NYC REMAC

Advisory No.	2017-13		
Title:	EMERGENCY CHANGE: Diazepam Shortage		
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The Regional Emergency Medical Advisory Committee (REMAC) of New York City is responsible to develop, approve and implement prehospital treatment and transport protocols for use within the five boroughs of the City of New York. The Regional Emergency Medical Advisory Committee (REMAC) of New York City operates under the auspices of Article Thirty of the New York State Public Health Law.

EMERGENCY change: Due to a shortage of diazepam (Valium), midazolam (Versed) IV has been added as an option to the following protocols:

a. 513 Seizures

b. 521 Head Injury

c. 530 Excited Delirium

d. 557 Pediatric Seizures

The revised protocols are attached, identifying specific changes. New Language is **underlined and bold**. Deleted Language is ~~**struck-out**~~.

Current and Updated Protocols can be accessed at the Regional EMS Council website: www.nycremsco.org.

Owners/operators of Ambulance and ALS First Response Services providing prehospital medical treatment within the five boroughs of the City of New York are responsible to provide copies of the NYC REMAC Prehospital Treatment Protocols to their personnel, and to ensure that Service Medical Directors and EMS personnel are informed of all changes/updates to the NYC REMAC Prehospital Treatment Protocols.

In order to provide evidence that all EMS personnel have been updated in current protocols, the EMS Agency must provide a list of updated personnel accompanied by a letter of affirmation signed by the service medical director and Chief Executive Officer no later than FOUR (4) weeks after completion of training/in-service.

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Chair, Regional Emergency Medical Advisory Committee of New York City

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SEIZURES

For patients experiencing generalized seizures that are ongoing or recurring

1. Begin Basic Life Support Seizures procedure.
2. Begin Cardiac Monitoring, record and evaluate EKG rhythm.
3. Begin an IV infusion of Normal Saline (0.9% NS) to keep vein open.

   NOTE: A GLUCOMETER SHOULD BE USED TO DOCUMENT BLOOD GLUCOSE LEVEL PRIOR TO ADMINISTRATION OF DEXTROSE.

   IF THE GLUCOMETER READING IS ABOVE 60 MG/DL, DEXTROSE SHOULD BE WITHHELD.

   DIABETIC PATIENTS WITH A BLOOD GLUCOSE LEVEL READING BETWEEN 60-80 MAY STILL BE EXPERIENCING HYPOGLYCEMIA, AND IF THEY DISPLAY SUCH SIGNS AND SYMPTOMS SHOULD BE TREATED ACCORDINGLY.

4. Administer up to 25 gm Dextrose, IV/IO bolus.
5. In patients with diabetic histories where an IV route is unavailable, administer Glucagon 1 mg, IM or IN.
6. Administer Lorazepam 2 mg, IV bolus, or, if IV access is unavailable, IN or IM. A single repeat dose of Lorazepam 2 mg, may be given after 5 minutes for generalized seizures that are ongoing or recurring.

   OR

   Administer Diazepam 5 mg, IV bolus. A single repeat dose of Diazepam 5 mg, IV-bolus, may be given for generalized seizures that are ongoing or recurring. (Rate of administration may not exceed 5 mg/min.)

   OR

   Administer **Midazolam 5 mg, IV/IO, or** if IV/IO access is unavailable, 10 mg, IM or IN~~, if IV access is unavailable~~.
7. If seizure activity persists, contact Medical Control for implementation of one or more of the following MEDICAL CONTROL OPTIONS:

MEDICAL CONTROL OPTIONS:

OPTION A: Repeat Lorazepam 2 mg, IV-bolus, or, if IV access is unavailable, IN or IM.

OR

Repeat Diazepam 5 mg, IV-bolus. (Rate of administration may not exceed 5 mg/min.)

OR

Repeat Midazolam 10 mg, IN or IM, if IV access is unavailable.

OR

Repeat Midazolam 5 mg, IV/IO bolus.

OPTION B: Transportation Decision.

