SPEMS Protocol Changes
EMT-Paramedic (EMT-P)
2/1/11 to 1/31/12

PROTOCOL CHANGES

- **Every Page**
  - Changed dates at bottom of each page
- **Cover Page**
  - Signature with February 1, 2011 date
- **Page P-2: Table of Contents**
  - Updated to reflect additions and current page numbers
- **Page P-4 Medical Control Authorization**
  - Deleted "SQ Injections" from the 3rd paragraph
  - Changed #7 to state run report form/"*software*"
- **Page P-6 Procedural Guidelines for Medical Control Authorization**
  - Second sentence, now reads " Failure to *maintain* appropriate documentation may result in the EMS technician's medical control authorization being suspended"
- **Pages P-10 Through P-15 Definitions**
  - Several sections relocated into this Definitions section
- **Page P-10 Definitions**
  - Addition of #3 <u>Adult Refusal of Transport</u>
    - Section relocated to Definition Section
    - No changes to content
- **Page P-11 Definitions**
  - Addition of # 7 <u>Classification of Cardiac Rhythms</u>
    - Section relocated to Definition Section
    - No changes to content
- **Page P-12 Definitions**
  - Addition of #11 <u>Duty Status-Geographical Area</u>
    - Section relocated to Definition Section
    - No changes to content
  - Addition of #12 <u>Errors/Deviation</u>
    - Section relocated to Definition Section
    - No changes to content
  - Addition of #16 <u>Medication Concentrations/Storage</u>
    - Section relocated to Definition Section
    - No changes to content
  - Addition of # 18 <u>Narcotics/Paralytics</u>
    - Section relocated to Definition Section
    - No changes to content
- **Page P-13 Definitions**
  - Addition of #19 <u>Non-EMS Licensed/Certified Personnel</u>
    - Section relocated to Definition Section
    - No changes to content
  - Addition of #20 <u>No Transport Codes</u>
    - Section relocated to Definition section
    - Deleted "5 page report" from the documentation requirement

- Addition of # 22 Patient's Physician On Scene
  - Section relocated to Definition Section
  - No changes to content
- **Page P-14 Definitions**
  - Addition of #23 Request Assistance from Receiving Area's ALS Service
    - Section relocated to Definition Section
    - Addition of bullet point that states "Patients who are potential candidates for thrombolytic or PCI therapy and transport time is > 25minutes."
  - Addition of #24 Transportation Guidelines
    - Section relocated to Definition Section
    - No changes to content
  - Addition of # 25 Transportation of Minors
    - Section relocated to Definition Section
    - No changes to content
- **Page P-15 Definitions**
  - Addition of # 24 Unknown Physician on Scene
    - Section relocated to Definition Section
    - No changes to content
- **Page P-16 Through P-27 Treatment Procedures**
  - Removal of items listed above and placed under "Definitions"
- **Page P-16 Treatment Procedures**
  - Airway Management
    - Addition of 5th sentence in 3rd paragraph that states "An ET tube introducer (i.e. Bougie) may be used, if needed, to facilitate endotracheal intubation at any time."
      - Allows for an introducer to aid in intubation
      - Such aids are optional NOT mandatory
    - Addition of 7th sentence of the 3rd paragraph that states "An ET tube introducer (i.e. Bougie) **CAN NOT** be passed through a King airway in order to endotracheally intubate."
- **Page P-17 Treatment Procedures**
  - Addition of Chemical Sedation/Restraint
    - Relocated to treatment procedures
    - No changes to content
- **Page P-18 Treatment Procedures**
  - Continuous Positive Airway Pressure (CPAP) (Optional)
    - III. m. Replaced "non visualized airway" with "King Airway"
    - IV b. Replaced "non visualized airway" with "King Airway"
- **Page P-19 Treatment Procedures**
  - Endotracheal Intubation: Using Pharmacologic Agents to Facilitate Intubation
    - In last paragraph, addition of 5th sentence that states "An ET tube introducer (i.e. Bougie) may be used, if needed, to facilitate endotracheal intubation at any time."
    - In last paragraph, addition of last sentence that states "An ET tube introducer (i.e. Bougie) **CAN NOT** be passed through a King airway in order to endotracheally intubate."
- **Page P-20 Treatment Procedures**
  - PAI Using Norcuron
    - Addition of 4th sentence that states "An ET tube introducer (i.e. Bougie) may be used, if needed, to facilitate endotracheal intubation at any time."
    - Addition of 6th sentence that states "An ET tube introducer (i.e. Bougie) **CAN NOT** be passed through a King airway in order to endotracheally intubate."

