This Policy Statement establishes the State Emergency Medical Advisory Committee (SEMAC) and the Department’s criteria for including ketamine in an EMS agency’s controlled substance formulary. Please take the time to read and understand this Policy Statement. Each individual EMS agency, its controlled substances agent and the medical director are responsible for adhering to all applicable laws, regulations and policies.

**History:**
In June of 2009, the SEMAC approved ketamine to be added to the State EMS Drug Formulary. This change required the Department to review and approve the medication, the process for inventory, security and training. This updated version reflects changes allowed by the Bureau of Narcotics Enforcement (BNE) and based on SEMAC approved advanced life support protocols.

Based on the potency of ketamine and the potential for serious issues of diversion and abuse, the Department remains extremely concerned about its applications in the prehospital environment.

**Conditions for Approval:**
In order for the Department to approve the addition of ketamine to an EMS agency with a current Class 3C controlled substance license, the following conditions must be met and the Department must review and issue written approvals.

1. The Regional Medical Advisory Committee (REMAC) must develop protocols for the administration of ketamine and a quarterly evaluation of its use on the regional level.

2. The protocols must also be approved by the SEMAC and then by the Department.

3. The service medical director must approve, in writing, ketamine for use by the EMS service.

4. Only those individuals certified at the paramedic level may administer ketamine.

5. The EMS agency must submit an amendment to their Controlled Substance Operations Plan to include, but not be limited to the following:

   - A detailed description of the procurement; inventory process and security of ketamine.
   - A program for 100% quality assurance by the service medical director for instances where ketamine has been administered.
   - A separate Quarterly Report (attached) for ketamine stock and administrations. This must be received by the Department within 30 days of the end each quarter.
6. The EMS agency must submit for review and approval by the Department, the training program developed to in-service personnel. The program must include, but not be limited to training on the updated controlled substance plan, inventory, security, patient administration and reporting policies and procedures. The curriculum format must follow the BEMS required curriculum addition format.

7. Each substock (the controlled substance medications carried on each vehicle) is limited to a **MAXIMUM of 1,000 mg**.

8. There are two (2) components of the reporting process:
   b. The EMS agency medical director is required to provide a written report of the service’s use of ketamine in the prior year no later than **January 31st of each year**. It must include, but not be limited to the following items:
      < The total number of administrations, amount or medication used and dose.
      < The amount of ketamine wasted.
      < A summary of the patient presenting problems.
      < A narrative summary highlighting the Quality Assurance reviews conducted for each ketamine administration.

9. All instances where a theft, loss or diversion, are suspected **MUST BE REPORTED TO THE DEPARTMENT IMMEDIATELY**. This report must be made to the BEMS Central Office using the **Loss of Controlled Substances Report** form (DOH-2094). This form is available online at [http://www.health.ny.gov/forms/doh-2094.pdf](http://www.health.ny.gov/forms/doh-2094.pdf).

10. **Prior** to including ketamine in the EMS agency’s formulary, the medical director and the agent must receive written approval from the Department.

11. If the agency makes any changes or updates to the Controlled Substance Operations Plan, it must provide the specific changes to the Department in writing **prior** to implementation.

The Department continues to closely monitor the EMS agencies that maintain a Class 3C controlled substance license to insure that there is the strictest compliance with all of the applicable sections of Public Health Law, the Codes, Rules and Regulations – Part 800 and Section 80.136 of the Part 80 Rules and Regulations on Controlled Substances in New York State, as well as the EMS service’s approved Controlled Substance Operations Plan.
# Drug Formulary

## KETAMINE

### Class

Anesthetic Induction

### Description

Ketamine is a controlled substance medication that is a rapid-acting general anesthetic producing an anesthetic state characterized by profound analgesia, normal pharyngeal-laryngeal reflexes, normal or slightly enhanced skeletal muscle tone, cardiovascular and respiratory stimulation, and occasionally a transient and minimal respiratory depression.

### Onset & Duration

<table>
<thead>
<tr>
<th>Onset</th>
<th>Rapid – IV within 30 seconds; half life: 10-15 min.; IM within 3-4 minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration</td>
<td>IV 2 mg/kg lasts 5-10 minutes; IM 9 to 13 mg/kg lasts 12-25 minutes</td>
</tr>
</tbody>
</table>

### Indications

1. Ketamine is indicated as the sole anesthetic induction agent for management of trauma patients in extreme pain requiring proper immobilization and/or extrication.

### Contraindications

1. Ketamine is contraindicated in those in whom a significant elevation of blood pressure would constitute a serious hazard and in those who have shown hypersensitivity to the drug.

