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To: Massachusetts Licensed Ambulance Services,
Affiliate Hospital Medical Directors and Hospital Pharmacists

From: Eric Sheehan, JD, Director, Bureau of Health Care Safety and Quality
Jon Burstein, MD, Medical Director, Office of Emergency Medical Services

Date: December 15, 2016

Re: Ketamine authorized for use by paramedics when treating behavioral emergency patients.

Purpose:
This notification is intended to update ambulance services, their affiliate hospital medical directors, and their affiliate hospital pharmacists regarding the implementation of the EMS Statewide Treatment Protocols (STP) adding Ketamine as an optional medication, pursuant to Protocol 2.4 Behavioral Emergencies (see attached, as Appendix A).

Background:
Ketamine was added to the 2016 STP, effective December 15, 2016, as an approved optional drug for use by paramedics under Protocol 2.4, as a single dose of 4 mg/kg intramuscularly in the rare event of a behaviorally dyscontrolled adult patient whose condition is so severe that it cannot be managed safely in any other manner. The language and dosing align with the 2016 National Model EMS Clinical Guidelines, published by the National Organization of State EMS Officials.

Timeline:
Ketamine is a Schedule III controlled substance under chapter 94C of the General Laws. As such, ambulance services wishing to use this option cannot currently carry Ketamine under their existing Massachusetts Controlled Substance Registrations (MCSR).

Once MCSR processes have been updated to reflect this change in STP, ambulance services will be able to apply to carry or use Ketamine as outlined in Protocol 2.4. As this process proceeds, the Department will provide further guidance on implementation of this provision.

Contact Information
For questions about the STP, please contact Renee Atherton, at renee.atherton@state.ma.us, or if you have any questions on the MCSR, please contact dcp.dph@state.ma.us.

Appendix A: Statewide Treatment Protocol 2.4 and 2.5

Behavioral Emergencies Adult & Pediatric 2.4

1.0 Routine Patient Care, followed by:

1. One EMT should manage the patient while the other handles scene control, but no EMT or First Responder should be left alone with the patient.
2. Avoid areas/patients with potential weapons (e.g., kitchen, workshop), and avoid areas with only a single exit; do not allow patient to block exit.
3. Keep environment calm by reducing stimuli (may need to ask family/friends to leave room, ask patient to turn off music/TV). Transport in a non-emergent mode unless the patient's condition requires lights and sirens.
4. Respect the dignity and privacy of the patient.
5. Make eye contact when speaking to the patient.
6. Speak calmly and in a non-judgmental manner; do not make sudden movements.
7. Maintain non-threatening body language (hands in front of your body, below your chest, palms out and slightly to the sides).
8. Establish expectations for acceptable behavior, if necessary.
9. Ask permission to touch the patient before taking vital signs, and explain what you are doing.
10. Assess the patient to the extent that they allow without increasing agitation, maintain a safe distance from a violent patient.
11. Stop talking with patient if they demonstrate increased agitation; allow time for them to calm down before attempting to discuss options again.
12. Provide reassurance by acknowledging the crisis and validating the patient's feelings and concerns; use positive feedback, not minimization.
13. Determine risk to self and others ("Are you thinking about hurting/killing yourself or others?").
14. Encourage patient to cooperatively accept transport to the hospital for a psychiatric evaluation and treatment.
15. Consider asking friends/relatives on scene to encourage patient to accept transport, if needed; but only if they are not a source of agitation.
16. Ask law enforcement or Online Medical Control to complete a MDMH Section 12 application for uncooperative patients who acknowledge intent to self-harm or harm others, but do not delay transport in the absence of this document.
17. Use restraints in accordance with 2.5 Behavioral Emergencies: Restraint if de-escalation strategy fails and the patient is a danger to him/herself or others.

