Emergency Medical Services Council

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Ambulance Medical Directors Subcommittee
Tuesday, July 25, 2017, 12:30 p.m. - 2:30 p.m.
Health Services Building, Room 311
525 Portland Avenue S., Minneapolis 55405

Draft Summary

Present	Absent
1. Jeffrey Ho, M.D., Hennepin EMS 2. Charlie Lick, M.D., Allina Health EMS 3. Paul Nystrom, M.D., Edina Fire Department 4. Kevin Sipprell, M.D., Ridgeview Ambulance Service (Chair)	1. John Lyng, M.D., North Memorial Ambulance Service
Guests	**Staff**
	1. Matthew R. Maxwell 2. Kristin Mellstrom

Welcome and Introductions – Chair Kevin Sipprell called the meeting to order at 12:35 p.m. with a quorum present. After introductions, the proposed July 25, 2017 agenda and meeting summary from June 27, 2017 were approved.

Mental/Behavioral Health and Intoxicated Patients Crowding ED – Sipprell explained that at the Subcommittee's previous meeting they discussed issues surrounding increasing numbers of patients crowding emergency departments for inebriation/intoxication or mental/behavioral health issues. The Subcommittee asked Staff to investigate if legislation (federal, state, local, etc.) exists that prohibits ambulance services from transporting from the scene of a 9-1-1 call to a destination other than an ED (such as a sobering center).

Matthew Maxwell presented Staff findings on research into local, state, and federal legislation regulating EMS dispositions. Per Maxwell, there were no apparent prohibitions in Ordinance 9, Minnesota Statute 144E or Rules 4690 that would prohibit an ambulance from transporting from the scene to a non-hospital destination, such as a sobering center. Maxwell explained that the federal EMTALA law does stipulate criteria for disposition (i.e. when does a patient "come to an emergency room") to a hospital for evaluation and stabilization, but is not considered to have "come to the emergency room" if the ambulance is operated under community-wide EMS protocols guiding disposition decisions.

Maxwell explained that, while Staff's opinion was that legislation or policy did not appear to prohibit ambulance transport directly to a non-hospital destination (such as a sobering center) a possible barrier would be reimbursement, especially for CMS patients. Maxwell also presented two case studies – one from Los Angeles, California and the other San Francisco, California – where the EMS systems implemented policies and procedures for EMS direct transport to a sobering center facility to alleviate emergency department crowding by inebriated patients. Also, a study done on transporting chronic inebriate patients to alternative destinations found a relatively high rate (almost 25%) of under triage.

Dr. Jeff Ho explained that the root issue is an overall lack of sufficient available beds at local sobering centers or mental health facilities. EMS having the option to bypass the emergency department and transport to an alternative destination is a moot point if there are no open beds at these facilities. Sipprell added that mental/behavioral health and inebriated patients often have comorbid factors, if inebriated due to intoxication it's difficult to obtain informed consent, and many are are high-risk patients. Kristin Mellstrom added that the Hennepin County sobering center will be adding 15 new beds in early 2018, but the center has indicated that EMS patients should be medically cleared at a hospital ED prior to transport to the center.

Dr. Charlie Lick explained that there is a group from North Memorial Medical Center, and a group with Allina Health, who are independently looking at the issues of mental/behavioral health, chem dependency, chronic inebriates and emergency department overcrowding/boarding and how to tackle the issue. Lick added that the role of the EMS Council could be to facilitate getting these two groups, and others working on the issue, together.

Charlie Lick will connect with the Allina group and Maxwell will contact John Lyng to ask him to reach out to the North group to see where each are on the issue. The Subcommittee agreed to continue the discussion at its next meeting.

Protocols – The Subcommittee discussed the *Normal Labor and Delivery*, *Newborn Emergencies, Pain Management*, and *Ischemic Chest Pain* protocols. Underlined text represents proposed new language; strikethrough text represents proposed deleted language.

Normal 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.
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. Term infants (> 37weeks) who are crying (good respiratory effort) and have good muscle tone can be given to mom to nurse with continued warming efforts and re-assessment.
    a. 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.

Newborn Emergencies

A. In all situations, minimize the newborn's heat loss:
    1. Dry the newborn well.
    2. Increase environmental temperature.
    3. ~~Fill two sterile gloves with above-body-temperature (100-104°F) water and place next to the newborn.~~
    4. ~~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.~~
D. 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).
E. 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

F. ~~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.~~

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

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

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

Pain Management – Adult

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
- Ischemic chest pain should only with ischemic ECG changes and failure to respond to 3 nitroglycerine
- 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:
    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
        - 1mcg.kg (up to 100mcg per single dose) IV/IO/IM/IN
            - Intranasal administration should not exceed 0.5ml per nostril
        - 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

Ischemic Chest Pain – Adult

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. If pain persists after 3 nitro, systolic BP remains 110 or greater, AND there are ischemic changes on the ECG may administer morphine sulfate 2-10 mg IV/IO titrated to obtain pain relief while continuing to administer nitro every 5 minutes.
   - If the patient is allergic to morphine, may administer Fentanyl 1 mcg/kg (up to 100 mcg per single dose) IV/IO, or another service specific opioid.
G. 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.
H. 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."

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

After Obtaining Verbal Orders
J. 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.

Review SMD Scene Response/Phone Calls (standing topic) – No items to discuss.

The meeting was **adjourned** at 2:18 p.m.

Future meetings, Tuesdays 12:30 p.m.-2:30 p.m., Health Services Building, Minneapolis:

- August 29, 2017
- September 26, 2017
- October 31, 2017
- November 28, 2017
- December 26, 2017