



MEDICAL CONTROL POLICY STATEMENT/ADVISORY

No. 2016-01
Date: February 10, 2016

PHARMACY RECERTIFICATION February 26, 2016

Office of the Medical Director
Noel Wagner, MD, NRP
1000 Houghton Ave
Saginaw, MI 48602
(989) 583-6905
Fax (989) 583-6842
www.SaginawValleyEMS.org

ALL SVMCA PROVIDERS:

We are scheduled to recertify the EMS Drug Boxes, ALS, BLS & MFR Kits on February 26, 2016. As always, please have the Drug Boxes and ALS Start Kits to the pharmacy for recertification as early as possible.

There are no changes to either the BLS or MFR kits. Agencies that have these must ensure that all medications expire after June 24, 2016 and submit their recertification sheets to the SVMCA no later than February 26th.

The EMS Drug Boxes and the ALS start kits each have significant changes due to the implementation of two new Department-approved protocols:

- **Supplemental Shock Protocol**
- **Adult and Pediatric Altered Mental Status Protocols**

First, the **Supplemental Shock Protocol** (Attachment I) allows for the administration of Tranexamic Acid by field personal to patients with presumed hemorrhagic shock, evidence of severe uncontrolled bleed, hypotension (<90 mmHg systolic) or tachycardia (>110 bpm) that is the result of a traumatic event. Read the protocol for specific indications, non-indications, and dosing.

Tranexamic Acid is a synthetic derivative of lysine that reduces the stimulation of clot breakdown (fibrinolysis) after traumatic events. Tranexamic Acid is to be mixed with 100 ml of normal saline and administered over 10 minutes. It is very important to document the time of infusion because a second dose must be started by the receiving facility within 3 hours of the initial administration in order to be effective.

Each EMS Drug Box will contain a Tranexamic Acid Infusion Kit that contains a 100 ml normal saline, 1 gram vial of tranexamic acid, and a label to place on the bag denoting that the medication has been added and the time of the infusion. In order to achieve infusion over 10 minutes (150 gtts/min on a 15 gtt/ml macro set).



The **Adult/Pediatric Altered Mental Status Protocols** (Attachment 2 & 3) represent a drastic change to the ALS Kits and EMS Drug Boxes. The new protocol sets a standard that we will now be using dextrose 10% (D10) instead of dextrose 50% (D50). This change in concentration is due to many factors:

- D10 has 25 grams of dextrose just like D50. It's basically just a dilution much like epinephrine 1:1,000 vs. 1:10,000 where both contain 1 mg.



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- D50 has a high osmolarity and can cause severe necrosis with extravasation. Recommendations are now that D50 be given through central lines only. Some reports of amputation have been reported.
- Hyperglycemia from D50 has been associated with an ↑ in injury with stroke, head trauma, myocardial infarction, sepsis, and post resuscitation. Mortality rates are higher in these patients that have hyperglycemia (>110-126 mmHg)
- D10 is much easier to titrate and can be discontinued once the patient is alert enough to take glucose orally. Hyperglycemia from D50 can make it difficult for many patients to manage the blood glucose after an event.
- D10 can be given to infants, pediatrics, and adults without requiring any dilution. The dosing is the same across all ages (up to 5 ml/kg initially)
- Shortages of D50 have been reported. All medications supplied in pre-filled glass syringes are expected to substantially increase over the coming months. D10 is less expensive now and does not currently have a predicted shortage.

The **Adult/Pediatric Altered Mental Status Protocols** have specific information on how to give the D10. Initial dosing is 5 ml/kg in all patients and infusion should be stopped when the patient is regaining consciousness.

Beginning on recertification day, D50 will be removed from the EMS Drug Boxes and replaced by D10. In the ALS kits, the 250 ml normal saline will be replaced by D10 250 ml. A warning sticker will also be placed on the D10 to alert providers that it is not saline. For now, the D50 will remain in the ALS Kit until our other MCAs approve the SVMCA protocol. It is our understanding that the State of Michigan will be approving our AMS protocol state-wide.

Both dopamine and vasopressin are being removed permanently as they have fallen out of favor. For now, the places for both in the drug box will be empty.



I sincerely apologize for the longest memo in MCA history. If you have any questions or concerns, please feel free to contact our office.

A handwritten signature in black ink, appearing to read 'Eric Snidersich'.

Eric Snidersich, BS EMT-P
EMS Manager, SVMCA

Attachments:

1. 3-1 Shock Supplemental Protocol
2. 1-3 Altered Mental Status (Adult)
3. 3-1 Altered Mental Status (Pediatric)
4. Box and Kit Inventories

Shock – Supplemental Protocol

This protocol is a supplement to the **Shock Protocol** (1-8) and contains direction for the consideration for the administration of Tranexamic Acid to patients with signs of hemorrhagic shock from traumatic injury.

