Emergency Medical Services Council

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Medical Standards Committee
Thursday, September 07, 2017, 9:30 a.m. - 11:30 a.m.
Edina Fire Station #1
6250 Tracy Avenue, Edina 55436

Draft Minutes

Present	Absent
1. Doug Gesme, Hennepin EMS 2. Jeff Ho, M.D., Hennepin EMS 3. Todd Joing, M.D., Fairview Southdale Hospital 4. Doug Kayser, Ridgeview Ambulance Service 5. David Ladmer, M.D., Methodist Hospital 6. Charles Lick, M.D., Allina Health EMS 7. Michelle London, M.D., Minneapolis Children's Hospital (Chair) 8. John Lyng, M.D., North Ambulance Service 9. Paul Nystrom, M.D., Edina Fire Department 10. Kelly Simon, UMMC 11. Kevin Sipprell, M.D., Ridgeview Ambulance	1. Scott Bentz, M.D., Mercy Hospital 2. Wade Brennom, M.D., Abbott Northwestern Hospital 3. Vacant - Paramedic
Guests	**Staff**
• Kaysie Banton, UMMC	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 September 7, 2017 agenda and meeting summary from July 1, 2017 were approved.

Report from Ambulance Medical Directors Subcommittee – Dr. Kevin Sipprell gave a brief summary of recent topics the Ambulance Medical Directors (AMD) Subcommittee has discussed, but not taken action on. Sipprell explained that metro hospitals are reporting elevated numbers of mental/behavioral health, ETOH, and chemical dependency patients in

their emergency departments. Per Sipprell, these patients are frequently being boarded for extended periods of time, often upwards of eight to twelve hours (or longer). Sipprell indicated that finding an open bed for many of these patients is a challenge, and frequently they are sent to facilities that are hours away (which removes the patient from their local support network of family and friends). Sipprell added that this issue is becoming a public health crisis.

The AMD Subcommittee will continue to discuss the issue and possibly developing a position paper to move the issue forward.

Protocols – The Committee discussed the following protocols. Underlined text represents proposed new language; strikethrough text represents proposed deleted language.

Adult Obstetric Complications

A. Begin oxygen therapy <u>& administer high flow O_2 by mask</u> for any complications.
B. Immediate transport for:
   - Prepartum or postpartum hemorrhage (moderate to heavy).
   - Limb presentation.
   - Prolapsed umbilical cord.
   - Known multiple fetuses.
   - Previous cesarean section.
C. Start an IV Normal Saline in route.
D. If the patient is hypotensive, position on the left side <u>and/or ~~manually displace~~ push the uterus to the patient's left side.</u>
E. For postpartum hemorrhage:
   1. ~~Oxygen therapy.~~
   2. Massage the uterus gently.
   3. ~~Consult a medical control physician regarding use of pneumatic compression trousers (PCT).~~
F. For prolapsed umbilical cord:
   1. ~~Oxygen therapy~~
   2. Place the mother in <u>a position to minimize pressure on the cord (e.g.</u> the knee-chest position or Trendelenburg).
   3. Insert a gloved finger into the vagina and hold the presenting part off of the umbilical cord.
   4. Do not touch or attempt to replace the umbilical cord.
G. <u>Suspected eclampsia (20 weeks gestation with hypertension, or up to 7 days postpartum) – If patient is seizing with no known history of epilepsy/seizure disorder, administer 4 Gm mag sulfate IV/IO over 10 minutes.</u>
H. For infant distress, see the Newborn Emergencies - Pediatric protocol.
I. Contact a medical control physician for further orders for any complication.

Adult Normal Labor and Delivery – Title changed to "Adult Labor and Delivery."

A. ~~Obtain pertinent patient history and perform a physical exam.~~
B. If imminent delivery is not present, transport the patient in ~~the~~ a position of comfort, usually on the patient's left side.
C. If authorized, may consider patient self-administration of nitrous oxide for pain relief if no contraindications are present.
D. If in question of imminent delivery, observe briefly, then transport unless delivery is in progress.
    - Be prepared to stop the ambulance if delivery occurs en route.
E. If delivery is in progress:
    1. Assist delivery using clean ~~or sterile~~ technique.
    2. Suction the infant only if needed to clear obvious obstructions ~~and protect from heat loss. See the Newborn Emergencies – Pediatric protocol~~
    3. Protect from heat loss.
    4. If no need for immediate resuscitation, wait 30-60 seconds then double clamp and cut the umbilical cord approximately 8-10 inches from the infant.
    5. ~~Give the infant to the mother and allow the infant to nurse~~ Term infants (> 37weeks) who are crying (good respiratory effort) and have good muscle tone can be given to the mother to nurse with continued warming efforts and re-assessment.
        - For all others see Newborn Emergencies – Pediatric protocol.
    6. Transport; do not wait for nor attempt delivery of the placenta.
    7. Closely observe the infant for signs and symptoms of distress and monitor the mother for excessive postpartum bleeding.
    8. If complication arise, see the Newborn Emergencies – Pediatric protocol.

