## Introductions

## Approve Agenda

## Minutes

### Medical Issues

- 705.02 - Allergic/Adverse Reaction and Anaphylaxis  
  - Dr. Salvucci
- 705.04 – Behavioral Emergencies  
  - Dr. Salvucci
- Other

### New Business

- Vote for PSC Chair  
  - Julie Frey
- 705.19 – Pain Control  
  - Dr. Salvucci/Karen Beatty
- 460 – Urgent Interfacility Transfers of Acute Stroke Patients  
  - Dr. Salvucci/Karen Beatty
- Other

### Old Business

- Anticoagulant and Antiplatelet Medications List  
  - Karen Beatty/Dr. Salvucci
- 705.24 – Symptomatic Bradycardia  
  - Dr. Salvucci
- Other

### Informational/Discussion Topics

- 440 – Code STEMI Interfacility Transfer (Update)  
  - Karen Beatty
- CAM/ART Certification Issues  
  - Mark Komins
- air-Q Study Trial Update  
  - Dr. Salvucci
- PRESTO Trial Update  
  - Dr. Salvucci
- Other

### Policies for Review

- 351 – EMS Update Procedure
- 614 – Spinal Immobilization
- 619 – Safely Surrendered Babies
- 705.16 – Neonatal Resuscitation
- 1401 – Trauma Center Designation

### Agency Reports

- Fire Departments
- Ambulance Providers
- Base Hospitals
- Receiving Hospitals
- Law Enforcement
- ALS Education Program
- TAG
- EMS Agency
- Other

### Closing
<table>
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<tr>
<th>Topic</th>
<th>Discussion</th>
<th>Action</th>
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<tr>
<td>II. Approve Agenda</td>
<td>Approved</td>
<td>Approved by Todd Larson Seconded by Scott Carroll</td>
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<td>III. Minutes</td>
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<td>IV. Medical Issues</td>
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<td>V. New Business</td>
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<tr>
<td>A. Nomination Committee for PSC Chair</td>
<td>Julie asked the committee to volunteer on the PSC Chair nominating committee. A list of nominees will be developed and an election will be held at the next scheduled PSC meeting.</td>
<td><strong>Nominating Committee Volunteers:</strong> Stephanie Huhn, Jennie Hoffman and Debbie Licht</td>
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<td>B. 705.19 – Pain Control</td>
<td>Dr. Canby is concerned about the Morphine dose. He has had several elderly patients with hip fractures that have received 9 and 10 mg of MS, which he feels is too much for an elderly patient. Dr. Canby would like Dr. Salvucci to consider adding something to cover this issue.</td>
<td>Dr. Salvucci will look at it. Bring back to PSC.</td>
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<td>VI. Old Business</td>
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<td>A. 1 Liter Resuscitation Bags with Manometer</td>
<td>Dr. Salvucci asked the providers if they have had any problems getting the 1 Liter Resuscitation Bags. After a brief discussion, it was clear that all providers are working to get the 1 Liter Bags.</td>
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<td>B. 705.24 – Symptomatic Bradycardia</td>
<td>Add language to policy stating that Morphine should be given at ½ the normal dose for bradycardia patients.</td>
<td>Look at all policies to change “gm” to “g”</td>
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<td>C. 705.08 – Cardiac Arrest VF/VT</td>
<td>Under “BLS Procedures”, merge the adult and pediatric statement into one statement. Also, add “begin CPR</td>
<td>Check other policies for same change.</td>
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### VII. Informational/Discussion Topics

<table>
<thead>
<tr>
<th>A. Update on 440 – Code STEMI Interfacility Transfer</th>
<th>Karen stated that the STEMI committee is still working on this policy. Policy will be brought back to PSC after language changes are made.</th>
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<tr>
<td>B. CAM/ART Certification Issues</td>
<td>The committee will be meeting to discuss CAM/ART issues and report at the next PSC.</td>
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<td>C. air-Q Study Trial Update</td>
<td>Dr. Salvucci said there have been 110 cases. 4 of them were unsuccessful. For the small number of air leaks, Flex the neck to compress the airway. Make sure to use a generous amount of lube. There have been a few issues with low CO2. These are being used successfully around the country with no CO2 issues. We need to find out why we are having this issue in Ventura County. Chris reminded all providers that they can borrow the EMS Agencies air-Q mannequin any time.</td>
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<td>D. PRESTO Trial Update</td>
<td>Dr. Salvucci stated that in the 1st month of this study, there were 14 tubes of blood drawn. Dr. Chase wanted to make sure that field personnel are not delaying administration of medication to draw blood. Dr. Salvucci said he expects the field personnel to try it once and move on. Dr. Chase asked what the age range is for drawing blood. Dr. Salvucci will check with the VCMC contract and get back to him.</td>
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<td>E. 1404 – Guidelines for Interfacility Transfer of</td>
<td>Added to step #4 – Penetrating injury to globe of eye who is at risk for vision loss may be sent to VCMC if the</td>
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**Patients to a Trauma Center**

