Emergency Medical Services Council

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Medical Standards Committee
Thursday, December 01, 2016, 9:30 a.m. - 11:30 a.m.
Edina Fire Station #1
6250 Tracy Avenue, Edina 55436

Draft Minutes

Present	Absent
1. Todd Joing, M.D., Fairview Southdale Hospital 2. David Ladmer, M.D., Methodist Hospital 3. Michelle London, M.D., Minneapolis Children's Hospital (Chair) 4. Patrick Lorentz, proxy for Doug Kayser, Ridgeview Ambulance Service 5. John Lyng, M.D., North Ambulance Service 6. Paul Nystrom, M.D., Edina Fire Department 7. Michael Perlmutter, North Memorial Ambulance Service 8. David Rodgers, proxy for Doug Gesme, Hennepin EMS 9. Kelly Simon, proxy for Joe Klein, UMMC	1. Scott Bentz, M.D., Mercy Hospital 2. Wade Brennom, M.D., Abbott Northwestern Hospital 3. Jeff Ho, M.D., Hennepin EMS 4. Charles Lick, M.D., Allina Health EMS 5. Kevin Sipprell, M.D., Ridgeview Ambulance
Guests	**Staff**
1. Charles Barrett, Hennepin EMS	1. Matthew R. Maxwell 2. Kristin Mellstrom

Welcome and Introductions – Chair Michelle London called the meeting to order at 9:32 a.m. with a quorum present. After introductions, the proposed December 1, 2016 agenda and meeting summary from September 1, 2016 were approved.

Hospital Radio Checks – Kristin Mellstrom presented data from the six month medical control hospital radio check pilot program. Data suggests that overwhelmingly hospitals conducted their monthly radio checks on time and with few problems. There were a handful of incidents where a few hospitals were unable to contact the west medical resource coordination center

(MRCC) via radio, but were able to connect after calling the west MRCC via phone. The Committee agreed the program achieved its intent to ascertain on a monthly basis if each medical control hospital's 800 MHz EMS radio was operational. The Committee recommended that the monthly radio checks continue into the future.

Adult Sepsis – The subcommittee reviewed a new protocol, drafted by the Quality Committee and revised by the Ambulance Service Personnel Subcommittee and Ambulance Medical Directors Subcommittee. The Committee approved the protocol "as is."

Standing Orders

A. Consider sepsis if you suspect the patient has an infection plus two of the following:
   1. Systolic blood pressure less or equal to 100; or
   2. Respiratory rate greater than or equal to 22; or
   3. Altered mental status (e.g. GCS less than or equal to 14).

B. If the patient meets sepsis criteria in A:
   1. Administer 500 ml NS bolus age 18-65 (250 ml NS bolus age greater than 65 or history of CHF). May repeat up to 30 ml/kg to treat hypotension.
   2. If positive for suspected sepsis, the receiving facility should be notified as soon as possible by stating in your radio/phone report "SEPSIS ALERT."

Pediatric Bradycardia – The subcommittee recommended renaming the protocol to "Symptomatic Bradycardia." Other changes included (underlined text represents proposed new language; strikethrough text represents proposed deleted language):

Standing Orders

~~A. Assess and support the patient's ABCs as needed, provide oxygen and attach the cardiac monitor/defibrillator~~

~~B. If cardiorespiratory compromise is present (i.e., poor perfusion, hypotension, respiratory difficulty and/or altered level of consciousness):~~
   ~~1. Begin chest compressions~~
   2. ~~Assure adequate oxygenation and ventilation, and consider an advanced airway~~ <u>Oxygenate and ventilate</u>
   3. <u>Consider chest compressions if cardiopulmonary compromise is present and heart rate is less than 60 beats per minute:</u>
   4. If despite oxygenation and ventilation ~~the patient's heart rate is less than 60 bpm in an infant or child and~~ ~~poor systemic perfusion~~ <u>symptomatic bradycardia</u> ~~is present~~ <u>persists</u>:
      a. ~~Give~~ <u>Administer</u> epinephrine IV/IO 0.01 mg/kg (1:10,000, 0.1 mL/kg). May repeat every 3 to 5 minutes at same dose.
      ~~b. Administer Atropine 0.02 mg/kg (minimum dose 0.1 mg). May repeat once; maximum total combined dose for the patient not to exceed 1 mg.~~
      c. <u>For heart block or vagal etiologies, consider Atropine 0.02 mg/kg IV/IO (minimum dose 0.1 mg). May repeat once; maximum total combined dose for the patient not to exceed 1 mg.</u>

d. Consider cardiac pacing.