Pediatric Newborn Emergencies

A. In all situations, minimize the newborn's heat loss:
    1. Dry the newborn well.
        - Increase environmental temperature.
    2. ~~Fill two sterile gloves with above-body-temperature (100-104°F) water and place next to the newborn.~~
    3. ~~Use bunting, swaddler or similar device if the patient is stable~~.
B. Suction the newborn only if needed to clear secretions or an obstruction:
    1. During or after delivery, suction the mouth and oropharynx first, then the nose ~~before delivery of the shoulders~~.
    2. If meconium is present at birth, and the infant has poor muscle tone and inadequate respiratory effort, keep warm and provide ventilatory assistance and oxygenation as needed, including intubation and suction if the airway is obstructed. ~~suction the mouth and oropharynx first, then the nose, gently, but as completely as possible prior to ventilating.~~
    3. ~~Monitor the newborn's heart rate. Cease suctioning if the heart rate is less than 80 (monitor apical pulse with stethoscope) beats per minute~~.

C. During the first minute warm the infant, position airway, clear secretions if needed, and dry and stimulate.

D. ~~Provide physical stimulation if respirations are present but depressed. Suction and position for optimal airway. Do not hyperextend the neck.~~

E. Assess for apnea, gasping, or heart rate less than 100:

1. If apneic, gasping, or heart rate less than 100, initiate positive pressure ventilation, monitor SpO2, and consider ECH monitoring.
2. If labored breathing or persistent cyanosis, reposition airway and administer oxygen (less than 30% FiO2).

F. Reassess heart rate:

1. If less than 100 correct ventilation of increase oxygen
2. If less than 60 start chest compressions, increase oxygen to 100%, and intubate
3. Continue to reassess heart rate

G. ~~Assist ventilation if respirations are absent, minimal or heart rate is less than 80 bpm.~~

1. ~~Suction and position for optimal airway.~~
2. ~~Do not hyperextend the neck.~~
3. ~~May use a pediatric mask or pocket mask with supplemental high flow oxygen.~~
4. ~~Do not use positive pressure oxygen valve.~~

H. ~~Perform chest compressions if the newborn's apical heart rate is less than 80 bpm despite assisted/adequate ventilation.~~

I. If heart rate remains less than 60 administer epinephrine (0.01 mg/kg) IV/IO.

J. **Transport early.** Attempt to maintain body temperature and assure optimal ventilation and oxygenation.

Adult Pain Management

To provide relief of pain when indicated. ~~This protocol is NOT to be used in cases where the patient:~~

Exclusion criteria:

- ~~Has a systolic~~ BP less than or equal to 90.
- ~~Has~~ pain determined to be cardiac in origin (See the protocol Ischemic Chest Pain – Adult).
- ~~Is in~~ active labor.
- Headache
- Non-traumatic Neck or Back Pain
- Any chronic pain (head, neck, back, fibromyalgia, abdominal or pelvic pain)
- Dental pain

Inclusion criteria:

- Acute Severe Traumatic pain
  - Neck or Back pain from acute trauma with inability to ambulate from the incident
  - Significant orthopedic injury (severe tenderness to palpation, with swelling, bruising and/or deformity)
  - Severe traumatic chest or abdominal pain with tenderness to palpation

- Major burns
- Active cancer or palliative care
- Acute (< 2 hrs duration) non-traumatic pain with 2 or more of the following:
  - Increased heart rate and/or blood pressure
  - Nausea and/or vomiting
  - Writhing
  - Described as severe or > 7/10 in severity
- Intubate patients with injury, painful condition or evidence of increasing discomfort (vital sign changes)
- Paramedic discretion

Standing Orders

A. Assess the patient's pain on a 0-10 scale or other acceptable method for patients with difficulty communicating

B. Inform the patient that pain is an important diagnostic parameter and the goal of this protocol is to relieve suffering and not to totally eliminate pain

C. If the patient meets inclusion criteria, administer one of the following service dependent medications (consider lower doses for elderly patients):