Pre-Medical Control**MFR/EMT/SPECIALIST/PARAMEDIC**

1. Follow **Shock Protocol**.

PARAMEDIC

2. Consideration for the administration of Tranexamic Acid should be given to any patient meeting the following criteria:
 - a. Presumed hemorrhagic shock from a traumatic cause or evidence of severe uncontrolled bleeding.

-or -

 - b. Hypotension (evidenced by systolic blood pressure < 90 mmHg) and/or tachycardia (>110 beats per minute), or declining blood pressure and sustained tachycardia in the presence of a traumatic injury.
3. Tranexamic Acid not indicated in the following:
 - a. Age less than 18 years
 - b. Spinal, cardiogenic or septic shock
 - c. Hemorrhagic shock from a non-traumatic cause (massive GI or gynecological bleeding).
 - d. Peripheral hemorrhage that can be controlled through compression (amputations).
4. Dosing
 - a. Mix 1 gram of Tranexamic Acid in 100 ml of normal saline.
 - b. Administer via IV over 10 minutes.
5. Notes
 - a. In order to maximize the effectiveness of Tranexamic Acid, a second dose must be administered at the destination facility.
 - b. Transport of the patient should be to a designated trauma facility capable of continuing the subsequent Tranexamic Acid dose.
 - c. Advise the receiving hospital of the administration of Tranexamic Acid when giving an in-bound and bedside report.

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Altered Mental Status

The purpose of this protocol is to provide for the assessment and treatment of patients with altered mental status of unknown etiology such as alcohol, trauma, poisonings, seizures, behavioral problems, stroke, environmental causes, infection, etc.

Pre-Medical Control

MFR/EMT/SPECIALIST/PARAMEDIC

1. Follow General Pre-hospital Care Protocol.
2. Restrain patient if necessary, refer to Patient Restraint Procedure.

MFR/EMT/SPECIALIST

3. For a known diabetic, consider small amounts of oral glucose paste, buccal or sublingual.

EMT/SPECIALIST/PARAMEDIC

4. **If the patient is alert** but demonstrating signs of hypoglycemia, measure blood glucose level, if available.
 - A. If less than 60 mg/dl administer oral high caloric fluid.
5. **If patient is not alert or vital signs are unstable:**
 - A. Evaluate and maintain airway, provide oxygenation and support ventilations as needed.
 - B. If no suspected spinal injury, place patient on either side.

SPECIALIST/PARAMEDIC

6. *If glucose is less than 60 mg/dl, and patient is demonstrating signs of hypoglycemia:*
 - A. *Infuse Dextrose 10% via IV up to 5ml/kg or until patient's level of consciousness improves.*
 - B. *Dextrose 10% 5ml/kg may be repeated if no improvement in level of consciousness after initial dosing.*
7. *Recheck blood glucose level when patient is alert. If still less than 60 mg/dl and the patient's airway is patent (low risk of aspiration), administer oral glucose paste.*
8. Per MCA selection, if unable to start an IV, when Dextrose 10% is indicated, administer glucagon.

<p><u>Glucagon</u> 1 mg IM</p> <p><input checked="" type="checkbox"/> Included</p> <p><input type="checkbox"/> Not Included</p>

9. If respiratory depression is present, administer Naloxone up to 2 mg IV slowly, titrating to improve respiratory status or IM, repeat as needed every 2-3 minutes.
10. Contact Medical Control.

Pediatric Altered Mental Status

The purpose of this protocol is to provide for the assessment and treatment of pediatric patients with altered mental status of unknown etiology such as alcohol, trauma, poisonings, seizures, behavioral problems, stroke, environmental causes, infection, etc.

Pre-Medical Control

MFR/EMT/SPECIALIST/PARAMEDIC

1. Follow **Pediatric Assessment and Treatment Protocol**.
2. Restrain patient if necessary, refer to **Patient Restraint Procedure**.
3. **If patient is not alert** or vital signs are unstable:
 - A. Evaluate and maintain airway, provide oxygenation and support ventilations as needed.
 - B. If no concern regarding spinal injury, place the patient on either side.

MFR/EMT/SPECIALIST

4. For a known diabetic, consider small amounts of oral glucose paste, buccal or sublingual.

EMT/SPECIALIST/PARAMEDIC

5. **If the patient is alert** but demonstrating signs of hypoglycemia, measure blood glucose level, if available.
 - A. If less than 60 mg/dl administer oral high caloric fluid.

SPECIALIST/PARAMEDIC

6. *If glucose is less than 60 mg/dl, and patient is demonstrating signs of hypoglycemia:*
 - A. *Infuse Dextrose 10% via IV up to 5ml/kg or until patient's level of consciousness improves.*
 - B. *Recheck blood glucose level when patient is alert. If still less than 60 mg/dl and the patient's airway is patent (low risk of aspiration), administer oral glucose paste.*
7. If respiratory depression is present, administer Naloxone up to 0.1 mg/kg (maximum dose 2 mg) IV slowly, titrating to improve respiratory status or IM; repeat as needed.
8. Per MCA selection, if unable to start an IV, when Dextrose is indicated, administer Glucagon.

