

REQUEST FOR APPROVAL

Check One:  Local Optional Scope of Practice  Trial Study

EMS Medical Director: Dr. Katherine Shafer, MD Date: July 13th 2018

Local EMS Agency: Mountain Valley EMS Agency

Proposed Procedure or Medication: Ketamine for analgesia

Please provide the following information. For information provided, check "yes" and describe. For information not provided, check "no" and state the reason it is not provided.

- |                          |                                     |                                                                                                                                                                                                                                        |
|--------------------------|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Yes                      | No                                  |                                                                                                                                                                                                                                        |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 1. Description of the procedure or medication requested: <u>Current with exsisting documents</u>                                                                                                                                       |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 2. Description of the medical conditions for which the procedure/medication will be utilized: <u>Current with exsisting documents</u>                                                                                                  |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 3. Patient population that will benefit: <u>Current with exsisting documents</u>                                                                                                                                                       |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 4. Description of proposed study design including the scope of the study, research question, method of evaluating the effectiveness of the procedures or medications and the expected outcome. <u>Current with exsisting documents</u> |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 5. Alternatives (Please describe any alternate therapy[ies] considered for the same conditions and any advantages and disadvantages): <u>Current with exsisting documents</u>                                                          |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 6. Estimated frequency of utilization: <u>Current with exsisting documents</u>                                                                                                                                                         |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | 7. Other factors or exceptional circumstances: <u>Current with exsisting documents</u>                                                                                                                                                 |

Please attach the following documents. Check "yes" for each document attached; for documents not attached, check "no" and please state the reason it is not attached.

- |                                     |                                     |                                                                                                                                              |
|-------------------------------------|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Yes                                 | No                                  |                                                                                                                                              |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 8. Any supporting data, including relevant studies and medical literature. _____                                                             |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 9. Recommended policies/procedures to be instituted regarding:<br>Use <u>Attachment A- MVEMSA policy 554.47 "Ketamine for Analgesic Use"</u> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Medical Control <u>See policy 554.47</u>                                                                                                     |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Treatment Protocols <u>See policy 554.47</u>                                                                                                 |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Quality assurance of the procedure or medication <u>See policy 554.47</u>                                                                    |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 10. Description of the training and competency testing required to implement the procedure or medication.<br><u>See attachment B</u>         |

- 11. Copy of the local EMS System Evaluation and Quality Improvement Program plan for this request.  
See attachment C \_\_\_\_\_
  
- 12. Make up of local medical advisory committee, appointed by the medical director, to assist with the evaluation of the trial study. \_\_\_\_\_

# Attachment A

POLICY: 554.47  
TITLE: Ketamine for Analgesic Use

EFFECTIVE: 11/01/2017  
REVIEW: 11/2022  
SUPERCEDES:

APPROVAL SIGNATURES ON FILE IN EMS OFFICE

PAGE: 1 of 2

**KETAMINE FOR ANALGESIC USE**

- I. **AUTHORITY** : Health and Safety Code, Division 2.5, California Code of Regulations, Title 22, Division 9
- II. **PURPOSE**: To serve as a patient treatment standard for Paramedics within their scope of practice.
- III. **PROTOCOL**: Every patient deserves to have his or her pain managed. Consider reassurance, position of comfort, ice and gentle transport as part of pain management. Privacy and separation from parents may benefit adolescents. Do not attempt to completely relieve the patient's pain, but treat aggressively enough to make it bearable.
  - ❖ **If a Non-Transport ALS first response provider starts the administration of Ketamine, that provider must accompany the patient to the hospital and maintain primary care of the patient.**
  - ❖ **No additional narcotics shall be administered to patients once the patient receives Ketamine**

**Eligibility Criteria:**

1. 15 years of age or older
2. GCS of 15
3. Acute Traumatic or Burn injury

1. Known/Suspected Alcohol/Drug Intoxication
2. Known/Suspected pregnancy
3. Allergy to Ketamine
4. Received narcotic analgesics of ANY form within the past 6 hours

**Exclusion Criteria**

**STANDING ORDERS**

<b>GENERAL ASSESSMENT</b>	CAB
<b>OXYGEN</b>	Oxygen delivery as appropriate to maintain O <sub>2</sub> saturation 92 – 98%
<b>MONITOR</b>	
<b>PULSE OXIMETRY</b>	
<b>IV ACCESS</b>	TKO
<b>ASSESS PAIN</b>	Utilize pain scale found below. Note and document initial pain score.
<b>KETAMINE</b>	If pain score is 5 or above, mix 0.3 mg/kg Ketamine (max dose = 30mg) in 50 - 100cc NSS or D5W, and administer slow IV drip over 5 minutes.
<b>PLACE BAND</b>	Place “Ketamine Administered” wrist band on patient.
<b>REASSESS</b>	Assess and document pain score every 5 minutes for duration of transport.

