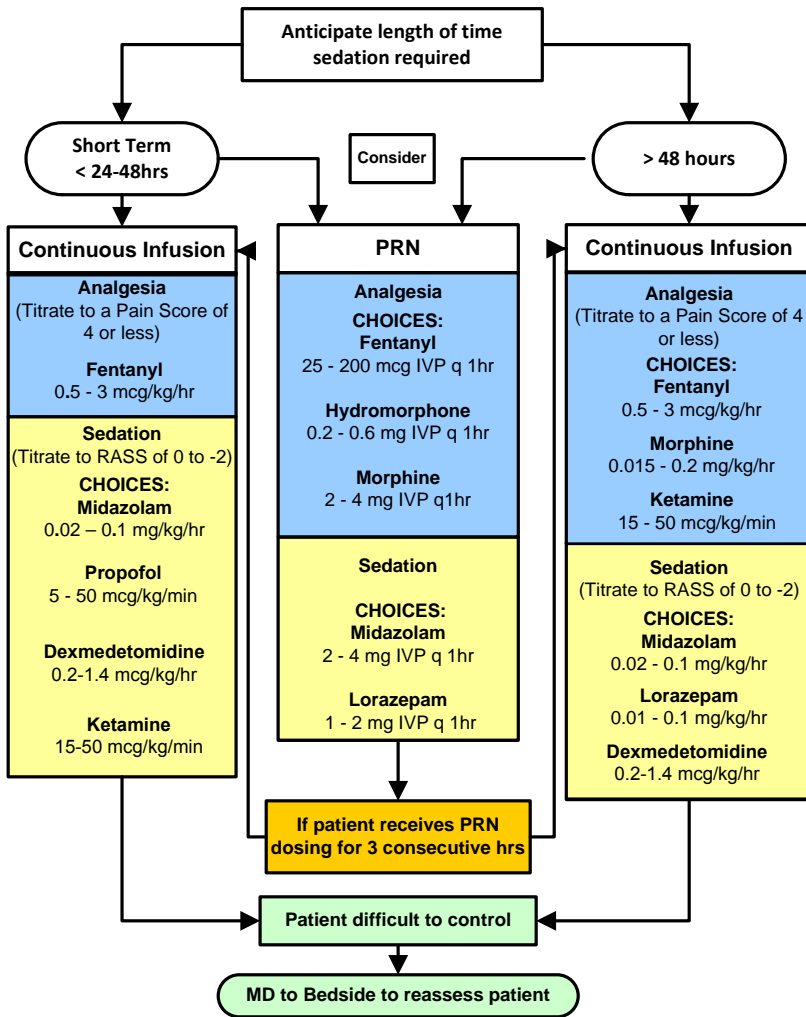
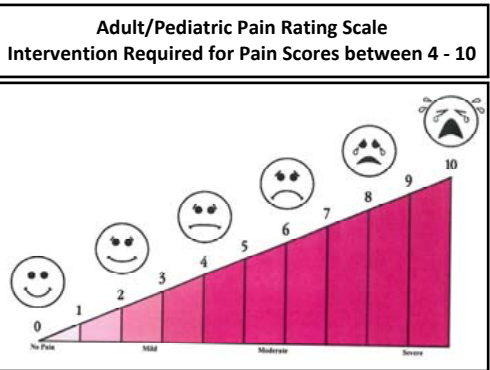


Neuro Critical Care Analgesia & Sedation Protocol for the Mechanically Ventilated Patient



Richmond Agitation-Sedation Scale (RASS)	
+4	Combative Combative, violent, immediate danger to staff
+3	Very Agitated Pulls to remove tubes or catheters, aggressive
+2	Agitated Frequent non-purposeful movement, fights ventilator
+1	Restless Anxious, apprehensive, movements not aggressive
0	Alert & Calm Spontaneously pays attention to caregiver
-1	Drowsy Not fully alert but has sustained awakening to voice (eye opening & contact >10 sec)
-2	Light Sedation Briefly awakens to voice (eyes open & contact <10sec)
-3	Moderate Sedation Movement or eye opening to voice (no eye contact)
-4	Deep Sedation No response to voice, but movement or eye opening to physical stimulation
-5	Unarouseable No response to voice or physical stimulation

ANALGESIA	FENTANYL TITRATION
	Increase infusion rate by 0.35 - 0.7 mcg/kg/hr every 5 minutes. BOLUS: May bolus 0.5 mcg/kg every 5 minutes until desired level Call provider for rate > 3 mcg/kg/hr or 200 mcg/hr
	MORPHINE TITRATION
Increase infusion rate by 0.01 - 0.015 mg/kg/hr every 15 minutes. BOLUS: May bolus 0.03 mg/kg every 5 minutes until desired level Call provider for rate > 0.2 mg/kg/hr or 15 mg/hr	
Increase infusion rate by 5-10 mcg/kg/min q 10min Call provider for rate > 50 mcg/kg/min or 5000 mcg/min	



SEDATION	PROPOFOL TITRATION	MIDAZOLAM TITRATION
	Increase infusion rate by 5 mcg/kg/min every 5 minutes BOLUS: May bolus 0.5 mg/kg until desired level every 5 minutes Call provider for rate > 50 mcg/kg/min DO NOT EXCEED 70 mcg/kg/min Obtain baseline triglyceride level, and a level every 3 days. if infusion rate is 40mL/hr or greater obtain a level daily. Call provider for level greater than 450 mg/dL.	Increase infusion rate by 0.01 - 0.015 mg/kg/hr every 5 minutes. BOLUS: May bolus 0.02 mg/kg every 5 minutes until desired level Call provider for rate > 0.1 mg/kg/hr or 7 mg/hr ***Use Midazolam with caution in: Asians, Renal & Liver failure, Elderly>65
Increase infusion rate by 0.1 - 0.3 mcg/kg/hr every 15 minutes. Call provider for rate > 1.4 mcg/kg/hr Hold and call provider for significant bradycardia, do not titrate if HR<60 or SBP<90	LORAZEPAM TITRATION	
	Increase infusion rate by 0.01 - 0.015 mg/kg/hr every 5 minutes. BOLUS: May bolus 0.02 mg/kg every 5 minutes until desired level Call provider for rate > 0.1 mg/kg/hr or 7 mg/hr	

DAILY SEDATION INTERRUPTION

- Hold both the sedative and analgesic infusions every morning to allow for an accurate neurological assessment.
* Do not interrupt the analgesic infusion in patients who currently follow commands, but reduce the dose by ½.
 - Provider should be immediately called to the bedside to evaluate the patient once there is a change in clinical status including but not limited to agitation, fighting the ventilator, O2 desaturation, or awake and able to follow commands.
 - After the physician or the nurse has evaluated the patient, the infusion(s) THAT ARE NECESSARY for adequate patient sedation and or analgesia is (are) re-started at ½ the previous dose(s) and then titrated up as necessary to the minimal effective dose(s).
 - A spontaneous breathing trial should be done in conjunction with the daily sedation holiday. Please refer to Spontaneous Breathing Trial Protocol for exceptions
- CONTRAINDICATIONS TO SEDATION INTERRUPTION:**
Undergoing active treatment for elevated ICP - Status Epilepticus - Receiving neuromuscular blocking agents Hypoxemia PEEP > 18 or FiO2 > 80% - ARDS
**** Patients identified at increased risk of self-extubation should not be turned during the sedation interruption.****