1. Morphine Sulfate 2-10 mg (usual effective initial dose 0.1 mg/kg), up to 10 mg single dose IV/IO/IM/SQ. If using IV/IO route titrate in increments to patient response. No maximum total dose of Morphine Sulfate for adults
   - Reassess the patient's pain scale and if necessary administer a second dose up to 5 mg IV/IO/IM/SQ every 5 to 10 minutes. If using IV/IO route titrate in increments to patient response
2. Hydromophone 0.5-2 mg IV/IO/IM. If using IV/IO route titrate in increments to patient response.
   - Reassess the patient's pain scale and if necessary administer a second dose up to 0.5-2 mg IV/IO/IM. No maximum total dose of hydromophone for adults
3. If pain is of a traumatic origin (non-cardiac), consider Ketamine (slow IV push):
   - IV/IO route 0.2 mg/kg (maximum dose 50 mg); may repeat every 15 minutes. Reassess the patient's pain scale and if necessary administer a second dose 0.2 mg/kg IV/IO
   - IM route 0.4 mg/kg (maximum dose 50 mg); may repeat every 30 minutes. Reassess the patient's pain scale and if necessary administer a second dose 0.4 mg/kg IM
4. Fentanyl
   a. 1mcg.kg (up to 100mcg per single dose) IV/IO/IM/IN
      - Intranasal administration should not exceed 0.5ml per nostril
   b. May repeat 0.5mcg/Kg IV/IO/IM/IN (up to 50 mcg/repeat dose) every 10 min, not to exceed cumulative dose of 200mcg.
5. Inhaled nitronox may be used as an alternative if available

D. Monitor the patient's vital signs (including O_2 saturation). If respiratory depression or hypotension occurs after administration of morphine sulfate or hydromophone ventilate the patient as necessary and administer naloxone (Narcan) 0.4-2 mg IV/IO

E. Contact medical control physician for orders if:

- The patient has a systolic BP less than or equal to 90

F. For patients experiencing pain outside the above listed inclusion criteria consider:
   - Symptomatic relief of nausea/vomiting if needed.
   - Advising them of the general concerns in the medical community about opioid use and that doctors are being very careful about which patients receive these addictive medications.
   - Inform them that 'we carry this type of medication for severe trauma such as broken bones and for certain medical situations that require immediate pain control such as heart attacks'.
   - Acknowledge their pain and try to improve comfort
   - Advise them that a doctor will need to evaluate them prior to administering pain medication.
   - Reassure the patient that the receiving facility will be notified of the need for prompt pain management assessment.
   - Consult medical control if questions.

After Obtaining Verbal Orders

G. Consider initial or additional pain medication including benzodiazepines as appropriate:
   - Midazolam HCL (Versed) 2-5 mg IV/IO/IM (if using IV/IO route, titrate to patient response), or
   - Lorazepam (Ativan) 1 mg IV/IO/IM

H. Monitor for respiratory depression when administering narcotics and benzodiazepines together

Adult Ischemic Chest Pain

A. Obtain 12-Lead ECG

B. Administer:
   1. 325 mg Aspirin PO if the patient has no history of allergy to Aspirin (even in absence of chest pain)
   2. Nitroglycerin 0.4 mg SL tablet or one metered dose spray if the patient's systolic BP is greater than or equal to 100 (consult with medical control physician if systolic BP is less than 100). Check the BP immediately prior to and after administration of nitro

C. Establish IV access. If the patient has been loaded in the ambulance without IV access, begin transport promptly, with IV and all other interventions performed en route.

D. Consider repeat/serial ECGs

E. If there is no pain relief and the patient's systolic BP remains 100 or greater consider repeating nitro every five minutes. Recheck the patient's BP before and after administration.
   - If pain persists after 3 nitro, and systolic BP is greater/equal to 100, give an opioid titrated to obtain pain relief per pain management protocol,

F. After administration of at least 3 nitro, if authorized and transport time is greater than 10 minutes, consider administration of nitro drip
    - Dependent on patient response and effective dose. Initial dose 10 mcg/min delivered by infusion pump. May be increased by 5-10 mcg/min every 5-10 minutes until desired hemodynamic or clinical response is achieved. If no response is seen, may increase by 20 mcg/min until response achieved. Monitor titration continuously until the patient reaches desired level of response. Monitor blood pressure and pulse closely maintaining systolic pressure greater than 100.

G. If the patient meets the inclusion criteria as an ST Elevation Myocardial Infarction (STEMI) patient, as defined in the Metro Region STEMI Protocol, the patient should be transported to a designated Level I Cardiac Center except as allowed in the protocol. The receiving facility should be notified as soon as possible that the patient is a STEMI patient by stating in your radio/phone report "STEMI ALERT."