- **Page P-21 Treatment Procedures**
  - PAI Using Rocuronium
    - Addition of 4th sentence that states "An ET tube introducer (i.e. Bougie) may be used, if needed, to facilitate endotracheal intubation at any time."
    - Addition of 6th sentence that states "An ET tube introducer (i.e. Bougie) **CAN NOT** be passed through a King airway in order to endotracheally intubate."
- **Page P-22 Treatment Procedures**
  - PAI Using Succinylcholine
    - Addition of 4th sentence that states "An ET tube introducer (i.e. Bougie) may be used, if needed, to facilitate endotracheal intubation at any time."
    - Addition of 6th sentence that states "An ET tube introducer (i.e. Bougie) **CAN NOT** be passed through a King airway in order to endotracheally intubate."
- **Page P-24 Treatment Procedures**
  - Pain Management
    - Addition of #7 "Cardiac monitoring is required for all patients that receive pain management"
  - Intraosseous Infusion-Adult
    - Last part of first paragraph now states "The preferred site for the EZ-IO is the anterior surface of the proximal tibia. However, the proximal humerus may be utilized as a secondary site if one or more of the contraindication listed below prevents cannulization into the proximal tibia. The EZ-IO must be used as per manufacturer instructions. The EZ-IO must be secured with an EZ-STABILIZER as per manufacturer instructions."
      - Allows for placement of EZ-IO into proximal humerus if insertion into the anterior proximal tibia is contraindicated
      - Requires that the EZ-IO must be used according to the manufacturer's instructions
      - Requires that ALL EZ-IO catheters be stabilized with the EZ-STABILIZER
        - This device is available from dealers who sell EZ-IO catheters
    - Changed Contraindication #1 to read "*Previous orthopedic procedure (previous surgery at or around the insertion site, previous IO within 24 hrs*.) or injury, or soft tissue injury to the insertion site.
- **Page P-27 Treatment Procedures**
  - Uncontrolled Hemorrhage Manage with a Hemostatic Agent
    - Changed from "Uncontrolled Hemorrhage Managed with Celox (Optional)"
    - Addition of "A. **QUICKCLOT (optional) (Must be the heat free formulas as noted below)**
      - Combat Gauze, is a 3in X 4yrd roll of heat free hemostatic gauze
      - ACS+, is a heat free hemostatic sponge"
    - Addition of "B. **CELOX (optional)(will be discontinued on 2/1/2012)** is Chitosan-base and its granules assist in clot formation. It has no identified adverse reaction."
    - Quickclot and/or Celox are optional
    - After 2/1/2012, only Quickclot will be allowed to be carried; but it will remain optional
- **Page P-28 Pre-Hospital Medications**
  - Under Inhaled Medications: added "Optional" to Levalbuterol (Xopenex) 1.25mg/3ml
  - Removal of Subcutaneous Medications
  - Intramuscular Medications
    - Epinephrine 1:1,000 1mg/1cc moved under IM medication
    - Epi is now given IM rather than SC

- Under <u>IV Medications</u>
  - Added **Calcium Gluconate 10%**, 1g/10cc (Page 21)
  - Added **Magnesium Sulfate 50%**, 5g/10cc (Page 21)

- **Page P-31 Through P-37 Do Not Resuscitate Orders**
  - Updated to reflect new form and procedures
  - Addition of 4th line: "Note: There is now a new TDSHS form for DNRs. Either the new or the old form is acceptable. A copy of both forms is on subsequent pages."
  - Addition of #1 A form is considered valid if:
    - 1. One of the six sections have been filled out and signed appropriately. **Note**: Electronic signatures are acceptable. (Only one completed section is required)
      - a. Section A: Declaration of the adult person
      - b. Section B: Declaration by legal guardian, agent or proxy on behalf of the adult person is incompetent or otherwise incapable of communication
      - c. Section C: Declaration by a qualified relative of the adult person who is incompetent or otherwise incapable of communication
      - d. Section D: Declaration by physician based on directive to physicians by a person now incompetent or otherwise incapable of communication
      - e. Section E: Declaration on behalf of the minor person
      - f. Section F: Directive by two physicians on behalf of the adult, who is incompetent or unable to communicate and without guardian, agent, proxy or relative. (**Note**: if this section is utilized, no signature of witnesses or notary are required)
  - Addition of #3, A form is considered valid if:
    - 3. Signatures of two witnesses or notary are present; except when section F is utilized (No witness or notary signature is required for Section F). **Note**: Electronic signatures are acceptable
    - Copies of both the new form and older forms are included (front and back) on pages P-34 through P-37
    - Summary
      - Either the new form or old form is acceptable
      - Electronic signatures are now allowed
      - Only one of the 6 sections must be filled out on the new forms
      - Witness signatures or a notary signature is still required
      - Refer to the directions for the new form on page P-37 for clarification

