Date & Time	**Sedation Protocol for Mechanically Ventilated Patients** Page 1 of 4
	FOR CONTINUOUSLY MONITORED PATIENTS IN THE ICU SETTING *If adjunct restraint is used, the appropriate order form must be completed*
	Drug Allergies:____ ☐ NKA
	☐ Consult ICU Pharmacotherapist to assist with initiation and titration of analgo-sedation during mechanical ventilation
	<u>Early Mobility:</u> ☐ Consult PT/OT to evaluate and treat daily for early mobilization Exclusions for Aggressive Mobilization • Significant vasopressor requirement (multiple pressors, or norepinephrine monotherapy > 10 mcg/min) • Mechanical ventilation requirement of $Fi0_2$ > 80% and/or PEEP > 12; or acutely worsening respiratory failure • Use of neuromuscular paralysis • Currently in acute neurological event (CVA, SAH, ICH) • Unstable spine or extremity fractures • Grave prognosis, transitioning to comfort care • Open abdomen, or at risk for wound dehiscence • Actively bleeding • Bed rest order

	<u>Special Instructions:</u>
	
	• These orders are NOT indicated for the following situations:
	    o Alcohol or benzodiazepine withdrawal
	    o Patients with status epilepticus
	
	• Do NOT use Richmond Agitation Sedation Scale (RASS) or Critical Care Pain Observation Tool (CPOT) for patients receiving neuromuscular blockade
	• Consider PAIN medications PRIOR to administration of sedative agents and/or painful procedures
	• Discontinue Sedation Protocol upon extubation (new orders must be written to continue analgesics and/or sedatives)
	• Re-evaluate analgesia/sedation goals DAILY
	• For ALL analgesics and sedatives, intermittent bolus dosing is preferred over continuous infusions

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	Pharmacy Mnemonic: SEDATE2
	Select One Level Only: ☐ Initial Order ☐ Change Order (discontinue previous level of sedation)
	Medications: (select ONE level ONLY)
	☐ **LEVEL 1:** **ESTABLISH & ACHIEVE LIGHT SEDATION; MANAGE ACUTE PAIN/AGITATION**

Goals:

- Pain via CPOT: _____________(< 3 recommended)
  Note: CPOT < 3 in patient with abnormal mentation does NOT rule out presence of pain
- Sedation via RASS: ______________ (-2 to +1 recommended)
- Nurse to perform CAM-ICU every 12 hours for delirium monitoring

☐ Fentanyl 50 mcg IVP every 5 minutes PRN pain (CPOT > 3; maximum 2 doses per hour)
- For unrelieved pain after 2 doses, may increase to 100 mcg IVP every 5 minutes PRN pain (maximum 2 doses per hour)

OR

☐ Dilaudid (hydromorphone) 0.5 mg IVP every 15 minutes PRN pain (CPOT > 3; maximum 2 doses per hour)
- For unrelieved pain after 2 doses, may increase to 1 mg IVP every 15 minutes PRN pain (maximum 2 doses per hour)

If patient receives four (4) analgesic boluses in one hour, nurse may initiate Fentanyl infusion (if selected below)

☐ Fentanyl 10 microgram/ml infusion___________ (usual starting dose 50 mcg/hr); titrate by 25 mcg/hr every 15 minutes to achieve goal CPOT and RASS. Maximum 400 mcg/hr.

Nurse may initiate sedative if:
- Patient attains goal pain score but RASS is above goal
- RASS is not attained after Fentanyl infusion has been titrated to 100 mcg/hr

☐ Propofol 10,000 mcg/mL infusion: Initiate at 10 mcg/kg/min. May titrate by 10 mcg/kg/min every 5 minutes to a maximum of 50 mcg/kg/min to achieve goal RASS
- Consider checking serum CPK and triglycerides periodically during therapy, especially if used > 3 days and at high infusion rates

OR

Patients with significant hemodynamic instability, propofol intolerance, or have received high-dose propofol for > 3 days:

☐ Midazolam 100mg in 100 mL infusion (1:1): Initiate at 1 mg/hr. Titrate by 1 mg/hr every 30 minutes to a maximum of 10 mg/hr to achieve RASS goal
- Note that benzodiazepine use is associated with delayed awakening, increased delirium, and duration of mechanical ventilation
- Use lowest dose possible to attain RASS and switch or discontinue sedative when clinically appropriate

Nursing instructions:
1. Assess level of pain and sedation via CPOT and RASS every 4 hours and every 30 min PRN after boluses or infusion rate changes
2. Coordinate discontinuation of analgesic and sedative infusions with morning spontaneous breathing trials (SBT)
3. Upon SBT failure, reinitiate analgesic and sedative infusions at 50% of previous rate

Date & Time	**Sedation Protocol for Mechanically Ventilated Patients**
	Pharmacy Mnemonic: SEDATE3
	☐ **LEVEL 2:** **Deep sedation is indicated; for example patients on neuromuscular blockade, therapeutic hypothermia, or those whose clinical status requiring deeper level of sedation (refractory hypoxemia, elevated peak airway pressures.)**
	Goals: • Pain via CPOT: ____________(< 3 recommended) Note: CPOT < 3 in patient with abnormal mentation does NOT rule out presence of pain • Sedation Goal: ☐ RASS -4 to -5 ☐ Other (ie. ventilator synchrony, peak airway pressure control, etc.): ______________
	Continuous Analgesic: ☐ Fentanyl 10 microgram/ml infusion __________ (usual starting dose 50 mcg/hr); titrate by 25 mcg/hr every 15 minutes to achieve goal CPOT and RASS. Maximum 500 mcg/hr. Continuous Sedative: ☐ Propofol 10,000 mcg/mL infusion: Initiate at 10 mcg/kg/min. Titrate up by 10 mcg/kg/min every 5 minutes to goal sedation target. Maximum 50 mcg/kg/min • Consider checking serum CPK and triglycerides periodically during therapy, especially if used > 3 days and at high infusion rates **OR** *Contraindication or Intolerance to Propofol:* ☐ Midazolam 100mg in 100 mL NS infusion (1:1): Initiate at 1 mg/hr. Titrate by 1 mg/hr every 30 minutes to a maximum of 10 mg/hr to achieve goal sedation target

DOCTOR'S ORDERS

Date & Time	Sedation Protocol for Mechanically Ventilated Patients Page 4 of 4
	Pharmacy Mnemonic: SEDATE4
	Other: Patients in whom extubation is anticipated within 24 hours and are at high-risk for failing ventilator weaning due to agitation: ☐ Precedex (dexmedetomidine) 200 mcg in 50 mL NS infusion: Initiate at 0.3 mcg/kg/hr; titrate by 0.2 mcg/kg/hr every 15-30 minutes until RASS of 0 to-1 is attained. Titrate to maximum of 1.5 mcg/kg/hr as needed • Hold for HR <60 and MAP < 70 • Reduce analgesic infusions or boluses by 50% during dexmedetomidine therapy • Wean previous sedative infusions by 25% every 30 minutes when dexmedetomidine initiated • May be continued through SBT and weaned after extubation
	Adjunctive Neuroleptic: ☐ Obtain 12-1ead EKG x l ☐ Haldol (haloperidol) 5 mg IV every 30 minutes PRN RASS +2 or greater • May increase to l0 mg IV every 30 minutes after 2 consecutive doses • Hold if QTc > 500 msec ☐ Olanzapine 5 mg IM every 4 hours PRN RASS +2 or greater • Hold if QTc > 500 msec

_______/________ Date Time

________________________ Physician Signature

DOCTOR'S ORDERS