**ADVISORY 19-04-01**

**TO:** All MA Licensed Ambulance Services and MA Accredited EMT Training Institutions

**CC:** EMCAB Members

**FROM:** Dr. Jonathan Burstein, State Emergency Medical Services (EMS) Medical Director

**DATE:** April 12, 2019

**RE:** Required Medications on Ambulances per Statewide Treatment Protocols, v. 2019.1

In order for ambulances services to provide care in accordance with the updated Statewide Treatment Protocols (STP), v. 2019.1, which become effective April 1, 2019, they will need to make some changes in the medications or medication levels they carry.

**Services must complete training and medication changes for STP v.2019.1 by June 17, 2019**. Once a service has successfully trained all of their EMS personnel, and adjusted vehicle medication levels, they may begin operating under the revised protocols even prior to April 1, 2019.

**Norepinephrine may only be administered via infusion pump.** Services may continue to use Dopamine instead of Norepinephrine until they have pumps available on their ambulances. Services that have trained and equipped their EMS personnel may begin having them use the pumps immediately. Norepinephrine should be packaged with 250mL 5% Dextrose diluent, or may be supplied as a premixed infusion from the pharmacy.

**Midazolam is the only required benzodiazepine.** Paramedic units must carry a total of 12mg of Midazolam. Diazepam or Lorazepam are only acceptable when a drug shortage of Midazolam occurs and the affiliate hospital medical director approves of these as alternatives to Midazolam.

Fentanyl must be carried, but Morphine remains optional. Ketamine remains an optional medication under 2.4 Behavioral Emergencies.

**Advanced EMTs are authorized to administer ondansetron.** Advanced EMTs may administer oral ondansetron. Ondansetron by oral disintegrating tablet (ODT) is the preferred method of dispensing this medication; however, Ondansetron is also approved for Advanced EMT administration IV/IM/IO to adults, and IV/IM to pediatric patients.

**EMT-Basics are approved under medical director options to use injectable epinephrine.** Under the Check and Inject program, with training and affiliate hospital medical director approval, EMT-Basics can use injectable epinephrine to replace epinephrine auto-injectors. Services must carry at a minimum 2 adult and 2 pediatric epinephrine kits.

Minimum medication quantities reflect operational use and reasonable restocking time. For those services that have high volume and/or limited access to drug replacement through their affiliate hospital’s pharmacy, adjustments to minimum drug quantities may be needed.  Alternative drug replacement for off hours may be necessary in order to maintain minimum par levels.

Please note: Medications may be available in concentrations not listed below, and should be maintained in consultation with the hospital pharmacist and affiliate hospital medical director.

**ADVANCED LIFE SUPPORT (ALS-PARAMEDIC LEVEL) MEDICATION LIST**

VERSION **2019**

ALL of the following medications are required (in addition to/above those required for ALS-Advanced and Basic Life Support vehicles):

| **REQUIRED MEDICATIONS** |
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| **Medication Name** | **Suggested Concentration/****Formulation** | **Minimum quantity per vehicle** |
| **Adenosine** (Adenocard) | 6mg/2mL | 36mg |
| **Albuterol** | 2.5mg for Nebulizer | 10mg |
| **Amiodarone** | 150mg/3mL | 450mg |
| **Atropine Sulfate** | 1mg | 3mg |
| **Acetaminophen PO** | 1000mg  | 2000mg or bottle  |
| **Calcium Chloride** | 10% solution--100mg/mL | 1g |
| **Dextrose** | 25g of D10, additional medicationas D10, D25 or D50 | 50g |
| **Diltiazem** |  | 100mg |
| **Diphenhydramine** (Benadryl) | 50mg | 100mg |
| **Dopamine \*\***(typically comes in two options) | 400mg/250mLOr 800mg/500ml | 1 pre-mixed bag |
| **Epinephrine** | 1:1000 for infusion | 2mg |
| **Epinephrine** | 1:10,000 (1mg pre-filled syringes) | 12mg |
| **Fentanyl** (Sublimaze) | 50mcg/mL | 400mcg |
| **Furosemide** (Lasix) |  | 80mg |
| **Glucagon** | 1mg  | 2mg |
| **Haloperidol** (Haldol) | 5mg | 10mg |
| **Ibuprofen PO** | 200 mg | 1200 mg or bottle |
| **Ipratropium Bromide** (Atrovent) | 0.5mg | 2000mcg/4 doses |
| **Ketorolac** | 15mg IV or 30mg IM | 60mg |
| **Lidocaine HCL 2%** | Pre-Filled syringes; 20mg/ml | 200mg |
| **Lidocaine HCL** | Vials for infusion or pre-mixed bags | 2gm/1 bag |
| **Magnesium Sulfate**  |   | 4g |
| **Metoprolol** (Lopressor) | 5mL  | 10mg |
| **Midazolam** (Versed) | 2mg/mL  | 12mg |
| **Naloxone** (Narcan) |  | 20mg |
| **Nitroglycerin** | Bottle or 6 unit dose tabs & Paste (1) tube/2 doses  | 1 each |
| **Norepinephrine \*** (Levophed) | 4mg/4mL  | 4mg |
| **Dextrose 5%** Diluent packaged with norepinephrine  |  | 250mL |
| **Racemic** **Epinephrine**  | 11.25mg/2mL  | 2 doses  |
| **Sodium Bicarbonate**  | 2 pre-filled @ 50mL  | 100 mEq |
| **Methylprednisolone** (Solu-Medrol) OR **Hydrocortisone** (Solu-Cortef)  | 125mg **OR** 100mg  | 125mg **OR**100mg  |

