

Indications:

- For the treatment of pain, anxiety and/or agitation in patients with an advanced airway.
- Continuous infusions may be considered in other critically ill patients
 - Who have or may require multiple intermittent doses of sedative or pain medications
 - If started at the sending facility or ordered by the sending physician
 - As directed by Online Medical Control

Administration Notes:

- **Continuous pulse oximetry, continuous end-tidal CO₂ (ETCO₂) monitoring and continuous ECG (heart rate) monitoring must be used and documented.**
- Contact Online Medical Control for any question of indication or dosage, or if additional/alternative meds may be beneficial.
- Continuous infusions should always be administered via an agency-approved infusion pump. Sedative medications should not be administered via a pediatric or adult drip set.

Approach to Under-Sedation

If the patient requires additional sedation and/or pain control despite the maximum infusion rate:

1. Consider adding a Fentanyl or Ketamine infusion to a sedative-only infusion (if the patient has or is suspected to have pain/discomfort).
2. Provide an **Intermittent (Bolus) Dose** of an appropriate sedative or pain medication.
3. Contact Medical Control for further instructions.

Note: EMS providers may not increase an infusion rate beyond the maximum unless the patient was on the higher dose at the time of transfer or under direction from Medical Control.

Approach to Hypotension

Do not stop a sedative infusion just for hypotension. Sick patients still need sedation or pain control. Balance the reduction in sedation with appropriate hemodynamic support:

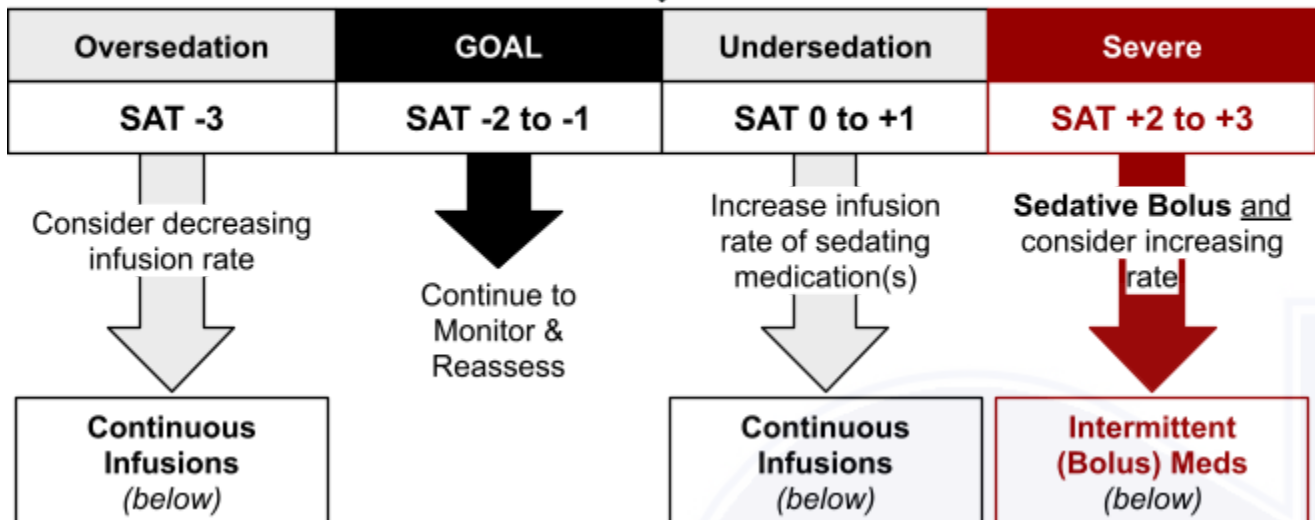
1. Provide a Fluid bolus (if appropriate)
2. Decrease the infusion rate of sedative/pain medication
3. Initiate appropriate vasopressor, as per Medical Shock

Sedation Goals

Continuous Patient Reassessment (*as per Universal Care [1-01]*) & Evaluation/Reevaluation of Appropriate Level of Sedation:

Determine Sedation Assessment Tool (SAT) Score:

SCORE	RESPONSIVENESS	SPEECH
+3	Combative, violent, out of control	Continual loud outbursts
+2	Very anxious and agitated	Loud outbursts
+1	Anxious and restless	Normal / Talkative
0	Responds easily to name, speaks in normal tone	Speaks normally
-1	Responds only if name is called loudly	Slurring or prominent slowing
-2	Physical stimulation	Few recognisable words
-3	No response to stimulation	Nil



Continuous Infusions

Sedative & Pain

Ketamine

Starting dose: 0.2 mg/kg/hour
Maximum: 2.5 mg/kg/hour

C

Ketamine
0.2 to 2 mg/kg/hour

Sedative Only

Midazolam [Versed]

Starting dose: 0.5 mcg/kg/hour
Maximum: 2 mcg/kg/hour

C

Midazolam [Versed]
0.5 to 2 mcg/kg/hour

Propofol [Diprivan]

Starting dose: 5 mcg/kg/minute
Maximum: 50 mcg/kg/minute

C

Propofol
5 to 50 mcg/kg/minute

Dexmedetomidine [Precedex]

Starting dose: 0.2 mcg/kg/hour
Maximum: 1.5 mcg/kg/hour

C

Dexmedetomidine
0.2 to 1.5 mcg/kg/hour

Pain Only

Fentanyl

Starting dose: 0.5 mcg/kg/hour
Maximum: 2 mcg/kg/hour

C

Fentanyl
0.5 to 2 mcg/kg/hour

Note: Continuous administration of paralytics (Rocuronium or Vecuronium) may be continued if initiated by the sending facility. The initiation of a paralytic drip by EMS personnel will only be at the direction of Online Medical Control.

RX-06 ADVANCED SEDATION & ANALGESIA	Titratable Medications are only within the scope of a Critical Care Paramedic or Flight Nurse	<table border="1"> <tr><td>First Responder</td></tr> <tr><td>EMT</td></tr> <tr><td>AEMT</td></tr> <tr><td>Paramedic</td></tr> </table>	First Responder	EMT	AEMT	Paramedic
First Responder						
EMT						
AEMT						
Paramedic						

Intermittent (Bolus) Medications

Sedative & Pain

Ketamine

0.5 to 1 mg/kg IV/IO

Standard Adult dose: 50-100 mg IV/IO

P	Ketamine 0.5 to 1 mg/kg IV/IO <u>or</u> 2-5 mg/kg IM
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Sedative Only

Midazolam [Versed]

0.05 to 0.1 mg/kg IV/IO

or 0.1-0.2 mg/kg IM/IN

Standard Adult Dose: 1-2 mg IV/IO

or 2-5 mg IM/IN

P	Midazolam [Versed] 0.05 to 0.1 mg/kg IV/IO or 0.1 to 0.2 mg/kg IM/IN
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Pain Only

Fentanyl

0.5 to 1 mcg/kg IV/IO

or 1-2 mcg/kg IM/IN

Standard Adult Dose: 25-100 mg IV/IO

or 50-100 mcg IM/IN

P	Fentanyl 0.5 to 1 mcg/kg IV/IO <u>or</u> 1-2 mcg/kg IM/IN
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Repeat all intermittent medications as needed (generally every 10-15 minutes)

QI Review Parameters:

1. {TBD}