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HEAD INJURIES

In patients with head trauma with a Glasgow Coma Scale (GCS) score of 13 or lower

1. Begin Basic Life Support Head and Spine Injuries procedures.
2. Perform Advanced Airway Management* in patients for whom the Glasgow Coma Scale score is less than 8 AND if less invasive methods of airway management are not effective.
3. Begin Cardiac Monitoring, record and evaluate EKG rhythm.
4. Begin an IV infusion of Normal Saline (0.9% NS) to keep vein open.
5. If a seizure is witnessed:
   a. Administer Lorazepam 2 mg, IV bolus, or, if IV access is unavailable, IN or IM. A single repeat dose of Lorazepam 2 mg, may be given after 5 minutes if seizure activity persists or recurs.

      OR

   b. Administer Diazepam 5 mg, IV bolus. A single repeat dose of Diazepam 5 mg, IV bolus, may be given if seizure activity persists or recurs. (Rate of administration may not exceed 5 mg/min.)

      OR

   c. Administer **Midazolam 5 mg, IV/IO, or** if IV/IO access is unavailable, 10 mg, IM or IN~~, if IV access is unavailable~~.
6. If the Glasgow Coma Scale (GCS) score is less than 8, and active seizures or one or more of the following signs of brain herniation are present, hyperventilate the patient to maintain a continuous end-tidal waveform capnography value between 30-35mmHg:
   a. Fixed or asymmetric pupils
   b. Abnormal flexion or extension (neurologic posturing)
   c. Hypertension and bradycardia (Cushing's Reflex)
   d. Intermittent apnea (periodic breathing)
   e. Further decrease in GCS score of 2 or more points (neurologic deterioration)
7. If seizure activity persists, contact Medical Control for implementation of one or more of the following MEDICAL CONTROL OPTIONS:

MEDICAL CONTROL OPTIONS:

OPTION A: Repeat Lorazepam 2 mg, IV bolus, or, if IV access is unavailable, IN or IM.
OR
Repeat Diazepam 5 mg, IV bolus. (Rate of administration may not exceed 5 mg/min.)
OR
Repeat **Midazolam 5 mg, IV/IO, or** if IV/IO access is unavailable, 10 mg, IM or IN~~, if IV access is unavailable~~.

OPTION B: Transportation Decision.

* *If the patient is alert prior to performing Advanced Airway Management, refer to Prehospital Sedation in General Operating Procedures. Prior permission from Medical Control is required.*

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EXCITED DELIRIUM

(ADULT PATIENTS ONLY)

1. Begin Basic Life Support procedures.
2. Prehospital Chemical Restraint Procedure: If patient continues to struggle while being physically restrained:
   a. Administer Midazolam, 10 mg, IM or IN.

   NOTE: If patient is agitated, the PREFERRED route of choice is IM. Once the patient is sedated, IV access should be established in the event additional sedation is necessary.
3. After adequate sedation, begin IV infusion of Normal Saline (0.9% NS) or Ringers' Lactate (RL) via a 14 to 20-gauge catheter, up to 1 liter, via a macro-drip.
4. Begin Cardiac Monitoring, record and evaluate EKG rhythm.
5. Begin pulse oximetry, and cardiac monitoring. Obtain Finger Stick Blood Glucose (FSBG) level.

   NOTE: A GLUCOMETER SHALL BE USED TO DOCUMENT BLOOD GLUCOSE LEVEL PRIOR TO ADMINISTRATION OF DEXTROSE.

   IF THE GLUCOMETER READING IS ABOVE 60 MG/DL, WITHHOLD TREATMENT FOR HYPOGLYCEMIA.

   DIABETIC PATIENTS WITH A BLOOD GLUCOSE LEVEL READING BETWEEN 60-80 MAY STILL BE EXPERIENCING HYPOGLYCEMIA, AND IF THEY DISPLAY SUCH SIGNS AND SYMPTOMS SHOULD BE TREATED ACCORDINGLY.
6. If the patient continues to struggle while being physically restrained after Standing Orders have been administered, contact medical control for implementation of one of the following MEDICAL CONTROL OPTIONS.