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| **OPTIONAL MEDICATIONS** |
| **Hydroxycobalamin** (B12) | **Tetracaine** | **NeoSynephrine/Phenylephrine nasal** |
| **Cyanide antidote kit** | **Vasopressin** | **Lidocaine jelly**  | **Nerve Agent antidote kit** |
| **Tranexamic Acid:** 2g/vehicle | **Morphine:** 20mg/vehicle | **Ketamine:** 1000mg/vehicle |
| **Acetaminophen IV :** 2000mg/vehicle | **Any other medications, as authorized by DPH** |

\* Dopamine must be carried until IV pump available; then only norepinephrine must be carried.

**ADVANCED LIFE SUPPORT (ADVANCED EMT LEVEL) MEDICATION LIST**

VERSION **2019**

This list represents the medications required to be maintained on an ALS vehicle at the Advanced EMT level. Each quantity is in addition to/above the requirements of Basic Life Support vehicles.

| **REQUIRED MEDICATIONS** |
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| **Medication Name** | **Suggested Concentration/****Formulation** | **Minimum quantity** **per vehicle** |
| **Albuterol** | 2.5mg for Nebulizer | 10mg |
| **Dextrose** | 25g of D10, additional Medication as D10, D25 or D50 | 50g |
| **Glucagon** | 1mg | 2mg |
| **Ipratropium Bromide** (Atrovent) | 0.5mg | 2000mcg/ 4 doses |
| **Lidocaine HCL 2%** | Pre-Filled syringes; 20mg/ml | 200mg |
| **Naloxone** (Narcan) |   | 20mg |
| **Nitroglycerin** | Bottle or 6 unit dose tabs/2 doses | 1 each |
| **Odansetron (Zofran)** | 4mg ODT tablet; 2mg/ml IV  | 8mg |

**BASIC LIFE SUPPORT (BLS) MEDICATION LIST**

VERSION **2019**

This list represents the medications required to be maintained on a BLS vehicle. These medications are to be carried by ALS vehicles at the Advanced EMT and Paramedic levels as well.

| **REQUIRED MEDICATIONS** |
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| **Medication Name** | **Suggested Concentration/****Formulation** | **Minimum quantity** **per vehicle** |
| **Epinephrine Auto-Injector****OR Injectable Epinephrine** | Adult and Pedi;1mg/ml | 2 Adult, 2 Pedi2 Adult kits, 2 Pedi kits |
| **Aspirin (chewable)** | 81mg or 324mg | 648mg |
| **Naloxone (prefilled syringe with** **nasal atomizer)** | 2mg | 8mg |
| **Oral glucose or equivalent** | 25g | 2 |

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| **OPTIONAL MEDICATION** |
| **Albuterol (Required if using CPAP)** |

If you have any questions, please contact Renée Atherton, NRP, OEMS Compliance Coordinator, at renee.atherton@state.ma.us.