- **Page P-38 Cardiac Triage/Transport Decision Scheme**
  - New Section
  - References the Regional Cardiac Plan
  - Designed to provide guidance for transport of cardiac patients
  - Patients with ACS or confirmed STEMI should be transported to "PCI" (Percutaneous Coronary Intervention) Capable Facilities or to the Closest Appropriate Acute Care Facility.
    - If an adequate airway cannot be established and/or maintained or if the patient goes into cardiac arrest, has malignant cardiac dysrhythmias, or is acutely unstable, the patient should be transported to the **<u>NEAREST ACUTE CARE FACILITY.</u>**
    - Medical Control may order bypass in any situation as appropriate, such as when a facility is unable to meet hospital resource criteria, or when a patient is in need of specialty care.
    - If expected transport time is excessive (>25 minutes) activation of air transport should be considered.

        - If there is a question on whether or not to bypass a facility, on-line medical control should be contacted for the final decision.
    - Review this section for more details
- **Page P-39 Stroke Triage/Transport Decision Scheme**
    - New Section
    - References the Regional Stroke Plan
    - Designed to provide guidance for transport of stroke patients
    - Patients who meet triage criteria for activation of the Regional Stroke Plan should be transported to the **<u>CLOSEST HIGHEST DESIGNATED STROKE FACILITY</u>** or the **<u>CLOSEST APPROPRIATE ACUTE CARE FACILITY</u>** according to the plan guidelines with special consideration under the following circumstances:
        - If an adequate airway cannot be established and/or maintained or if the patient goes into cardiac arrest, has malignant cardiac dysrhythmias, or is acutely unstable, the patient should be transported to the **<u>NEAREST ACUTE CARE FACILITY.</u>**
        - Medical Control may order bypass in any situation as appropriate, such as when a facility is unable to meet hospital resource criteria, or when a patient is in need of specialty care.
        - If expected transport time is excessive (>25 minutes) activation of air transport should be considered.
        - If there is a question on whether or not to bypass a facility, on-line medical control should be contacted for the final decision.
    - TRANSPORTATION SHOULD BE BASED ON THE TIME OF ONSET OF SYMPTOMS
        - Patients with an onset of **<u>STROKE SYMPTOMS < 3 HOURS</u>** should be taken to the highest designated stroke facility for treatment and evaluation for interventional care
        - Patients with an onset of stroke **<u>SYMPTOMS OCCURRING >3 HOURS</u>** should be transported to the nearest acute care facility for initial diagnosis and treatment. Similarly, a non-designated facility may be appropriate if the above standards of care can be provided.
    - Review this section and <u>www.spems.org</u> for more details
- **Page P-40 and P-41 Trauma Triage Criteria for EMS Facility Bypass and Transfer**
    - Addition of the word "Trauma" to the title as this refers to trauma patients
- **Page P-45 Trauma Triage/Transfer Decision Scheme Pre-Hospital**
    - Addition of the word "Trauma" to the title as this refers to trauma patients
- **Page P-47 Equipment List**
    - Hypodermic needles appropriate for *IM injections* replaces SC injections (3 required)
    - Added "Quick Clot (must be heat free formula) (Optional)"
- **Page P-48 Equipment List**
    - Inhaled Medications
        - Added "Optional" to Levalbuterol (Xopenex) 1.25mg/3ml
        - Xopenex is now an optional drug
    - Moved Epinephrine 1:1,000 1mg/1cc under <u>Intramuscular Medications</u>
        - Epi is now given IM rather than SC

- **Page P-49 Equipment List**
    - First paragraph changed to reflect required training for ECAs, EMTs, and Intermediates on IM injections (rather than SC injections) prior to carrying epinephrine 1:1,000 for IM injections
    - Under ALS & ALS Capable Units:

        - Added “1ea- ET tube introducer (i.e. Bougie) (optional)
        - Added “1ea- EZ-Stabilizer”
- **Page P-50 Equipment List**
    - Addition of 1-250cc or 500cc Normal Saline
        - Must be carried to mix a Magnesium Sulfate drip
        - May carry either bag size or both bag sizes, but MUST carry at least 1 bag of either
    - Under IV Medications (ALS):
        - Increased the minimum number of Dextrose 50%, 25g/50cc to 2
        - Added 2- Ondansetron (Zofran) 4mg/2cc
    - MICU IV Medications
        - Epinephrine 1:1,000 now under IM Medications
        - Removed Ondansetron (Zofran) from MICU IV Medication list
            - Now under ALS medications
        - Added 1- Calcium Gluconate 10%, 1g/10cc
- **Page P-51 Equipment List**
    - MICU IV Medications
        - Added 2- Magnesium Sulfate 50%, 5g/10cc
        - Removal of <u>Subcutaneous Medications</u>
            - Epi 1:1,000 now given IM
    - Statement added “(MICU & MICU Capable units must stock at least 4 Epinephrine (1:1,000) 1mg/1cc)”
        - 2 for IM
        - 2 for IV
    - Signature of Medical Director
    - Dated 02/01/2011
    - Service Director MUST sign all copies on units
- **Throughout Treatment Algorithms**
    - Changed the date on the bottom to read 02/01/2011
- **Page 2 Trauma**
    - Box changed on mid left to state “Control bleeding with a hemostatic agent (optional) if necessary (P-27)”
        - Allows for Celox or Quick Clot if used
- **Page 6 Respiratory Distress**
    - Xopenex is now optional
    - Xopenex is removed from flow chart, but may be substituted for Albuterol
        - 3rd box on left added that states: “Xopenex (optional), 1.25mg via nebulizer, may be substituted for Albuterol anywhere throughout this algorithm”
        - Allows for user preference of Xopenex or Albuterol
    - All Epi 1:1,000 doses now IM instead of SC
- **Page 11 Cardiac Chest Pain or Suspected Myocardial Infarction**
    - Addition of box just above Continue to Treat, Monitor, and Transport that states “Reference the Cardiac Triage/Transport Scheme (P-38)”
    - Changed wording in top middle box to state **If chest pain continues after the suppression of underlying arrhythmias, *or after correcting cardiogenic shock* return to this algorithm.”
    - Removed “Initiate Transport” from top box
    - Addition to box, below RVI box, that states:
        - “1. Reference the Cardiac Triage/Transport Scheme (P-38)”

- **Page 21 Eclampsia**
  - New Algorithm
  - "Eclampsia is defined as a presentation of an unexplained seizure or convulsion in the setting of the signs and symptoms of Pre-Eclampsia. Not all patients will be clinically diagnosed with Pre-Eclampsia. It is considered a complication of severe Pre-Eclampsia. It typically occurs during or after the 20th week of gestation or in the postpartum period."
  - Valium is NOT used for eclampsia without medical control
  - Requires administration of 50% Magnesium Sulfate, 4g, IVP, over 15 minutes (dilute Mag 1:1 with NS) if actively seizing or has seized
  - If seizures are suppressed or patient is no longer actively seizing (but has seized) administer a Magnesium Sulfate Drip
  - Bottom box lists signs/symptoms of Magnesium toxicity and Mag drip instructions
    - If patient becomes toxic on Magnesium, administer 10% Calcium Gluconate, 1g, SIVP
    - Instructs how to mix and administer Mag Sulfate drip
      - 5g in 250cc of NS. Run at 30gtt/min, OR
      - 5g in 500cc of NS. Run at 60gtt/min
  - Review the algorithm for full comprehension
- **Page 23 Allergic Reaction**
  - Addition of the box (3rd from bottom) that states "Xopenex (optional), 1.25mg via nebulizer may be substituted for Albuterol anywhere throughout this algorithm"
  - Epinephrine 1:1,000 now given IM rather than SC throughout algorithm
- **Page 25 Decreased Level of Consciousness (Non-Traumatic)**
  - Removed neurological symptoms from title
  - Added motor or sensory deficit box at upper middle to refer to the Stroke/TIA algorithm
  - Removed Cincinnati Stroke Scale box
  - Stroke and TIA management is addressed under a new algorithm on Page 32
  - Addition of box at upper center which states "Is patient taking any of the following?
    - MS Contin
    - Oxycontin
    - Diluadid
    - Fentanyl/Duragesic Patch
  - If patient is taking any of these meds, then the dose of Narcan is decreased
    - Box on middle left states "To prevent acute withdrawal syndrome administer Narcan in Increments of 0.1mg every 2-3 minutes until clinical effect noted."
    - Dosage is decreased for these patients to prevent withdrawal
  - (Updated Addendum) In Glucagon box mid right "Do Not establish EZ-IO unless BGL < 50mg/dL and/or pt condition warrants".
    - EZ-IO should only be established for profound hypoglycemia or critical patient, otherwise use Glucagon or Oral Glucose
  - Addition of box bottom right that states "** When administering high dose Narcan to an opiate dependent patient the benefit must out way the risk (i.e. resp <10/min, SBP <90mmHg, unable to control airway ect...)."
  - In Pediatric Dose Box:
    - Addition of **Dextrose 12.5%** (**D12.5W**), 5cc/kg to all pediatrics < 1 yoa. (**D50W** may be diluted 1:2 with NS to achieve **D12.5W**)"
      - Only for kids < 1 year of age
      - Dilute 1 part of D50 with 2 parts NS