H. Consider requesting diversion if the difference in transport times to requested hospital versus closest hospital is greater than 30 minutes.

After Obtaining Verbal Orders
I. If the patient is a potential candidate for reperfusion therapy, consider diversion if the difference in transport times to requested hospital versus closest hospital is greater than 30 minutes.

Trauma Disposition – The Committee continued its discussion on the draft Trauma Disposition Guideline which proposes expansion of the scope of the current guideline to include all trauma (versus just major trauma). The proposal is based on the 2008 CDC *National Trauma Triage Protocol*, current (2009) Minnesota state *EMS Major Trauma Triage and Transport Guideline* (which itself is primarily based on the 2008 CDC document), and North Memorial Ambulance Service's trauma disposition guideline.

Staff presented the results from a multi-month open comment period which gave trauma hospitals an opportunity to provide feedback on the draft guideline. The comments were numerous, and sometimes contradictory. Comments included, but were not limited to, concern that level I and II trauma hospitals could be overwhelmed; minor and moderate trauma, and the special consideration cases, could be handled at level III trauma centers; and trauma cases should go to the closest appropriate designated trauma center. Also, some suggestions would not align with the State trauma hospital designation guidelines.

A concern voiced by numerous members of the Committee was that the proposed guideline could result in lower tier designated trauma hospitals losing trauma patients they currently care for. Some lower tier trauma hospitals provide higher-tier trauma hospital services for select patient injuries, even though they have not received the higher tier trauma designation from the State. Those hospitals feel they can competently care for those patients, but the proposed guideline would result in diversion of those patients to higher tier trauma centers.

The Committee was unable to reach shared agreement on moving the proposed guideline forward. The lower tier trauma hospitals felt they stood little to gain but everything to lose from the draft guideline and felt the higher tier trauma hospitals stood the most to gain but little to lose. The Committee briefly discussed if there were trends of poor trauma patient outcomes [based on EMS disposition decisions using the current guideline] in the region. While anecdotal cases were cited, there wasn't clear evidence or supporting trends to indicate the current trauma system and current EMS major trauma disposition guideline were producing poor patient care or bad outcomes.

The Committee reached consensus that the focus of the EMS System's trauma disposition guideline should be on major trauma only. The Committee remanded this topic back to the Ambulance Medical Directors Subcommittee with direction to review the current Major Trauma Patient Disposition Guideline and take into consideration the comments submitted during the public comment period.

STEMI Policy – The Committee continued its discussion on the draft System Transport Policy for STEMI Patients. The draft represents an almost entirely new policy and was developed in response to recognition that the STEMI Policy – originally drafted in 1999 and last amended in 2004 – was outdated and the criteria was unrealistic based on current STEMI patient volumes and number of STEMI hospitals.

Staff explained that crafting a STEMI transport policy is difficult because the Hennepin County EMS System does not want to be in the business of 'designating' STEMI centers, but a policy that identifies which hospitals are STEMI destinations for EMS patients is necessary to guide paramedics when making disposition decisions. Adding to the difficulty is the reality that the State's STEMI designation process isn't mandatory, and no metro hospitals have voluntarily gone through the designation process. As such, no system for STEMI designation exists in the like does for the Trauma system or Stroke system.

There was brief discussion regarding the scope of Ordinance 9 and the EMS Council, and whether the Council has the authority to regulate hospital activity in any manner. Maxwell explained that the EMS Council has the authority to develop and approve policies and guidelines that regulate ambulance services operating in Hennepin County, and the STEMI transport policy is a list of which hospitals qualify as appropriate EMS destinations for STEMI patients. The hurdle lies in identifying the criteria that constitutes "appropriate."

STEMI patients represent significant financial revenue for hospitals, and the vast majority of emergency STEMI patients are brought in by EMS. Per Maxwell, the EMS Council has the authority to create policies for the EMS System that may govern some hospital activity, but hospitals must voluntarily agree to abide by the policies. For example, the medical control system enables hospitals to communicate with paramedics but hospitals are required to comply with the medical control policy. Hospitals may elect to opt out of the medical control system, but in doing so would lose their status as a medical control hospital and ability to communicate with paramedics in the field.

Maxwell explained that the same principle would apply to the proposed STEMI transport policy. Hospitals electing to opt out would not be listed as a STEMI destination for EMS patients. Some hospitals voiced concern that this was coercive and tantamount to the EMS Council creating a STEMI designation system.

Due to time constraints the Committee agreed to continue discussion on this topic at its next meeting.

Minnesota Department of Health Hospital Closure Data – Tabled due to time constraints.

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

- December 7, 2017

Adjourn – The meeting adjourned at 11:45 a.m.