

SAN FRANCISCO EMERGENCY MEDICAL SERVICES AGENCY

Effective: 01/07/13
Supersedes: 08/01/08

Protocol: P-207

CHEMICAL SEDATION FOR VENTILATOR-DEPENDENT AND AGITATED PATIENTS CCT PARAMEDICS

INFORMATION REQUIRED

- Treatment provided and transferring physicians orders are within the CCT-P Scope of Practice.
- Ventilator dependent patient requiring chemical sedation or restraint due to agitation, restlessness and/or anxiety that is compromising the patient's stability.
- Agitated patient requiring chemical sedation or restraint due to restlessness and/or anxiety that is compromising the patient's stability.

OBJECTIVE FINDINGS

- Agitation
- Restlessness
- Anxiety
- Changes in cardiac monitor
- Increase level of distress
- Changes in vital signs
- Need for invasive procedure
- Decrease in pulse oximetry

CCT- P Treatment
<ul style="list-style-type: none">• Patients shall be placed and maintained on cardiac and pulse oximetry monitors during transport.• Signed transfer orders from the transferring physician must be obtained prior to transport. Transfer orders must provide for maintaining the chemical sedation during transport. If patient meets the criteria for chemical sedation and no orders are given see guidelines for administration of Midazolam below.•
Ventilator Dependent Patients
<ul style="list-style-type: none">• <u>Apply soft restraints if appropriate.</u>• Continuously monitor oxygen saturation, end-tidal CO2, heart rate, blood pressure and LOC.• Guidelines for the administration of Midazolam for adults 12 years or older:<ul style="list-style-type: none">- Midazolam 2 – 4 mg slow IV push- May repeat dose every 20 – 30 minutes as needed for sedation. Maximum total dose is 10 mg.- Use IM only if IV access is unavailable. IM dose is 3 – 5 mg, given deep into a large muscle mass. Maximum total dose is 10 mg.- May repeat IM dose every 60 – 90 minutes as needed for sedation.

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Agitated Patients

- Continuously monitor oxygen saturation, end-tidal CO₂, heart rate, blood pressure and LOC
- Guidelines for the administration of **Midazolam** for adults 12 years or older:
 - **Midazolam** 2 – 4 mg slow IV push
 - May repeat with smaller IV dose of 1 – 2 mg every 20 – 30 minutes as needed for sedation. Maximum total dose is 6 mg
 - Use IM only if IV access is unavailable. IM dose is 3 – 5 mg, given deep into a large muscle mass
 - May repeat with smaller IM dose of 1 – 3 mg every 60 – 90 minutes as needed for sedation. Maximum total dose is 6 mg.

PRECAUTIONS AND COMMENTS

- This procedure shall only be performed by paramedics with CCT-P (Critical Care Transport-Paramedic) training and designation.
- Assess for sedative side effects. **Midazolam** is 3 – 4 times more potent than Diazepam.
- The half-life of **Midazolam** is < 2 hours.
- Onset of action is usually 2 – 5 minutes. Wait after each incremental dose to assess effect. A total dose greater than 6 mg is usually not necessary.
- Serious cardio-respiratory complication may occur. These include respiratory depression, apnea, respiratory arrest and/or cardiac arrest. Resuscitation equipment should be immediately available.
- Hypotension has been noted, particularly with concomitant narcotic administration.
- Use 25 – 33% less **Midazolam** if narcotics are co-administered or administered prior to arrival.
- If the patient is hypovolemic, (as defined by SBP < 90 or other clinical indicators) either decrease the dose by 50% or do not administer the **Midazolam**.