. Hold infusions until patient reaches RASS score 0 to +1. Do not institute daily awakening trials if patient is receiving a neuromuscular blocking (NMBA) or paralytic agent.

Begin awakening trials for propofol continuous infusions at 6:00am daily. Hold infusions until patient reaches RASS score of 0 to +1. Do not institute daily awakening trials if patient is receiving a NMBA or paralytic agent.

STEP 1 Assess Patient's Pain using Visual Analog or Cognitively Impaired Scale

I. Rule out environmental or reversible causes
   Reposition
   Hot and cold therapy
   Temperature control

II. Analgesia

☐ MORPHINE (Drug of choice in patient hemodynamically stable and adequate renal function)

1. Initial dosing: 2mg IVP every 10 min until pain level is less than 4/10
2. Intermittent dosing: 2 mg IVP every 2 hours PRN to maintain pain level less than 4/10. May increase by 1mg every 2 hours to maximum of 4mg every 2 hours prn.
3. If intermittent dosing required more often than every 2 hours, begin continuous infusion of 2mg/hour and titrate to pain level less than 4/10

☐ FENTANYL (May be used in patients who are hemodynamically unstable and/or have severe renal dysfunction)

1. Initial dosing: 50mcg IVP every 10 min until pain level is less 4/10.
2. Intermittent dosing: 50 mcg every 2 hours PRN to maintain pain level less than 4/10.
3. If intermittent dosing required more often than every 2 hours, begin continuous infusion of 50 mcg/hour and titrate to pain level less than 4/10

☐ HYDROMORPHONE (May be used in patients who are hemodynamically unstable and/or have severe renal dysfunction)

1. Initial dosing: 0.25mg IV every 5 minutes until pain level is less than 3/10
2. Intermittent dosing: 1mg IV every 4 hours PRN to maintain pain level less than 3/10
3. If intermittent dosing required more often than every 4 hours, begin continuous infusion of 1mg/hour and titrate in 0.5 mg/hour increments to maintain pain level less than 3/10

If under medicated, rebolus using intermittent dosing as prescribed above and then increase continuous infusion dose by 50%

If overmedicated, hold continuous infusion until at analgesia goal then restart continuous infusion at a dose decreased by 50%

III. Assess pain/sedation level every 4 hours.

STEP 2 Assess for delirium using the Modified Confusion Assessment Method for the ICU (CAM ICU)

Administer Haloperidol 5mg IVP every 2 hours PRN if delirium is noted on CAM ICU assessment (notify physician if > 100mg administered over 48 hours)

STEP 3 Assess patient's anxiety using the Richmond Agitation Sedation Scale (RASS)

I. Adequate sedation is mandatory during use of NMBA or paralytic therapy. EEG monitoring is recommended for assessment in patients with NMBA or paralytic infusions

II. Rule out environmental or reversible causes

Hypoxemia	Pain
Hypercarbia	Alcohol withdrawal
Hyperglycemia	Drug withdrawal
Hypoglycemia	Electrolyte abnormalities
Hypotension	Avoid excessive stimulation

III. Use sedatives to achieve goal of 0 to -2 on RASS. (EEG monitoring may be used to supplement RASS. Must be ordered separately)

If frequent neurological assessment is required or sedation is planned to be less than 72 hours:

☐ PROPOFOL:

1. Initial dosing: 25mg IVP one time bolus
2. Start continuous infusion at 5mcg/kg/min.
3. Titrate by 5mcg/kg/min every 5 min to RASS goal or max of 80 mcg/kg/min
4. Monitor triglycerides 48 hours after infusion started if propofol still infusing. Notify physician for triglyceride level greater than 400mg/dl

☐ MIDAZOLAM (should not be used in patients with severe renal dysfunction and/or for more than 72 hours)

1. Initial dosing: 2mg IVP PRN every 20 min to achieve sedation goal
2. Intermittent dosing: 2mg every 1 hour PRN to maintain sedation goal
3. If intermittent dosing is required more often than every hour, begin continuous infusion of 1mg/hour and titrate by 1mg/hr every 10 minutes to RASS goal. Maximum dose is 0.2mg/kg/hr

If less frequent neurological assessment is required or sedation is expected to last longer than 72 hours:

☐ LORAZEPAM (Drug of choice for long term sedation)

1. Initial dosing: 2mg IVP PRN every 20 min to achieve sedation goal
2. Intermittent dosing: 2mg every 2 hours PRN to maintain sedation goal
3. If intermittent dosing is required more often than every 2 hours, begin continuous infusion of 1mg/hour titrate by 1mg/hr every hour to sedation goal.

If under medicated, rebolus using intermittent dosing as prescribed above and increase continuous infusion dose by 50%.

If overmedicated, hold continuous infusion until at sedation goal then restart continuous infusion at a dose decreased by 50%.

If patient has been on Propofol for longer than three days and does not have compromised ICP, it is recommended that sedation be changed to Lorazepam.

III. Assess pain/sedation level every 4 hours

STEP 4 Perform awakening trial daily

I. All sedation should be stopped at time daily awakening trial is performed

II. Allow patient to awaken to RASS 0 to +1 before restarting

III. Alert MD for assessment

IV. If necessary to restart sedation/analgesia, restart at 50% prior dose

V. Do not attempt awakening trial in patients with NMBA or paralytic infusions

Date: _____ Physician Signature: _____