5. If pulseless arrest develops see appropriate protocol

~~C. If cardiorespiratory compromise is not evident, support the patient's ABCs, observe and transport~~

D. Review the most frequent causes and treat according to protocols if present:

1. Hypovolemia – fluids, PCT
2. Hypoxia – ventilation and oxygenation
3. Hypothermia – re-warming. See the Table of Contents for the Hypothermia – Pediatric protocol
4. Hypoglycemia – check blood sugar and if <60 treat per Hypoglycemia protocol

~~After Obtaining Verbal Orders~~
~~E. For heart block or vagal etiologies, consider Atropine 0.02 mg/kg (minimum dose 0.1 mg). May repeat once; maximum total combined dose for the patient not to exceed 1 mg~~ ~~F. Consider cardiac pacing~~

Pediatric Asthma (patient is breathing) – The subcommittee recommended the following changes (underlined text represents proposed new language; strikethrough text represents proposed deleted language):

Standing Orders

A. Begin oxygen therapy and expedite transport.

B. ~~Move the patient to the ambulance and begin transport.~~ ~~**Asthma patients should always be transported to a hospital for monitoring and further treatment.**~~

C. Give nebulized albuterol 2.5 mg with Atrovent 0.5 mg added.

- May repeat ~~albuterol neb 2.5 mg with Atrovent 0.5 mg x 1~~. as needed.

D. Contact a medical control physician for patients with continued moderate-to-severe respiratory distress after two nebs.

E. ~~Consider ET intubation.~~

F. If no improvement after 2 nebs consider:

- Manual exhalation; and
- Terbutaline or epinephrine 1:1000 0.01mg/kg (0.01 mL/kg) SC. Maximum dose 0.25 ml terbutaline or 0.3 ml epinephrine (to be used in the field only if the patient's condition is severe); and
- Magnesium Sulfate 25 mg/kg IV.

G. If the patient is unresponsive to other treatments and impending respiratory failure is evident, ~~paramedics may~~ consider ~~Magnesium Sulfate 25 mg/kg IV.~~ Advanced airway.

~~**After Obtaining Verbal Orders**~~
H. ~~Consider ET intubation.~~

I. ~~Consider terbutaline or epinephrine 0.01mg/kg 1:1000 (0.01 mL/kg) SC. Maximum dose 0.25 ml terbutaline or 0.3 ml epinephrine (to be used in the field only if the patient's condition is severe).~~

J. ~~If the patient is unresponsive to other treatments and impending respiratory failure is evident, paramedics may consider Magnesium Sulfate 25 mg/kg IV.~~

Pediatric Asthma (patient is not breathing) – The subcommittee recommended the following changes (underlined text represents proposed new language; strikethrough text represents proposed deleted language):

Standing Orders

A. Insert an oral or nasal airway and begin positive pressure ventilation. Ventilate with a short inspiration:long expiration ratio at a rate of 8-10/min.

B. Insert advanced airway ~~an EOA, LMA or Combitube (if the patient meets size requirements) or if authorized, ET tube as soon as possible.~~

C. ~~Paramedics may~~ Administer: ~~terbutaline 0.01 mg/kg (0.01 mL/kg) SC, maximum dose 0.25 mg while awaiting contact with a medical control physician.~~

   a. Epinephrine1:1000 0.01 mg/kg (0.01 mL/kg) IM. Maximum dose 0.5 mg.

   b. Continuous in-line nebulizer (2.5 mg albuterol + 0.5 mg atrovent)

D. ~~If the patient's lung deflation is poor,~~ Perform manual exhalation.

E. Start an IVIO ~~Normal Saline and attach ECG leads while contacting a medical control physician~~.

   a. Administer Magnesium Sulfate 25 mg/kg IV/IO over 3-5 minutes (max dose 2 Gm)

      - If hypotensive response to magnesium sulfate, administer 20 mL/kg normal saline bolus.

F. ~~Expedite transport.~~

~~After Obtaining Verbal Orders~~

G. ~~If terbutaline has not already been administered, consider administering terbutaline or epinephrine 0.01 mg/kg 1:1000 (0.01 mL/kg) SC. Maximum dose 0.25 ml terbutaline or 0.3 ml epinephrine.~~

H. ~~If the patient is unresponsive to other treatments and impending respiratory failure is evident, paramedics may consider Magnesium Sulfate 25 mg/kg IV.~~

I. ~~Consider Atropine 0.02 mg/kg or 0.2 mL/kg IV/IO up to 5 ml for a child or 10 ml for an adolescent (minimum dose 0.1 mg or 1 ml). May be repeated once in 5 minutes.~~

J. ~~Consider Sodium Bicarbonate for a prolonged arrest or upon return of spontaneous circulation after a prolonged resuscitation.~~

MAST/PCT – The subcommittee reviewed seven protocols with language pertaining to MAST/PCT and removed all references to the devices and procedure. The following protocols were affected:

- Adult general trauma/traumatic shock
- Adult shock (non-traumatic)

- Adult obstetric complications
- Pediatric PCT Guidelines
- Pediatric cardiac arrest (asystole/PEA)
- Pediatric Shock
- Permitted ALS Procedures and Equipment

HazMat Response, Adult Unconscious (Unknown Etiology), Pediatric Unconscious (Unknown Etiology), Adult Oxygen Therapy, Pediatric Oxygen Therapy – The Committee agreed to delete these protocols from the protocol book.