contacted Base/area hospital does not have an Ophthalmologist.

**F. 1405 – Trauma Triage and Destination Criteria**

Change “Head Injury and on **Coumadin**” to the more generic “Anti-coagulants”. A list will be developed with all current anti-coagulants.

Add – Hands with an amputation proximal to the distal interphalangeal joint (DIP) or any part of the thumb, the MICN should consider sending to LRRMC.

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**VIII. Policies for Review**

| A. 400 – Ventura County Emergency Departments | Approved | Approved by Kathy McShea Seconded by Debbie Licht |
| B. 502 – Advanced Life Support Service Provider Approval Process | Approved | Approved by Betsy Patterson Seconded by James Rosolek |
| C. 1000 – Documentation of Prehospital Care | Approved with changes *Add “DIP” to Attachment A “Change “gm” to “g” – Page 7 of 8 | Approved by Debbie Licht Seconded by Scott Zeller |
| D. 1201 - Air Unit Staffing Requirements | Approved with changes Change EMT-I and EMT-P to EMT. | Approved by Don Hadland Seconded by Kathy McShea |
| E. 1202 – Air Unit dispatch | Approved | Approved by Todd Larson Seconded by Kathy McShea |

**XI TAG Report**

We need more data on Sepsis from the hospitals.

**X. Agency Reports**

Chris Rosa presented Dede Utley with a plaque and heartfelt thank you for all she has contributed to the EMS System in Ventura County.

<p>| A. Fire departments | VCFPD – The EMS Coordinator/Nurse position is open again. The dept. has promotions to BC. VCFD - Dept. is going through promotions and retirements. Dede is leaving town in 3 weeks. Her position is open. John Van Mannekes will be the interim coordinator until a full time replacement is found. OFD – Academy is ½ done. There are seven firefighters in the academy. Stephanie thanked everyone for “all the good work on the train derailment”. Fed. Fire – none | |
| | | |</p>
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<th>Description</th>
<th>Notes</th>
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<tr>
<td>B. Transport Providers</td>
<td>LMT – Thank you AMR/GCA for the Community Paramedic Training Program you invited them to.</td>
<td>AMR/GCA – June 1st is the kick off for the Hospice Community Paramedicine program.</td>
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<td>C. Base Hospitals</td>
<td>SVH – Dr. Tilles said that the new E.R. should be open in a few weeks. The hospital has added an Interventional Cath Lab. LRRMC – Had their first CPR classes at WLV and T.O H.S. The 9th and 12th graders participated. Debbie thanked everyone who helped with the training. She will continue to need volunteer CPR Instructors for the schools. The hospital CEO will donate mannequins to schools that want the program. SJRMC – The MICN class ends on March 13th. They will have 14 graduates. VCMC – none</td>
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<td>D. Receiving Hospitals</td>
<td>SPH – none CMH – There have been some traffic issues at the hospital. Ambulances have been coming in through the back, which is problematic. Please have crews utilize the Loma Vista entrances. The new parking structure will be breaking ground soon. PVH – none OVCH – none</td>
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<td>C. Law Enforcement</td>
<td>VCSO - none CSUCI PD – none</td>
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<td>F. ALS Education Programs</td>
<td>Ventura College – James thanked everyone who helped by opening up clinical sites for their students. They have 18 students starting their field training soon.</td>
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<td>G. EMS Agency</td>
<td>Dr. Salvucci – none Steve – none Chris – Thank you to everyone involved with the Train Incident. It was a great success from MCI perspective. Reddinet was utilized perfectly. Good job everyone! AAR on March 27th at the EMS Agency. Katy – none Julie – none Randy – none Karen – none</td>
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<td>H. Other</td>
<td>Meeting adjourned at 1200</td>
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**Eligible to Vote**