E/I/A/P

Acute risk factors for violence include:

- Male gender
- Homicidal or violent intent or plans
- Intoxication or recent substance use
- Actions taken on plans/threats
- Unconcerned with consequences
- No alternatives to violence seen
- Intense fear, anger, or aggressive speech/behavior
- Specified victim (consider proximity, likelihood of provocation)

Protocol Continues

2.4 Behavioral Emergencies Adult & Pediatric

Protocol Continued

Haloperidol should be administered by **INTRAMUSCULAR** injection ONLY.

PARAMEDIC STANDING ORDERS

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- Initiate an IV of Normal Saline at a KVO rate.
- Apply cardiac monitor if clinically feasible, obtain 12 lead ECG-manage dysrhythmias per protocol.
- Position patient to ensure breathing is not impaired.
- If providing medication to patients >70 years of age, limit dose.

ADULT STANDING ORDERS

- **Haloperidol** 5 mg **IM**; and/or
- **Lorazepam** 2mg IV/IO/IM; or
- **Midazolam** 2-6 mg IV/IO/IM/IN
- **Ketamine** 4mg/kg IM only, to a maximum dose of 400mg IM only, as a single dose.
- NOTE: In patients >70 years of age, limit medication to half these doses.

PEDIATRIC STANDING ORDERS

- **Midazolam** 0.1mg/kg IV/IO/IM/IN

Medical Control may order additional doses of above medications

Haloperidol is preferable for psychotic patients; but do not administer to patients with a history of seizures or prolonged QT intervals.

Lorazepam is preferable for patients experiencing alcohol withdrawal or the toxic effects from sympathomimetic drugs, e.g. cocaine (or pcp).

Diazepam should NOT be administered to patients experiencing behavioral emergencies.

Behavioral Emergencies: Restraint Adult & Pediatric 2.5

OVERVIEW

In accordance with M.G.L. c. 111C, §18, the following guidelines may be followed to restrain a patient only when the patient presents an immediate or serious threat of bodily harm to him/herself or others.

Adults (or emancipated minors as defined in A/R 5-610) who are competent with the functional capacity to understand the nature and effects of their actions and/or decisions have the right to refuse treatment and/or transport. Do not restrain these individuals.

Procedures:

1. Follow 2.4 Behavioral Emergencies.
2. Use the least restrictive method that assures the safety of the patient and others.
3. Use only soft restraints (leather restraints only if made with soft padding inside).
4. Remind law enforcement that for ambulance transport, patients who are handcuffed must have handcuffs in front (not behind) or to the stretcher and that the key must be readily available for removal; if needed.
5. Apply restraints in a way that allows for airway, breathing, and circulation assessment.
6. Never restrain a patient in a prone position or use equipment that forms a "sandwich" around the patient.
7. Have a minimum of four (4) trained personnel coordinate the restraint effort and consider involving parents if patient is a child.
8. Secure the patient so that major sets of muscle groups cannot be used together, restraining the lower extremities to the stretcher first around the ankles and across the thighs with soft restraints and stretcher straps.
9. Restrain the patient's torso and upper extremities with one arm up and one arm down with soft restraints and stretcher straps; do not impair circulation.
10. Consider cervical-spine immobilization to minimize violent head/body movements.
11. Pad under patient's head to prevent self-harm.
12. Secure backboard or scoop stretcher (if used) to ambulance stretcher.
13. Transport OB patients in a semi-reclining or left lateral position.
14. Monitor/record vital signs every 5 minutes, ensuring patient's airway remains clear.
15. Consider placing a non-rebreather mask (use only at 15 lpm) or a face mask (NOT a P100/N95) on the spitting patient's face.
16. Unless necessary for patient treatment, do not remove restraints until care is transferred at the receiving facility or condition has changes to necessitate removal.
17. Notify receiving facility and tell them that patient is restrained.
18. Document restraint use details in the patient care report, including:
    a. reason for restraint use
    b. time of application
    c. type(s) of restraints used, in addition to cot straps
    d. patient position
    e. neurovascular evaluation of extremities
    f. issues encountered during transport
    g. other treatment rendered
    h. police and/or other agency assistance

E/I/A/P