General Oxygen Therapy – The subcommittee reviewed a new protocol and approved it "as is."

Standing Orders

A. Oxygen therapy should be administered when indicated by specific protocol.
B. When an EMS provider believes the patient will improve with oxygen therapy the following guidelines are applicable:
   1. Oxygen should be administered by mask at a minimum of 10 liters per minute or by nasal cannula at 4-6 liters per minute.
   2. Oxygen flow should be adjusted per SpO_2 (if pulse oximetry is available) to achieve 94% or greater oxygen saturation.
C. For pediatrics, if the patient is agitated use high flow blow-by O_2.

Pediatric Croup and Epiglottitis – The subcommittee recommended renaming the protocol to Croup. Other changes included (underlined text represents proposed new language; strikethrough text represents proposed deleted language):

Standing Orders

A. Keep the patient upright at all times when conscious
B. Begin oxygen therapy. Remove the O2 mask if it is not well tolerated by the patient
C. If the child is unconscious, position supine and begin ventilation.
D. Place ECG leads
E. Transport early
F. ~~Contact a medical control physician as soon as possible if epiglottitis is suspected or distress is marked, include "epiglottitis" in your patient report, and give your report as soon as possible.~~
G. Consider nebulized epinephrine for suspected croup.
   - Recommend dosage of 5 mg 1:1000 (5 ml) or as specified by service medical director
H. If unable to administer epinephrine via neb, may administer epinephrine 1:1000 0.01 mg/kg ~~SC/~~IM.

Pediatric Drug Ingestion or OD – The subcommittee recommended renaming the protocol to Drug Overdose. Other changes included (underlined text represents proposed new language; strikethrough text represents proposed deleted language):

Standing Orders

A. ~~Begin oxygen therapy if the child becomes obtunded.~~

B. ~~Tricyclic overdoses requiring respiratory support should be ventilated with high flow O_2 via bag-valve-mask device.~~

C. For any patient with a respiratory rate less than eight, or a patient history of or physical findings consistent with opioid overdose, assist the patient's ventilation and consider administration of Narcan 0.1 mg/kg IV/IO/IM up to 2 mg.

- Due to the relatively short half-life of Narcan, patients that respond favorably to Narcan administration should still be considered under the influence and transported regardless of their mental status and/or refusal of care.

D. ~~For all significant overdoses, obtain IV access.~~

E. For all suspected tricyclic overdoses, monitor ECG.

After Obtaining Verbal Orders

F. Consider additional Narcan 0.1 mg/kg IM or IV up to 2 mg.

G. Consider Sodium Bicarbonate 1 mEq/kg IV/IO for tricyclic ingestions.

H. Consider glucagon 0.1 mg/kg IV/IO for known beta blocker overdose.

I. Consider Calcium Chloride 20 mg/kg (0.2 mL/kg) for known calcium channel blocker overdose with hypotension or bradycardia.

J. ~~If the child is unconscious and their blood glucose level is less than 60 mg/dL, consider D50W 1 mL/kg IV up to 50 ml for patients four years or older. For patients three years or younger, use D25W, 2 mL/kg.~~

Pediatric Severe Nausea and/or Vomiting – The subcommittee recommended the following changes (underlined text represents proposed new language; strikethrough text represents proposed deleted language):

Standing Orders

A. If the patient has severe nausea and/or vomiting:

1. Obtain IV access.
2. Administer Zofran (ondansetron) 0.1 mg/kg up to a maximum of 4 mg IV/IO/IM; if given IV administered slowly over 1-2 minutes. May be repeated once after 10 minutes.
   - Alternate antiemetics, selected by the service medical director, may be used at recommended dosages as an alternative for severe nausea or vomiting.

B. Contact a medical control physician for further orders if needed.

Known Outbreak of Transmittable Respiratory Illness (patient is breathing; patient is not breathing) – The Committee reviewed both protocols and recommended no changes.

Report from AMD Subcommittee – The Committee received a report from the AMD Subcommittee on the following non-actionable topics:

- Pain Management Study
- Hospital Disposition(Campus Systems and MN*Trac* general notifications)
- STEMI Policy Review

Minnesota Department of Health Hospital Closure Data – The Committee reviewed closure data for west metro hospitals through the end of October, 2016. No action was taken on this topic.

Future meetings, Thursday 9:30-11:30 a.m., at Edina Fire Department:

- March 2, 2017
- June 1, 2017
- September 7, 2017
- December 7, 2017

Adjourn – The meeting adjourned at 10:53 a.m.