Date Change/cancelled - not counted against member for attendance

**Non Voting Members**

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TEMPORARY
PARKING PASS
Expires April 9, 2015

Health Care Services
2240 E. Gonzales Rd
Oxnard, CA 93036
For use in "Green Permit Parking" Areas only, EXCLUDES Patient parking areas

Parking Instructions: Parking at workshop venue is limited. Arrive early to allow for offsite parking if venue parking lot is full.

2240 Gonzales Rd. location
If you park in a designated "green permit parking" slot, fold this flyer in half and place pass face-up on the dash of your car, to avoid receiving a ticket.

2100 Solar Drive
An additional amount of "Green Permit Parking" spaces (only 30) are available in adjacent parking lot, those that back-up against venue parking area, (Enter this parking lot off of Gonzales[3rd driveway] or Solar Drive). Place this flyer on your dash. If all of those stalls are occupied, overflow parking is available at The Palms shopping area or side streets.

The Palms - shopping mall
Enter The Palms at Lombard and Gonzales. Allow for a ten minute walk to venue location.

Additional parking is available on side streets, Lombard, Solar and Wankel Way.
# Allergic/Adverse Reaction and Anaphylaxis

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<td><strong>BLS Procedures</strong></td>
<td><strong>BLS Procedures</strong></td>
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<tr>
<td>Assist with prescribed Epi-Pen</td>
<td>Assist with prescribed Epi-Pen Jr.</td>
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<tr>
<td>Administer oxygen as indicated</td>
<td>Administer oxygen as indicated</td>
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## ALS Prior to Base Hospital Contact

### Allergic Reaction or Dystonic Reaction
- **Benadryl**
  - IV/IM – 50 mg

### If Wheezing is present
- **Albuterol**
  - Nebulizer – 5 mg/6 mL
  - Repeat as needed

### Anaphylaxis without Shock
- **Epinephrine 1:1,000**
  - IM –
    - Less than 40 years old – 0.5 mg
    - 40 years old and greater – 0.3 mg
  - Only if severe respiratory distress is present

- **IV access**
- **Benadryl**
  - IV/IM – 50 mg
  - May repeat x 1 in 10 min

### Anaphylaxis with Shock
- Treatment as above for Anaphylaxis without Shock
- Initiate 2nd IV
- **Normal Saline**
  - IV bolus – 1 Liter

### For Profound Shock
- **Epinephrine 1:10,000**
  - Slow IVP – 0.1 mg (1 mL) increments
  - Max 0.3 mg (3 mL) over 1-2 min

## Communication Failure Protocol

### Anaphylaxis without Shock
- **Repeat Epinephrine 1:1,000**
  - IM – 0.3 mg q 5 min x 2 as needed

### Anaphylaxis with Shock
- For continued shock
  - **Repeat Normal Saline**
    - IV bolus – 1 Liter
  - **Repeat Epinephrine 1:1,000**
    - IM – 0.3 mg q 5 min x 2 as needed

### For Profound Shock
- **Epinephrine 1:10,000**
  - Slow IVP – 0.1 mg (1 mL) increments
  - Max 0.3 mg (3 mL) over 1-2 min

## Base Hospital Orders only

### Communication Failure Protocol

### Anaphylaxis without Shock
- **Repeat Epinephrine 1:1,000**
  - IM – 0.01 mg/kg q 5 min x 2 as needed

### Anaphylaxis with Shock
- For continued shock
  - **Repeat Normal Saline**
  - IV/IO bolus – 20 mL/kg
  - **Repeat Epinephrine 1:1,000**
  - IM – 0.01 mg/kg q 5 min x 2 as needed

### For Profound Shock
- **Epinephrine 1:10,000**
  - Slow IVP – 0.01 mg/kg (0.1 mL/kg) increments
  - Max 0.3 mg (3 mL) over 1-2 min

### Consult with ED Physician for further treatment measures

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Effective Date: December 1, 2014  Date Revised: October 9, 2014
Next Review Date: October, 2016  Last Reviewed: October 9, 2014

VCMS Medical Director

Diphenhydramine Hydrochloride

By Hospira, Inc. | Last revised: 10 February 2014

DIPHENHYDRAMINE HYDROCHLORIDE- diphenhydramine hydrochloride injection, solution Hospira, Inc.