- **Page 30 Poisoning**
    - Removed "Overdose" from title
- **Page 31 Seizures**
    - (Updated Addendum) In Glucagon box at right center "Do Not establish EZ-IO unless BGL < 50mg/dL and/or pt condition warrants".
        - EZ-IO should only be established for profound hypoglycemia or critical patient, otherwise use Glucagon or Oral Glucose
    - In Pediatric Dose Box:
        - Addition of **Dextrose 12.5%** (**D12.5W**), 5cc/kg to all pediatrics < 1 yoa. (**D50W** may be diluted 1:2 with NS to achieve **D12.5W**)"
            - Only for kids < 1 year of age
        - Dilute 1 part of D50 with 2 parts NS
- **Page 32 Stroke/TIA or Neurological Deficit**
    - New algorithm
    - Stresses the Cincinnati Stroke Scale and early notification (from scene if possible) of receiving facility for positive CSS
    - References the Stroke Triage Scheme (P-39)
    - Narcan NOT given in this algorithm
    - Defines Neurological Deficit on bottom box
        - 1. Any Sudden Motor or Sensory Deficit
        - 2. Sudden confusion, trouble speaking or understanding
        - 3. Sudden difficulty seeing in one or both eyes
        - 4. Sudden trouble walking, coordination, or focal weakness
        - If possible inquire about the patient's baseline neurological state. Chronic neurological deficits do not warrant rapid transport to a Stroke Center. ALWAYS err on the side of caution if questionable.
    - Review the algorithm for full comprehension

CHANGES TO SUPPLEMENT

- **Table of Contents**
    - Page numbers changed
    - D50 changed to Dextrose, 12.5%, 25%, and 50%
    - Addition of Calcium Gluconate and Mag Sulfate
- **Addition of new drugs to drug index**
    - Calcium Gluconate Page S-10
    - Magnesium Sulfate Page S-21
    - IV preparation instructions included for 250cc and 500cc
- **Dextrose (Page S-12) changed to include D12.5W, D25W, and D50W**
    - Mixing procedure and dosages
- **Epinephrine 1:1,000 (Page S-14)**
    - Route changed from SC to IM
- **Adult Drug Charts (Pages S-35 to S-38)**
    - Divided into 2 sections
        - For weights up to 100kg
        - For weights of 110kg and above
    - Addition of new drugs to drug index
        - Calcium Gluconate
        - Magnesium Sulfate
            - Loading dose

        - Maintenance dose (IV drip) mixing in 250cc
        - Maintenance dose (IV drip) mixing in 500cc
    - Route for Epi 1:1,000 changed from SC to IM
    - Drips for Lidocaine corrected to gtt/min
- **Pediatric Drug Charts (Pages S-39 and S-40)**
    - Dextrose divided into D12.5W and D25W
    - Route for Epi 1:1,000 changed from SC to IM
- **IV Drip Rate Formulas and Examples (Pages S-41 and S-42)**:
    - Inclusion of Magnesium Sulfate example for 250cc bag of NS
    - Inclusion of Magnesium Sulfate example for 500cc bag of NS