

Medical Advisory Committee – July 11, 2006

Attendance: Joe Barger-EMS, Bruce Kenagy-EMS, Scott Miller-AMR, Jody Munoz-AMR, Judy Smith-EMS, Alvin Tang-Kaiser, Darrell Lee-MOF, Allan Drabinsky-JMMD, Monica Teves-AMR, Greg Sekera-Pinole Fire, Lori Altabet-JMMC, Greg Kennedy-CFD, Andy Swartzell-SRVF, Pam Dodson-EMS, Sam Bradley-AMR, Nancy Daniel-MOF, Randy Lyman-REACH, Jeanne Miller-CFD, Chuck Coleman-RHF, Dub Fields-AMR, Scott Wallace-CALSTAR, Gary Tamkin-AMR

1. **Policy 19 – Determination of Death** – proposed change in policy to clarify assessment of persons that appear to meet the obvious death criteria with post-mortem lividity or rigor. Discussion of issues of notification of death – it was felt that this notification is not appropriate for prehospital personnel to perform and should be left with law enforcement.
2. **End-Tidal CO2** – expectation of use of end-tidal CO2 for all patients in County. Information available from Dr. Barger regarding wave-forms and appropriate use of detectors.
3. **12-lead EKG Update** – all transport agencies to be performing 12-lead EKG by December. Encouraged in all ALS provider agencies. Proposed changes to treatment guidelines will be presented at a future meeting. Training program developed by Dr. Barger. Dr. Barger to research placement of limb leads. Discussed need for subsequent 12-lead after treatment during transport – no plan to require subsequent 12-lead as part of procedure, but not prohibited.
4. **CPAP Procedure** – San Ramon and Moraga currently using CPAP – no apparent issues at this point. CPAP remains an option for all ALS agencies with implementation county-wide in 2007.
5. **Intubation Revisions – Bougie** – proposed changes to intubation procedure to implement use of Bougie and encourage good ventilation of patients during the process of intubation. New proposal for procedure will be distributed in future for consideration at next meeting. Suggestion to look at issues involved with dealing with stomas and replacement with new trach or ET tube. Change Bougie references to ETTI (endotracheal tube introducer). Consider changes to process for using tube-check bulb.
6. **Auto-Pulse** – State EMSA has had discussions with manufacturer and there is currently a moratorium on delivery of products in California until manufacturer has developed and completed a safety study on the use of the device.
7. **Physicians' Meeting** – Dr. Barger will be scheduling a meeting with ED physicians in the next month or so.
8. **Treatment Protocol Changes for December 2006** – planning to remove treatment of ectopy in chest pain treatment guideline. Looking at new ACLS guidelines and other treatment guideline protocols for implementation in December. Planning special MAC meeting in August to review proposed changes for consideration, feedback and approval by September MAC meeting.
9. **Other** – Dr. Drabinsky raised issue of IV tubing used at John Muir Concord Campus and compatibility with AMR tubing. Issue has been raised with EMS and is being addressed at the Facilities and Critical Care committee. Possible adapter available to make transition of tubing without use of needles.

Issue raised concerning external jugular IVs and frequency of use. Perception is that some medics may be using EJ prior to considering other options. EJ should not be considered first-line access method. Need to look at data and confirm issues.

2. Procedure
 - a. BLS personnel—Follow first responder defibrillation treatment guideline
 - b. ALS personnel
 - 1) Do not initiate CPR
 - 2) Assess for presence of apnea, pulselessness (no heart tones and no carotid or femoral pulses)
 - 3) Document asystole in two leads for one minute
- B. Traumatic Arrest
 1. Blunt or penetrating traumatic arrest
 2. Procedure
 - a. BLS personnel—Follow first responder defibrillation treatment guideline
 - b. ALS personnel
 - 1) Do not initiate CPR
 - 2) Assess for presence of apnea, pulselessness (no heart tones and no carotid or femoral pulses)
 - 3) Document asystole or agonal rhythm (wide, bizarre rhythm less than 20 per minute) for one minute
- C. If any doubt exists as to the presence of vital signs, or if hypothermia, drug overdose, or poisoning suspected, begin CPR and follow the appropriate field treatment guidelines. Base hospital direction may be utilized in situations in which field personnel believe cessation of efforts are warranted or if any questions exist about application of the policy.
- D. Following determination of death, notify coroner and any other appropriate investigative agency (if not already done)
- E. Complete Prehospital Care Report including approximate time of determination of death.

V. DISCONTINUING ADULT CPR (must be in the absence of suspected hypothermia, drug ingestion, or poisoning)

Adult CPR may be discontinued by field personnel, without base hospital contact, in patients in whom an approved Do Not Resuscitate order is produced after initiation of resuscitative efforts

Adult CPR may be discontinued by field personnel, without base hospital contact, in patients in whom resuscitative efforts are unsuccessful (asystole or agonal rhythm despite interventions of adequate ventilation, defibrillation, and two rounds of cardiotoxic drugs). CPR may not be discontinued during patient transport. Patients with multiple rhythms, intermittent perfusing rhythms such as bradycardia or ventricular tachycardia, or in whom scene conditions warrant transport (safety issues, some public settings) should undergo resuscitative efforts and transport.

