**STICU Non-Weight-Based Dosing Analgesia & Sedation Protocol for the Mechanically Ventilated Patient**

**Analgesia**
- **Fentanyl**:
  - Continuous Infusion: Titrate to Pain Score 4 or less
  - PRN: 25 - 200 mcg IVP q 1hr

**Sedation**
- **Midazolam**: 0.5 - 5 mg/hour
- **Lorazepam**: 1 - 2 mg IVP q 1hr
- **Dexmedetomidine**: 0.2 - 1.4 mcg/kg/hr

**Propofol**: 5 - 50 mcg/kg/min

**Dexametomidine**: 0.2 - 1.4 mcg/kg/hr

**Continuous Infusion**
- **Analgesia** (PRN Pain Score 4 or more)
  - **CHOICES:**
    - Fentanyl: 25 - 200 mcg IVP q 1hr
    - Hydromorphone: 0.2 - 0.6 mg IVP q 1hr
    - Morphine: 2 - 4 mg IVP q 1hr
    - Ketamine: 2 - 50 mcg/kg/min

**Sedation** (Titrate to RASS of 0 to -2)
- **CHOICES:**
  - Midazolam: 0.5 - 5 mg/hour
  - Lorazepam: 1 - 2 mg IVP q 1hr

**Analgesia** (Titrate to a Pain Score of 4 or less)
- **CHOICES:**
  - Fentanyl: 50 - 200 mcg/hour
  - Morphine: 1 - 10 mg/hour

**Patient difficult to control**
- **MD to Bedside to reassess patient**

**If patient receives PRN dosing for 3 consecutive hrs**
- Consider

**Anticipate length of time sedation required**
- **Short Term (< 24-48hrs)**
- **> 48 hours**

**DANGERS TO SEDATION INTERRUPTION**
- Patient difficult to control
- Patient not able to follow commands
- No response to voice or physical stimulation

**CONTRAINDICATIONS TO SEDATION INTERRUPTION**
- Undergoing active treatment for elevated ICP
- Status Epilepticus
- Receiving neuromuscular blocking agents
- Hypoxemia
- PEEP > 18 or FiO2 > 80%
- ARDS

**DAILY SEDATION INTERRUPTION**
1. Hold both the sedative and analgesic infusions every morning to allow for an accurate neurological assessment.
2. Provider should immediately call 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 unable to follow commands.
3. 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 titrated up as necessary to the minimal effective dose(s).
4. A spontaneous breathing trial should be done in conjunction with the daily sedation holiday. Please refer to Spontaneous Breathing Trial Protocol for exceptions.

**Fentanyl Titrations**
- **Increase infusion rate by 25 mcg/hour every 5 minutes.**
  - **BOLUS:** May bolus 25 mcg every 5 minutes until desired level
  - **Call provider for rate > 200 mcg/hr**

**Morphine Titrations**
- **Increase infusion rate by 1 mg/hour every 10 minutes.**
  - **BOLUS:** May bolus 2 mg every 10 minutes until desired level
  - **Call provider for rate > 10 mg/hr**

**Ketamine Titrations**
- **Increase infusion rate by 5 mcg/kg/min q 10min**
  - **BOLUS:** May bolus 0.5 mg/kg every 10 minutes until desired level
  - **Call provider for rate > 50 mcg/kg/min**

**Dexmedetomidine Titrations**
- **Increase infusion rate by 0.1 mcg/kg/hr every 15 minutes**
  - **Call provider for rate > 1.4 mcg/kg/hr**

**Midazolam Titrations**
- **Increase infusion rate by 1 mg/hour every 5 minutes.**
  - **BOLUS:** May bolus 1 mg every 5 minutes until desired level
  - **Call provider for rate > 10 mg/hr**

**Lorazepam Titrations**
- **Increase infusion rate by 1 mg/hour every 15 minutes.**
  - **BOLUS:** May bolus 1 mg every 15 minutes until desired level
  - **Call provider for rate > 5 mg/hour**

**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 wakes 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

**Adult Pain Rating Scale**
- Intervention Required for Pain Scores between 4 – 10
- Use Verbal or Non-Verbal scales as appropriate.

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