MEDICAL CONTROL OPTIONS:

Option	Class	Medication	Route	Dose
Option A	Dissociative Agents	Ketamine	IntraMUSCULAR	2-4 mg/kg
		Ketamine	IntraNASAL	1-2 mg/kg
Option B	IM Benzodiazepines	Midazolam	IntraMUSCULAR	10 mg
		Lorazepam	IntraMUSCULAR	4 mg
Option C	IN or IV Benzodiazepines	Diazepam	IV **/IO** bolus	5-10 mg
		Midazolam	**IV/IO bolus** IntraNASAL	5 mg
		Lorazepam	IV bolus IntraNASAL	2 mg

OPTION D: Transportation Decision.

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PEDIATRIC SEIZURES

For patients experiencing seizures that are ongoing or recurring

1. Begin Basic Life Support Seizures procedures.

NOTE: **A GLUCOMETER SHALL BE USED TO DOCUMENT BLOOD GLUCOSE LEVEL PRIOR TO ADMINISTRATION OF DEXTROSE.**

IF THE GLUCOMETER READING IS ABOVE 60 MG/DL, DEXTROSE SHOULD BE WITHHELD.

DIABETIC PATIENTS WITH A BLOOD GLUCOSE LEVEL READING BETWEEN 60-80 MAY STILL BE EXPERIENCING HYPOGLYCEMIA, AND IF THEY DISPLAY SUCH SIGNS AND SYMPTOMS SHOULD BE TREATED ACCORDINGLY.

2. Administer Glucagon 1 mg, IM or IN.
3. If patient is still seizing, administer Midazolam 0.2 mg/kg, IM or IN. IN is the preferred route of administration. (Maximum dose is 5 mg.)

NOTE: **THE MIDAZOLAM DOSAGE LISTED ON THE LENGTH BASED DOSING DEVICE FOR INDUCTION (Pre-Intubation) MAY NOT BE USED FOR SEIZURES.**

During transport, or if transport is delayed:

4. Begin an IV or IO infusion of Normal Saline (0.9% NS) to keep vein open. Attempt vascular access no more than twice.
5. Administer Dextrose 0.5 gm/kg, IV or IO bolus. Use 10% Dextrose in patients less or equal to one (1) month of age. Use 25% Dextrose in patients greater than one (1) month of age and less than 15 years of age. (Refer to Length Based Dosing Device)
6. If seizures persist, contact Medical Control for implementation of one or more of the following MEDICAL CONTROL OPTIONS:

MEDICAL CONTROL OPTIONS:

OPTION A: Administer Lorazepam 0.1 mg/kg, IV/IN or IO bolus, slowly, over 2 minutes. Repeat doses of Lorazepam 0.1 mg/kg, IV/IN or IO bolus, slowly, over 2 minutes, may be given if seizures persist. (Refer to Length Based Dosing Device)

OR

Administer Diazepam 0.2 mg/kg, IV or IO bolus, slowly, over 2 minutes. Repeat doses of Diazepam 0.2 mg/kg, IV or IO bolus, slowly, over 2 minutes, may be given if seizures persist. (Refer to Length Based Dosing Device)

OR

Administer Midazolam 0.2 mg/kg IV/IO bolus, slowly, over 2 minutes. Repeat doses of midazolam 0.2 mg/kg, IV/IO bolus, slowly, over 2 minutes may be given if seizures persist. (Refer to Length Based Dosing Device.)

OPTION B: If IV or IO access has not been established, repeat administration of Midazolam 0.2 mg/kg, IM or IN. IN is the preferred route of administration. (Maximum repeated dose is 5 mg.)

NOTE: **Do not administer Lorazepam, Diazepam, or Midazolam if the seizures have stopped.**

OPTION C: Transportation Decision.