Rx only

DESCRIPTION

Diphenhydramine hydrochloride is an antihistamine drug having the chemical name 2-(Diphenylmethoxy)-N,N-dimethylethylamine hydrochloride. It occurs as a white, crystalline powder, is freely soluble in water and alcohol and has a molecular weight of 291.82. The molecular formula is C\textsubscript{17}H\textsubscript{21}NO • HCl and the structural formula is as follows:

![Structural formula of diphenhydramine hydrochloride](click image for full-size original)

Diphenhydramine hydrochloride in the parenteral form is a sterile, pyrogen-free solution available in a concentration of 50 mg of diphenhydramine hydrochloride per mL for intramuscular or intravenous use. The solution for parenteral use has been adjusted to a pH between 4 and 6.5 with either sodium hydroxide or hydrochloric acid.

CLINICAL PHARMACOLOGY

Diphenhydramine hydrochloride is an antihistamine with anticholinergic (drying) and sedative side effects. Antihistamines appear to compete with histamine for cell receptor sites on effector cells.

Diphenhydramine hydrochloride in the injectable form has a rapid onset of action. Diphenhydramine hydrochloride is widely distributed throughout the body, including the CNS. A portion of the drug is excreted unchanged in the urine, while the rest is metabolized via the liver.

Detailed information on the pharmacokinetics of Diphenhydramine Hydrochloride Injection is not available.

INDICATIONS AND USAGE

Diphenhydramine hydrochloride in the injectable form is effective in adults and pediatric patients, other than premature infants and neonates, for the following conditions when diphenhydramine hydrochloride in the oral form is impractical.

Antihistaminic: For amelioration of allergic reactions to blood or plasma, in anaphylaxis as an adjunct to epinephrine and other standard measures after the acute symptoms have been controlled, and for other uncomplicated allergic conditions of the immediate type when oral therapy is impossible or contraindicated.

Motion sickness: For active treatment of motion sickness.

Antiparkinsonism: For use in parkinsonism, when oral therapy is impossible or contraindicated, as follows: parkinsonism in the elderly who are unable to tolerate more potent agents; mild cases of parkinsonism in other age groups, and in other cases of parkinsonism in combination with centrally acting anticholinergic agents.

CONTRAINDICATIONS

Use in Neonates or Premature Infants: This drug should not be used in neonates or premature infants.
Use in Nursing Mothers: Because of the higher risk of antihistamines for infants generally, and for neonates and premature babies in particular, antihistamine therapy is contraindicated in nursing mothers.

Use as a Local Anesthetic: Because of the risk of local necrosis, this drug should not be used as a local anesthetic.

Antihistamines are also contraindicated in the following conditions: Hypersensitivity to diphenhydramine hydrochloride and other antihistamines of similar chemical structure.

WARNINGS

Antihistamines should be used with considerable caution in patients with narrow-angle glaucoma, stenosing peptic ulcer, pyloroduodenal obstruction, symptomatic prostatic hypertrophy, or bladder-neck obstruction.

Local necrosis has been associated with the use of subcutaneous or intradermal use of intravenous diphenhydramine.

Use in Pediatric Patients: In pediatric patients, especially, antihistamines in overdosage may cause hallucinations, convulsions, or death.

As in adults, antihistamines may diminish mental alertness in pediatric patients. In the young pediatric patient, particularly, they may produce excitation.

Use in the Elderly (approximately 60 years or older): Antihistamines are more likely to cause dizziness, sedation, and hypotension in elderly patients.

PRECAUTIONS

General: Diphenhydramine hydrochloride has an atropine-like action and, therefore, should be used with caution in patients with a history of bronchial asthma, increased intraocular pressure, hyperthyroidism, cardiovascular disease or hypertension. Use with caution in patients with lower respiratory disease including asthma.

Information for Patients: Patients taking diphenhydramine hydrochloride should be advised that this drug may cause drowsiness and has an additive effect with alcohol.

Patients should be warned about engaging in activities requiring mental alertness such as driving a car or operating appliances, machinery, etc.