- A. Procedure
 1. Document asystole or agonal rhythm (wide bizarre rhythm less than 20 per minute) in two leads for one minute
 2. Notify coroner and any other appropriate investigative agency (if not already done)
 3. Complete Prehospital Care Report including approximate time of determination of death.
- B. If any doubt exists as to the presence of vital signs, or if hypothermia, drug overdose, or poisoning suspected, begin CPR and follow the appropriate field treatment guidelines. Base hospital direction may be utilized in situations in which field personnel believe cessation of efforts are warranted or if any questions exist about application of the policy.

VI. MULTICASUALTY/MULTIVICTIM INCIDENTS

CPR will be initiated pursuant to the procedures outlined in the Multicasualty Plan and the Multivictim Incident Guidelines. CPR is to be initiated when there are sufficient numbers of rescuers to adequately manage the total number of, and types of, casualties on the scene.

VII. EMERGENCY MEDICAL DISPATCH

- A. Obvious Death

Emergency Medical Dispatchers (EMD) shall make every effort to provide pre-arrival instructions for administering CPR unless they have been provided information indicating that the patient meets one of the following obvious death criteria:

1. Decapitation
2. Total Incineration
3. Decomposition that prevents resuscitation
4. Total destruction of the heart, lungs, or brain, or separation of these organs from the body
5. Rigor mortis that prevents resuscitation

B. "Do Not Resuscitate" (DNR)

The EMD should make every effort to provide pre-arrival instructions for administering CPR even if he/she is advised that the patient has Do Not Resuscitate paperwork. If the caller refuses, the EMD shall advise them to have the DNR paperwork available for the responding personnel, and shall notify units enroute to the call of the existence of DNR paperwork.

VIII. CORONER

The Coroner is responsible for investigating all deaths listed in California Government Code Section 27491 including, but not limited to:

- 1) violent, sudden, or unusual deaths;
- 2) unattended deaths;
- 3) deaths wherein the deceased has not been attended by a physician in the 20 days before death;
- 4) known or suspected homicide, suicide, or accidental poisoning;
- 5) deaths known or suspected as resulting in whole or in part from or related to accident or injury either old or recent;
- 6) deaths due to drowning, fire, hanging, gunshot, stabbing, cutting, exposure, starvation, acute alcoholism, drug addiction, strangulation, aspiration, or where the suspected cause of death is sudden infant death syndrome;
- 7) death in whole or in part occasioned by criminal means;
- 8) deaths known or suspected as due to contagious disease and constituting a public hazard;
- 9) deaths from occupational diseases or occupational hazards;

Section 27491.2(b) For purposes of inquiry, the body of one who is known to be dead from any of the causes or under any of the circumstances described in Section 27491 shall not be disturbed or moved from the position or place of death without permission of the coroner or the coroner's appointed deputy. Any violation of this subdivision is a misdemeanor.

CARDIAC EMERGENCIES

Chest Pain C10

CHEST PAIN OR ASSOCIATED SYMPTOMS SUSPICIOUS OF CARDIAC ISCHEMIA

Substernal pain, discomfort or tightness with radiation to jaw, left shoulder or arm, nausea, diaphoresis, dyspnea, anxiety.

1. Ensure a patent airway
 - **OXYGEN** - low flow
2. Reassure patient and place in position of comfort
3. Restrict patient movement - loosen tight clothing
4. Allow patient to take their own **Nitroglycerin**, if systolic BP is greater than 90 mmHg and patient has not taken Viagra, Cialis, Levitra or similar drugs within the previous 24 hours
5. Cardiac monitor - 12 lead EKG if available
6. **IV ACCESS TKO**
ASPIRIN 325mg (or four 81mg tablets) PO to be chewed by patient. **DO NOT** administer if patient has allergies to aspirin or salicylates, or has apparent active gastrointestinal bleeding

NITROGLYCERIN 0.4 mg (gr. 1/150) SL if systolic BP greater than 90 and patient has not taken Viagra, Cialis, Levitra or similar drugs within the previous 24 hours - may repeat every 5 minutes until maximum of 6 doses administered, or pain subsides or BP less than 90 systolic

MORPHINE SULFATE 2-4 mg increments slow IV push - maximum 20 mg should be considered if pain not relieved by first three (3) doses of nitroglycerin. Consider earlier administration to patients in severe distress from pain. Titrate to pain relief, systolic BP > 90 and adequate respiratory effort. **CONTINUE ADMINISTRATION OF NITROGLYCERIN TO MAX SIX (6) DOSES.**

7. Consider:
 - For ventricular ectopy causing hemodynamic compromise (hypotension, confusion), **LIDOCAINE** 1.0 mg/kg IVP. Administer only if rate is greater than 60 and no evidence of heart block exists. Ectopy that does not result in hemodynamic compromise should not be treated.
 - Repeat **LIDOCAINE** 0.5 mg/kg IVP every 5-10 minutes until ectopy resolved or 3.0 mg/kg reached (with CHF, liver failure, age greater than 70 or shock, consider 10 minutes time interval between doses).
 - **FLUID CHALLENGE 250-1000 cc if hypotension develops after nitroglycerin or morphine administration in patients and persists despite trendelenberg positioning. Do not administer in patients with rales, ronchi or suspected pulmonary edema.**
8. **Contact Base Hospital if pain is not resolved or further fluid administration considered if hypotension develops**