Glucagon

1 mg IM

- Included
- Not Included

Post-Medical Control

1. Repeat Dextrose as indicated.
2. Repeat Naloxone as indicated.



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ATTACHMENT 4

EMS DRUG BOX					KITS			
SUPPLIES AND MICELLANEOUS			MEDICATIONS AND FLUIDS		ALS MINI-KIT			
2	Atomizer		3	atropine sulfate	1 mg/10 ml	2	Clave Adapter	
2	Clave Adapter		2	acetaminophen (Tylenol)	160 mg/5 ml	1	IV Start Kit	
1	Illinois Illiac Needle	16 ga.	5	adenosine (Adenocard)	6 mg/2 ml	2	Saline Flush Syr	10 ml
1	Illinois Illiac Needle	15 ga.	2	albuterol (Proventil)	2.5 mg/3 ml	2	Safety IV Catheter	18 GA x 1.16"
3	IV Start Kit		3	amiodarone (Cordarone)	150 mg/3 ml	2	Safety IV Catheter	20 GA x 1.16"
1	Paper Bag		4	aspirin	81 mg chew tab	2	Safety IV Catheter	22 GA x 1"
2	Primary Macro Drip Tubing		1	bacteriostatic NACL	30 ml	1	Syringe	3 ml
1	Primary Micro Drip Tubing		1	calcium chloride 10%	1 Gram/10 ml	1	Safety Needle	19 GA x 1 1/2"
1	Red plastic reseal lock		1	dextrose 10%	25 grams in 250 ml	1	Ondansetron (Zofran)	4 mg/2 ml
3	Safety IV Catheter	14 GA x 1.75"	1	dextrose 5% in Water	250 ml	2	Ipratropium (Atrovent)	0.5 mg/2.5 ml
3	Safety IV Catheter	16 GA x 1.16"	1	dextrose 5% in Water	50 ml	2	Albuterol (Proventil)	2.5 mg/3 ml
3	Safety IV Catheter	18 GA x 1.16"	2	diphenhydramine	50 mg/1 ml	1	Nitroglycerin	0.4 mg tab (#25)
3	Safety IV Catheter	20 GA x 1.16"	8	epinephrine 1:10,000	1 mg/10 ml	4	Aspirin	81 mg chew tab
3	Safety IV Catheter	22 GA x 1"	1	epinephrine 1:1000	30 mg/30 ml	1	50% Dextrose	25 Grams/50 ml
3	Safety IV Catheter	24 GA x 1"	1	glucagon injection	1 mg	1	Dextrose 10%	250 ml
3	Safety Needle	19 GA x 1 1/2"	2	ipratropium (Atrovent)	0.5 mg/2.5 ml	1	Primary Macro Drip Tubing	
3	Safety Needle	21 GA x 1 1/2"	2	lidocaine	100 mg/5ml	1	Red plastic reseal lock	
3	Safety Needle	23 GA x 5/8"	2	magnesium sulfate	1 Gram/2 ml	1	Paper Bag	
2	Saline Flush	10 ml	1	methylprednisolone	125 mg/2 ml	BLS KIT		
2	Syringe	1 ml	4	naloxone	2 mg/2 ml	1	Epi-Pen	0.3 mg
2	Syringe	3 ml	1	nitroglycerin	0.4 mg tab (#25)	1	Epi-Pen Jr.	0.15 mg
2	Syringe	10 ml	1	normal saline	500 ml	1	Nebulizer	
1	Syringe	20 ml	1	normal saline w/label	100 ml	4	Aspirin	81 mg chew tab
1	Syringe	30 or 35 ml	2	ondansetron (Zofran)	4 mg/2 ml	2	Albuterol (Proventil)	2.5 mg/3 ml
1	Syringe (Oral)	5 ml	2	sodium bicarbonate 8.4%	50 MEq/50 ml	1	naloxone	2 mg/2 ml
1	4-way Stopcock Extension		1	tranexamic acid	1 gram (packed w/NS 100 ml)	1	atomizer	
CONTROLLED SUBSTANCES (SEALED WITH RED LOCK)					MFR KIT			
2	diazepam (Valium)	10 mg/2 ml	4	midazolam (Versed)	5 mg/ 1 ml	1	naloxone	2 mg/2 ml
2	fentanyl	100 mcg/2 ml	2	morphine sulfate	10 mg/1 ml	1	atomizer	
1	ketamine	500 mg/5 ml	1	Carpuleject Injector				

Revised - February 2016