Drug Interactions: Diphenhydramine hydrochloride has additive effects with alcohol and other CNS depressants (hypnotics, sedatives, tranquilizers, etc).

MAO inhibitors prolong and intensify the anticholinergic (drying) effects of antihistamines.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals to determine mutagenic and carcinogenic potential have not been performed.

Pregnancy: Pregnancy Category B. Reproduction studies have been performed in rats and rabbits at doses up to 5 times the human dose and have revealed no evidence of impaired fertility or harm to the fetus due to diphenhydramine hydrochloride. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Pediatric Use: Diphenhydramine should not be used in neonates and premature infants (see CONTRAINDICATIONS).

Diphenhydramine may diminish mental alertness, or in the young pediatric patient, cause excitation. Overdosage may cause hallucinations, convulsions, or death (see WARNINGS and OVERDOSAGE).

See also DOSAGE AND ADMINISTRATION section.

ADVERSE REACTIONS

The most frequent adverse reactions are underscored:

2. Cardiovascular System: Hypotension, headache, palpitations, tachycardia, extrasystoles.


5. GI System: Epigastric distress, anorexia, nausea, vomiting, diarrhea, constipation.

6. GU System: Urinary frequency, difficult urination, urinary retention, early menses.

7. Respiratory System: Thickening of bronchial secretions, tightness of chest or throat and wheezing, nasal stuffiness.

All MedLibrary.org resources are included in as near-original form as possible, meaning that the information from the original provider has been rendered here with only typographical or stylistic modifications and not with any substantive alterations of content, meaning or intent.

The URL of this page is:
http://medlibrary.org/lib/rx/meds/diphenhydramine-hydrochloride-11/

This site is provided for educational and informational purposes only and is not intended as a substitute for the advice of a medical doctor, nurse, nurse practitioner or other qualified health professional.
## Behavioral Emergencies

### ADULT

**ALS Prior to Base Hospital Contact**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV Access</td>
<td></td>
</tr>
<tr>
<td>For Extreme Agitation</td>
<td></td>
</tr>
<tr>
<td><strong>Midazolam</strong></td>
<td></td>
</tr>
<tr>
<td>o IV – 2 mg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Repeat 1 mg q 2 min as needed</td>
</tr>
<tr>
<td></td>
<td>Max 5 mg</td>
</tr>
<tr>
<td>o IM – 5 – 10 mg</td>
<td></td>
</tr>
<tr>
<td>FOR IV USE:</td>
<td></td>
</tr>
<tr>
<td>Dilute 5 mg (1 mL) Midazolam with 4 mL NS for a final volume of 5 mL concentration of 1 mg/mL</td>
<td></td>
</tr>
<tr>
<td>When safe to perform, determine blood glucose level</td>
<td></td>
</tr>
</tbody>
</table>

**Base Hospital Orders only**

- Consult with ED Physician for further treatment measures

**Additional Information:**
- If patient refuses care and transport, and that refusal is because of “mental disorder”, consider having patient taken into custody according to Welfare and Institutions Code Section 5150. "Mental disorders" do not generally include alcohol or drug intoxication, brain injury, hypoxemia, hypoglycemia, or similar causes.
- Refer to VC EMS pre-hospital provider fact sheet for suspected excited delirium patients. Be sure to consider and rule out other possible causes or behavior (traumatic or medical).
- Use of restraints (physical or chemical) shall be documented and monitored in accordance with VCEMS policy 732
- Welfare and Institutions Code Section 5150:
  - A patient may be taken into custody if, as a result of a mental disorder, there is a danger to self and others or is gravely disabled. A California peace officer, a California licensed psychiatrist in an approved facility, Ventura County Health Officer or other County-designated individuals, can take the individual into custody, but it must be enforced by the police in the field.
  - Patients shall be medically cleared prior to transporting to a psychiatric facility if patient is placed on 5150 hold by law enforcement.
  - Patient may be transported directly to a psychiatric facility if evaluated by Crisis Team or PAT Team in the field.
  - All patients that are deemed medically unstable shall be transported to the most accessible Emergency Department.