### Adverse Reactions

1. Cardiovascular - blood pressure and pulse rate are frequently elevated following administration of Ketamine alone. However, hypotension and bradycardia have been observed. Arrhythmia has also occurred.
2. Respiration - Although respiration is frequently stimulated, severe depression of respiration or apnea may occur following rapid intravenous administration of high doses of Ketamine.
Laryngospasms and other forms of airway obstruction have occurred during Ketamine anesthesia.

3. Eye - Diplopia and nystagmus have been noted following Ketamine administration. It also may cause a slight elevation in intraocular pressure measurement.

4. Neurological - In some patients, enhanced skeletal muscle tone may be manifested by tonic and clonic movements sometimes resembling seizures.

5. Gastrointestinal - Anorexia, nausea and vomiting have been observed; however, this is not usually severe and allows the great majority of patients to take liquids by mouth shortly after regaining consciousness.

6. General: Anaphylaxis, local pain and exanthema at the injection site have infrequently been reported. Transient erythema and/or morbilliform rash have also been reported.

**Ketamine continued...**

**Drug Interactions**

Prolonged recovery time may occur if barbiturates and/or narcotics are used concurrently with Ketamine.

**How Supplied**

Injection: IM or IV 15 mg (15 mg/mL) and 30 mg (30 mg/mL)

Ketamine Hydrochloride Injection, USP is supplied as the hydrochloride in concentrations equivalent to Ketamine base.

<table>
<thead>
<tr>
<th>Container</th>
<th>Concentration</th>
<th>Fill</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fliptop</td>
<td>100 mg/mL</td>
<td>5 mL</td>
<td>Box of 10</td>
</tr>
<tr>
<td>Vial</td>
<td>50 mg/mL</td>
<td>10 mL</td>
<td>Box of 10</td>
</tr>
</tbody>
</table>

Color of solution may vary from colorless to very slightly yellowish and may darken upon prolonged exposure to light. This darkening does not affect potency. Do not use if a precipitate appears.

Store at 20 to 25°C (68 to 77°F).

Protect from light.

**Dosing**

Adult IV  1-4.5 mg/kg IV over 1 min.
Adult IM  6.5-13 mg/kg IM one dose
Pediatric IV >3 months 1.5 mg/kg IV over 1 min.
Pediatric IM >3 months 4-5 mg/kg one dose

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**Protocol**

<table>
<thead>
<tr>
<th>MA XX</th>
<th>Adult Pain Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA XX</td>
<td>Pediatric Pain Management</td>
</tr>
</tbody>
</table>

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**Special Considerations**

1. Elevation of blood pressure begins shortly after injection, reaches a maximum within a few minutes and usually returns to preanesthetic values within 15 minutes after injection.
2. Because pharyngeal and laryngeal reflexes are usually active, Ketamine can not be used alone for advanced airway management such as intubation. Mechanical stimulation of the pharynx should be avoided, whenever possible, if Ketamine is used alone.
3. The incidence of emergence reactions may be reduced if verbal and tactile stimulation of the patient is minimized during the recovery period. This does not preclude the monitoring of vital signs.
4. The intravenous dose should be administered over a period of 60 seconds. More rapid administration may result in respiratory depression or apnea and enhanced pressor response.
5. Use with caution in the chronic alcoholic and the acutely alcohol-intoxicated patient.
6. This medication is a Class III controlled substance medication approved for prehospital use by the SEMAC and the Department.
This policy is an update regarding fentanyl for prehospital Emergency Medical Services agencies. Please take the time to read and understand this Policy Statement. Each individual EMS agency, its controlled substances agent and the medical director are responsible for adhering to all applicable laws, regulations and policies.

**History:**
At the request of the State Emergency Medical Advisory Committee (SEMAC) and a number of air medical service physician medical directors, the Department was approached requesting that fentanyl be added to the formulary authorized by the Class 3C controlled substance license. This request was reviewed by the Department’s Division of Legal Affairs and the Bureau of Narcotic Enforcement (BNE).

Based on the potency of fentanyl and the serious issues of diversion and abuse, the Department initially approved its use by New York States air medical service providers under specific conditions. At the May 2007 meeting of the SEMAC, the use of fentanyl was approved for all advanced life support (ALS) EMS agencies possessing a current Department of Health EMS Agency Certification and Prehospital Controlled Substance License.

At present, the SEMAC and the Department approve regional ALS protocols that allow for the administration of fentanyl on standing orders for specific prehospital conditions in both adult and pediatric patients. In order for an ALS level EMS agency to possess and administer fentanyl, all of the following conditions must be met and the agency must receive Department approval.

