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ADVISORY 16-09-01

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: September 16, 2016, updated January 19, 2017
RE: Required Medications on ALS Ambulances per Statewide Treatment Protocols, v. 2016

In order for ambulances services licensed at the advanced life support (ALS)-Advanced EMT and Paramedic levels to provide care in accordance with the updated Statewide Treatment Protocols (STP), v. 2016, which become effective by December 15, 2016, they will need to make some changes in the medications or medication levels they carry. This document is an update to Advisory 15-09-01, "Required Medications on Paramedic Ambulances per Statewide Treatment Protocols, v.2015.1."

Services must complete training and medication changes for STP v.2016 by December 15, 2016. Once a service has successfully trained all of their providers, and adjusted vehicle medication levels, they may begin operating under the revised protocols. Of note: Ketamine has been added, in quantities below. As stated in Protocol 1.0 Routine Patient Care, which applies to all EMS encounters, infusion pumps are the preferred method of administering vasoactive medications. Under the updated Administrative Requirement (AR) 5-402, ALS Equipment List, infusion pumps will be required on paramedic-level ambulances effective December 31, 2017. **Norepinephrine may only be administered via infusion pump.** Services may 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.

Paramedic units must carry full doses of Midazolam, and at least minimum quantities of either Diazepam or Lorazepam. It is permissible to carry all three benzodiazepines. Fentanyl must be carried, but Morphine is optional. Ketamine has been added to 2.4 Behavioral Emergencies, also as an optional medication.

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 (PARAMEDIC LEVEL) MEDICATION LIST

VERSION 2016

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

REQUIRED MEDICATIONS		
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
Calcium Chloride	10% solution-- 100mg/mL	1g
Dextrose	25g of D10, additional medication as D10, D25 or D50	50g
Diazepam (Valium) *		20mg
Diltiazem		100mg
Diphenhydramine (Benadryl)	50mg	100mg
Dopamine **	1600mcg/250mL	800mcg
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
Ipratropium Bromide (Atrovent)	0.5mg	2000mcg/4 doses

REQUIRED MEDICATIONS		
Medication Name	Suggested Concentration /Formulation	Minimum quantity per vehicle
Lidocaine HCL 2%	Pre-Filled syringes; 20mg/ml	200mg
Lidocaine HCL	Vials for infusion or pre-mixed bags	2gm/1 bag
Lorazepam (Ativan) *		8mg
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
Ondansetron (Zofran)	2mg/mL	8mg
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

OPTIONAL MEDICATIONS		
Hydroxocolalamin (B12)	Tetracaine	NeoSynephrine/Phenylephrine nasal
Nerve Agent antidote kit	Vasopressin	Lidocaine jelly
Cyanide antidote kit	Morphine; quantity of 20mg/vehicle	Ketamine; quantity of 500mg/vehicle
Any other medications, as authorized by DPH		

* At least one (Lorazepam or Diazepam) must be carried, in addition to Midazolam.

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

ADVANCED LIFE SUPPORT (ADVANCED EMT LEVEL) MEDICATION LIST

VERSION 2016

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		
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

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