**Pediatric**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Extreme Agitation</td>
<td></td>
</tr>
<tr>
<td><strong>Midazolam</strong></td>
<td></td>
</tr>
<tr>
<td>o IM – 0.1 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Max 5 mg</td>
</tr>
<tr>
<td>When safe to perform, determine blood glucose level</td>
<td></td>
</tr>
</tbody>
</table>

**Base Hospital Orders only**

- Consult with ED Physician for further treatment measures

**Additional Information:**
- Patients shall be medically cleared prior to transporting to a psychiatric facility if patient is placed on 5150 hold by law enforcement.
- Patient may be transported directly to a psychiatric facility if evaluated by Crisis Team or PAT Team in the field.
- All patients that are deemed medically unstable shall be transported to the most accessible Emergency Department.

Ventura County Mental Health Crisis Team: (866) 998-2243
Dosing of midazolam for sedation

We are considering increasing the time until second dose of IM midazolam for sedation in Policy 705-04. The peak level is around 25 minutes, so 10 minutes may be too short.

A comparative pharmacokinetic study of intravenous and intramuscular midazolam in patients with epilepsy.
Bell DM1, Richards G, Dhillon S, Oxley JR, Cromarty J, Sander JW, Patsalos PN.
Author information

Abstract
The pharmacokinetics of midazolam, a water soluble 1,4-benzodiazepine, has been studied in 12 patients (11 male, 1 female; age range 19-57 years) with epilepsy. All patients were taking hepatic enzyme inducing antiepileptic drugs (AEDs) on a regular basis. Midazolam (5 mg) was administered intravenously and 1 week later midazolam was administered intramuscularly, the dose used being dependent on the sedative response to the intravenous dose (10 mg, n = 2; 7 mg, n = 8; 5 mg, n = 2). Serial blood samples were collected at timed intervals for 5-7 h. After intravenous administration initial distribution was rapid with a mean half-life (t 1/2 alpha) of 0.06 +/- 0.03 h followed by a terminal half-life (t 1/2 beta or gamma) of 1.5 +/- 0.3 h. Volume of distribution was 0.62 +/- 0.27 l/kg. After intramuscular administration midazolam was rapidly absorbed with peak serum concentrations achieved at 25 +/- 23 min. Two patients showed delayed absorption. Mean terminal half-life was 2.8 +/- 1.7 h. The absolute bioavailability of intramuscular midazolam was calculated in 11 patients as 87 +/- 18%. Sedation was rapid (less than 1-2 min) but transient (7-75 min) after intravenous and slower (2-30 min) and for a longer period (20-120 min) after intramuscular administration. Since intravenous administration of AEDs including diazepam is not always feasible in status epilepticus there are obvious advantages in having an effective intramuscular formulation. Our data suggest that midazolam may be such a drug.

Pharmacokinetics and pharmacodynamics of midazolam after intravenous and intramuscular administration in alpacas.
Author information
Abstract

OBJECTIVE:

To determine pharmacokinetic and pharmacodynamic properties of midazolam after IV and IM administration in alpacas.

ANIMALS:

6 healthy alpacas.

PROCEDURES:

Midazolam (0.5 mg/kg) was administered IV or IM in a randomized crossover design. Twelve hours prior to administration, catheters were placed in 1 (IM trial) or both (IV trial) jugular veins for drug administration and blood sample collection for determination of serum midazolam concentrations. Blood samples were obtained at intervals up to 24 hours after IM and IV administration. Midazolam concentrations were determined by use of tandem liquid chromatography-mass spectrometry.

RESULTS:

Maximum concentrations after IV administration (median, 1,394 ng/mL [range, 1,150 to 1,503 ng/mL]) and IM administration (411 ng/mL [217 to 675 ng/mL]) were measured at 3 minutes and at 5 to 30 minutes, respectively. Distribution half-life was 18.7 minutes (13 to 47 minutes) after IV administration and 41 minutes (30 to 80 minutes) after IM administration. Elimination half-life was 98 minutes (67 to 373 minutes) and 234 minutes (103 to 320 minutes) after IV and IM administration, respectively. Total clearance after IV administration was 11.3 mL/min/kg (6.7 to 13.9 mL/min/kg), and steady-state volume of distribution was 525 mL/kg (446 to 798 mL/kg). Bioavailability of midazolam after IM administration was 92%. Peak onset of sedation occurred at 0.4 minutes (IV) and 15 minutes (IM). Sedation was significantly greater after IV administration.