**KETAMINE**

If after 15 minutes or more, the pain score is 5 or higher, may administer a second dose of 0.3 mg/kg Ketamine (max dose = 30mg) in 50 - 100cc NSS or D5W, and administer slow IV drip over 5 minutes.

This is the official pain scale to be used in patient assessment and documented on the PCR.



# Attachment B

# Ketamine for Acute Pain

# Pain

- Pain is defined as suffering or feeling of discomfort
- In EMS, usually caused by acute injury or illness
- Pain can be physical, emotional, or mental
- EMS faces all types of pain and can administer medications to help relieve physical pain



# Challenge of Treating Pain

- Each person tolerates pain uniquely
- No single agent works uniformly for everyone
- Subjective assessment
- Acute pain can turn into chronic pain
- Long-term narcotics can lead to addiction and mental pain

# Why do we need another pain medication?

- Opioid crisis
- Many people have adverse effects to narcotics
- Addiction potential
- Limited non-narcotic parenteral agents
- Treating pain is humane

# Goals of care

- Adequate relief of pain
- Safe medication administration

# Current Treatment Options

- Parenteral narcotics
- Aspirin
- There are no other agents permitted for prehospital analgesia in the State of California

## Ketamine – a new treatment

- Increasing use for analgesia in emergency departments
- Administered as an IV infusion slowly over 5 minutes
- Lower dosage than for sedation/intubation
- Hemodynamic stability
- Safe and effective with rapid onset and short duration

## Ketamine – side effects

- Most common is nausea with analgesic doses
- Other side effects if using high dose ketamine:
  - Laryngospasm
  - Tachycardia
  - Hypertension
  - Increased salivation

## Ketamine for Acute Pain

- Patients who are **15 years or older** with acute traumatic or burn injury, a GCS of 15, an analog pain score of at least 5 (on a scale of 1-10), and who are in need of an analgesic, are eligible to receive ketamine

## Exclusions

- Patients should NOT receive ketamine if any one of the following is true:
  - GCS 14 or under
  - Pregnancy
  - Known or suspected alcohol or drug intoxication
  - Known allergy to ketamine
  - Has received narcotic analgesic in past 6 hours
  - Pain score not above 5 prior to administering Ketamine



# Ketamine Administration and Dosage

- Dose of 0.3mg/kg with a maximum of 30mg
  - You must approximate the weight of the patient
- Ketamine is most commonly supplied as a 10mg/ml, 50 mg/ml or 100 mg/ml solution
- Key to administration and decreasing side effects is a slow IV infusion over at least 5 minutes
- You can use ondansetron for nausea if necessary
- DO NOT administer narcotic analgesic in addition to Ketamine
- DO NOT administer Ketamine IM nor IN

# Mixing Ketamine in an IV infusion bag

- Draw up the appropriate amount of Ketamine BASED ON THE CONCENTRATION OF KETAMINE carried
  - For example, a 30 mg dose would be the following:
    - 3 mls of a 10mg/ml concentration
    - 0.6 mls of a 50 mg/ml concentration
    - 0.3 mls of a 100mg/ml concentration
- Add the ketamine to a 50 cc bag of normal saline or D5W (note: Ketamine is stable in BOTH)
- Attach an adult drip set (10 gtts/ml)
- Run the infusion over approximately 5 minutes (120 gtt/min or 2 gtt/sec)

## Post-Administration

- Relief starts quickly after administration
- You must record initial pain score (scale of 1 to 10)
- Pain scores should be reported at administration and every 5 minutes thereafter
- Must document weight, dosage, and pain scores in patient care record
- You may give one additional dose of 0.3mg/kg (max single dose = 30mg) as an IV infusion if, after 15 minutes, the pain score remains at or above 5.
- Do Not administer narcotic analgesic if Ketamine has been given
- Call base hospital physician if any questions or concerns

# Questions?

- Please contact the EMS Agency for any questions
- Any complications should be reported immediately
- You may freely utilize the base hospital physicians for any medical direction

# Attachment C

**EMERGENCY MEDICAL SERVICES AUTHORITY**

10901 GOLD CENTER DRIVE, SUITE 400  
RANCHO CORDOVA, CA 95670  
(916) 322-4336 FAX (916) 324-2875



February 23, 2018

Richard Murdock, Executive Director  
Mountain Valley EMS Agency  
1101 Standiford Ave. #D1  
Modesto, CA 95350

Dear Mr. Murdock:

After a review, the Emergency Medical Services Authority has determined that the *Mountain Valley EMS Agency Quality Improvement Program* is in compliance with Title 22, Division 9, Chapter 12 *EMS System Quality Improvement* and *EMSA #166 Emergency Medical Services System Quality Improvement Program Model Guidelines*.

An update will be due 12 months from the date of this letter (February 23, 2019). If you have any questions regarding the plan review, please call Adam Davis, at (916) 322-4336, extension 409.

Sincerely,

A handwritten signature in cursive script, appearing to read "Tom McGinnis".

Tom McGinnis, EMT-P  
EMS Systems Division Chief

TM:ad