This policy addresses the following:

- Approval Process
- Reporting Process
- Required Conditions
Approval Process:
In order for the Department to approve the addition of fentanyl to an EMS agency with a current Class 3C controlled substance license, the following conditions must be met and the Department must review and issue written approval.

1. The Regional Medical Advisory Committee (REMAC) must provide protocols for the administration of fentanyl and a periodic evaluation of its use on the regional level.

2. The protocols must be approved by the SEMAC and the Department.

3. The service medical director must approve, in writing, fentanyl for use by the EMS agency.

4. Only those individuals certified at the EMT - Critical Care or Paramedic level may participate in the Operational Plan and administer a controlled substance medication to a prehospital patient.

5. The EMS agency must submit an amendment to their Controlled Substance Operations Plan to include, but not be limited to the following:
   < A detailed description of the procurement; inventory process and security of fentanyl.
   < A program for routine quality assurance by the service medical director for instances where fentanyl has been administered.
   < The training program used to in-service all appropriate staff on the inventory, security and administration of fentanyl.
   < Policies for submitting the Quarterly Report (attached) for fentanyl stock and administrations. This must be received by the Department within 30 days of the end each quarter.

6. Prior to including fentanyl in the EMS agency’s controlled substance formulary, the medical director and the agent must receive written approval from the Department.

7. Each substock may have a maximum of 400mcg of fentanyl.

Reporting Requirements:

1. A separate Quarterly Report for fentanyl stock and administrations. This form is available on line at http://www.health.state.ny.us/forms/doh-4352.pdf. This must be received by the Department within 30 days of the end each quarter.

2. As a part of the reporting process, the agency medical director is required to provide a written report of the service’s use of fentanyl in the prior year no later than January 31st of each year. The report should include, but not be limited to the following items:
   < The total number of administrations, amount or medication used and dose.
   < The amount of fentanyl wasted.
   < A summary of the patient presenting problems.
   < A narrative summary highlighting the Quality Assurance reviews conducted for each fentanyl administration.
Please note that failure to submit the quarterly and/or the annual reports may result in the suspension of the agency’s authority to possess and administer controlled substance medications.

3. All instances where a theft, loss or diversion, are suspected MUST BE REPORTED TO THE DEPARTMENT IMMEDIATELY. This report must be made to the BEMS Central Office using the Loss of Controlled Substances Report form (DOH-2094). This form is available on line at http://www.health.ny.gov/forms/doh-2094.pdf

4. Prior to including fentanyl in the EMS agency’s formulary, the medical director and the agent must receive written approval from the Department.

5. If the agency makes any changes or updates to the Controlled Substance Operations Plan, it must provide the specific changes to the Department in writing prior to implementation.

Required Conditions:

1. Fentanyl may only be stocked in 2ml vials or ampules containing 50mcg/ml.

2. The Department must approve the sub-stock inventory that exceeds 400mcg of fentanyl.

3. The agency operation plan and the medical director must insure that the formulary includes an appropriate antagonist in an amount proportional to the amount of fentanyl carried, necessary to reverse the effects of a fentanyl administration.

4. Fentanyl may only be administered on standing orders for adult patients as delineated in the approved regional ALS protocols. Other administrations will require direct medical control consultation.

The Department continues to closely monitor the EMS agencies that maintain a Class 3C controlled substance license to insure that there is the strictest compliance with all of the applicable sections of Public Health Law, the Codes, Rules and Regulations – Part 800 and Section 80.136 of the Part 80 Rules and Regulations on Controlled Substances in New York State, as well as the EMS service’s approved Controlled Substance Operations Plan.

Issued and authorized by Bureau of EMS Office of the Director
PURPOSE:

The purpose of this policy statement is to provide EMS providers knowledge and understanding of the role, responsibility and capabilities of Certified Athletic Trainers so that when EMS is called to a sporting event, the patient will benefit from positive communication and consistent prehospital emergency medical care.

BACKGROUND:

EMS often responds to sporting events where Certified Athletic Trainers are employed, such as public schools, sports leagues and college sporting events. In many instances, a Certified Athletic Trainer may be the highest trained healthcare provider available when an athlete has sustained an injury or has become ill. It is important that EMS providers and Certified Athletic Trainers work together.

Certified Athletic Trainers are certified under NYS Education Law, Article 162. Section 8351 defines an Athletic Trainer as:

“...any person who is duly certified in accordance with this article to perform athletic training under the supervision of a physician and limits his or her practice to secondary schools, institutions of postsecondary education, professional athletic organizations, or a person who, under the supervision of a physician, carries out comparable functions on orthopedic athletic injuries, excluding spinal cord injuries, in a health care organization. Supervision of an athletic trainer by a physician shall be continuous but shall not be construed as requiring the physical presence of the supervising physician at the time and place where such services are performed.”