CONCLUSIONS AND CLINICAL RELEVANCE:

Midazolam was well absorbed after IM administration, had a short duration of action, and induced moderate levels of sedation in alpacas.
## Pain Control

### BLS Procedures

<table>
<thead>
<tr>
<th>ADULT</th>
<th>PEDIATRIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Place patient in position of comfort</td>
<td>Place patient in position of comfort</td>
</tr>
<tr>
<td>Administer oxygen as indicated</td>
<td>Administer oxygen as indicated</td>
</tr>
</tbody>
</table>

### ALS Prior to Base Hospital Contact

**IV/IO access**
- Cardiac Monitor

<table>
<thead>
<tr>
<th>Ondansetron</th>
<th>Morphine – Pain 5 out of 10 or greater</th>
</tr>
</thead>
<tbody>
<tr>
<td>• IV/IM/ODT – 4 mg</td>
<td></td>
</tr>
</tbody>
</table>

**Initial IV Dose**
- Slow IVP - 0.1 mg/kg over 2 minutes\(^1\)
- Maximum for ANY IV dose is 10 mg

**Initial IM Dose**
- IM - 0.1 mg/kg\(^1\)
- Maximum for ANY IM dose is 10 mg

**Second IV/IM Dose, if pain persists**
- 5 minutes after IV morphine, or 15 minutes after IM morphine
- Administer half of the initial morphine dose

**Third IV/IM Dose, if pain persists**
- 5 minutes after 2\(^{nd}\) IV morphine, or 15 minutes after 2\(^{nd}\) IM morphine
  - **Ondansetron** (only if third dose of morphine needed)
  - IV/IM/ODT – 4 mg
  - Administer half of the initial morphine dose

Check and document vital signs before and after each administration
- Hold if SBP < 100 mmHg

**If patient has significant injury to head, chest, abdomen or is hypotensive, DO NOT administer pain control unless ordered by ED Physician**

### Communication Failure Protocol

**Base Hospital Orders only**

Consult with ED Physician for further treatment measures

1. **Special considerations, administer 0.05 mg/kg**
   - Chest pain not resolved by nitroglycerine (NTG)
   - Consider lower dose for patients older than 65 years of age
   - Patient with history of adverse reaction to morphine

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Effective Date: December 1, 2013  
Next Review Date: October, 2015  
Date Revised: October 10, 2013  
Last Reviewed: October 10, 2013  
VCEMS Medical Director
I. PURPOSE: To define the interfacility transfer process by which patients with an acute stroke are transferred to: 1) an Acute Stroke Center (ASC) or 2) a neuroendovascular center (NEC) for treatment of an emergent large vessel occlusion (ELVO).


III. DEFINITIONS:
A. ASC: Acute Stroke Center designated according to VC EMS Policy 450
B. NEC: Neuroendovascular Center is a certified Primary Stroke Center (PSC) that has the capability to perform neuroendovascular procedures for acute stroke including mechanical thrombectomy and intra-arterial thrombolysis. (VC EMS to verify compliance)
C. ELVO: Emergent large vessel occlusion
D. PSC: Primary Stroke Center, certified by either The Joint Commission, Det Norske Veritas, or the Healthcare Facilities Accreditation Program.

IV. POLICY:
A. Hospitals will:
   1. Assemble and maintain a “Stroke Transfer Pack” in the emergency department to contain all of the following:
      a. Phone numbers of all Ventura County Primary Stroke Centers and NECs.
      b. Phone numbers of the closest Primary Stroke Centers and NECs outside the County.
      c. Preprinted template order sheet with recommended prior-to-transfer treatments. Treatment guidelines will be developed with input from the ED, Neurologists and the NEC.
      d. Patient Consent/Transfer Forms.
      e. Treatment summary sheet.
   2. Have policies, procedures, and a quality improvement system in place to minimize door-to-brain imaging interpretation, door to thrombolytic initiation and ischemic stroke diagnosis-to-transfer times.
3. Establish policies and procedures to make personnel available to accompany the patient during the transfer to the NEC or ASC. These policies will include patient criteria for requiring an RN or physician to accompany patient when medications or procedures outside of the paramedic scope of practice are being used.

B. Ventura County Fire Communications Center (FCC) will:
   1. Respond to a stroke transfer request by immediately dispatching the closest available ALS ambulance to the requesting hospital.