Certified Athletic Trainers manage athletic injuries and illnesses such as sprains, strains, contusions, and postsurgical reconditioning. Their responsibilities include:

- Identification of factors that may contribute to athletic injury and eliminate them before an injury occurs;
- Conduct pre-participation screenings;
- Develop appropriate fitness and training programs;
- Apply protective or injury preventative devices, such as tape, bandages, or braces;
- Maintain CPR and AED training;
- Recognition and evaluation of potentially serious, life threatening injuries; and
- Administering appropriate first aid and emergency care to the injured athlete.
At athletic events, Certified Athletic Trainers provide emergency care and first aid to individuals who have sustained an athletic injury, evaluate the injury(s), and make referrals to appropriate medical personnel. Through individual consultation and lectures, Certified Athletic Trainers also instruct coaches, athletes, parents, medical personnel, and the community in the care and prevention of athletic injuries.

Additional information regarding Certified Athletic Trainers can be found at: http://www.op.nysed.gov/prof/at/

**RECOMMENDATIONS:**

EMS agencies should be aware of those facilities, both public and private, that may have Athletic Trainers working with teams at their sporting events. Meeting with Certified Athletic Trainers and discussing the EMS agency resources, scope of practice and protocols, will assist developing an understanding of the roles and responsibilities, improve relationships and should it become necessary, the prehospital care provided at the scene of a medical emergency. As a part of the planning process the agency medical director should be contacted to discuss specific issues and treatment plans.
Based on the results of a State Emergency Medical Advisory Committee (SEMAC) demonstration project, the New York State Emergency Medical Service Advisory Council (SEMSCO) approved Syringe Epinephrine for Emergency Medical Technicians (Check & Inject NY) at the September 14, 2016 meeting. The project established that EMTs, with the appropriate training may administer the proper dose of epinephrine for a patient experiencing a severe anaphylactic reaction using a specific 1cc syringe. Additionally, the project realized a significant cost saving over maintaining epinephrine auto-injectors.

The Commissioner of Health has approved the addition of Syringe Epinephrine and at the request of the SEMAC, this approval includes the intramuscular administration of 1:1000 epinephrine using a 1cc syringe, a 23 gauge, 1 inch intramuscular safety needle and a single dose 1:1000 epinephrine packaged in a 1mg/ml vial as an addition to the scope of practice for an EMT.

Policy

- **Education:**

  *Every EMT original, refresher and continuing medical education (CME) certification training program must include the didactic content and psychomotor skills for the administration of 1:1000 epinephrine using a syringe for treating a patient with severe anaphylaxis.*

  The NYS EMS Instructional Guidelines have been updated and an Intramuscular Injection Psychomotor Evaluation Tool (practical skills sheet) has been developed to assist EMS course sponsors, Certified Instructor Coordinators (CIC) and EMS agencies in providing initial and ongoing training. An instructor update can be found at [http://vitalsignsconference.com](http://vitalsignsconference.com) under “All Courses” in “Instructors” section. The course is entitled “2017 Instructor Update – Epi for EMTs”. The education resources are available at: [http://www.health.ny.gov/professionals/ems/national_education_standards_transition/index.htm](http://www.health.ny.gov/professionals/ems/national_education_standards_transition/index.htm) on pages 2 through 4.

- **BLS EMS Agencies**

  EMS Agencies intending to implement a Syringe Epinephrine program, in consultation with their medical director, should develop written policies and procedures for the use of Syringe Epinephrine that are consistent with regional policies and protocols. This should include, but not be limited to the following:
Written policies and procedures requiring an approved training program, requirements for continuing education, maintenance of competencies and the documentation for authorized providers;

Written policies and procedures requiring for the use of a 1cc syringe, a 23 gauge, 1 inch intra-muscular safety needle and single dose 1:1000 epinephrine packaged in a 1mg/ml vial;

A description of how the syringes, needles and medication will be kept secure in the vehicles and the station(s);

A plan for appropriate and safe disposal of medical waste;

A description of how the medication will be maintained within manufacturer’s approved temperature and light ranges; and

Documentation of an administration and the medical director’s plan for quality assurance and appropriateness review of utilization.

Once the EMS service has decided to implement a syringe epinephrine program, the EMS Service must provide the Department with an updated Medical Director Verification Form (DOH-4362).

- **Resources**

  Medical Director Verification Form (DOH-4362) – fill-in-able

  Check & Inject NY

  Anaphylactic Reaction with Respiratory Distress and Hypoperfusion Protocol – M-3

  Emergency Medical Technician Instructional Guidelines – Intramuscular Injections and Psychomotor Evaluation Tool (pages 2 – 4)