C. Ambulance Companies:
   1. Will respond an ALS ambulance immediately upon request for a “stroke transfer”.
   2. Transfers performed according to this policy are not considered an interfacility transport as it pertains to ambulance contract compliance.

D. NEC or ASC will:
   1. Maintain accurate status information on ReddiNet regarding the availability of neuroendovascular capability for NEC, or status availability for ASC.
   2. Publish a single phone number, that is answered 24/7, to receive notification of a stroke transfer.
   3. Immediately upon initial notification by a transferring physician at the hospital, accept transfer of all patients who have been diagnosed with an acute stroke and who, in the judgment of the transferring physician, require either 1) an urgent endovascular procedure, or 2) a higher level of care.
   4. Authorize the emergency physician on duty to confirm the acceptance in transfer of any patient with an acute stroke in need of an endovascular procedure or higher level of care.
   5. Establish an internal communications plan that assures the immediate notification of all necessary individuals, including the on-call neurologist and, for ELVO transfers, endovascular intervention staff.
   6. Adopt procedures to make an ICU/CCU bed available or to make alternate arrangements for inpatient care.

V. PROCEDURE:
A. Upon diagnosis of ELVO stroke or a stroke needing a higher level of care; and after discussion with the patient or patient’s family/caregiver, the hospital will:
   1. Determine availability of the NEC or ASC by checking ReddiNet.
   2. Immediately call the Ventura County Fire Communication Center at 805-384-1500 for an ALS ambulance.
   3. Identify their facility to the dispatcher and advise they have a “stroke transfer”.
4. After calling for ambulance, the ED transferring physician will notify the NEC or ASC emergency physician of the transfer.
5. Perform all indicated diagnostic tests and treatments.
6. Complete transfer consent, treatment summary, and stroke data forms.
7. Include copies of the ED face sheet and demographic information.
8. Have available if needed, one or more healthcare staff, as determined by the clinical status of the patient, to accompany the patient to the NEC or ASC.
   a. If, because of unusual and unanticipated circumstances, healthcare staff is unavailable for transfer, a Critical Care Transport (CCT) transfer may be requested by calling the CCT provider ambulance dispatch center.

B. Upon request for “stroke transfer”, the dispatch center will dispatch the closest ALS ambulance and verbalize “MEDxxx “stroke transfer” from [hospital]”. The destination hospital will be denoted in the Incident Comments, which will display on the Mobile Data Computer (MDC). If a unit does not have an operational MDC, the transferring hospital will advise the responding ambulance personnel of the destination hospital.

C. Upon notification, the ambulance will respond Code 3 (lights & sirens) and personnel will notify their ambulance company supervisor of the stroke transfer.

D. Ambulance units will remain attached to the incident and FCC will track their dispatch, en-route, on scene, en-route hospital, at hospital, and available times.

E. The patient shall be urgently transferred without delay. Every effort will be made to minimize on-scene time.
   1. All forms should be completed prior to ambulance arrival.
   2. Diagnostic test results may be relayed to the NEC or ASC at a later time.
   3. Intravenous drip t-PA will continue infusing on the ED pump, accompanied by an RN or physician.
   4. Nurse report will be given to the receiving hospital at the time of, or immediately after, ambulance departure.

F. Upon notification, the NEC or ASC will notify appropriate staff to prepare for patient.

G. The hospital and NEC or ASC shall review all stroke transfers within 24 hours for appropriate and timely care and to identify opportunities for improvement. Results will be reviewed and discussed at the Countywide EMS Stroke CQI Committee.

H. e-PCR documentation will be completed by ambulance personnel.
# EMS Trauma/Stroke

## List of Anticoagulant and Antiplatelet Medications

### Anticoagulant Medications

<table>
<thead>
<tr>
<th>Brand Name</th>
<th>Generic Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arixtra</td>
<td>fondaparinux</td>
</tr>
<tr>
<td>Coumadin</td>
<td>warfarin</td>
</tr>
<tr>
<td>Eliquis</td>
<td>apixaban</td>
</tr>
<tr>
<td>Jantoven</td>
<td>warfarin</td>
</tr>
<tr>
<td>Lixiana</td>
<td>edoxaban</td>
</tr>
<tr>
<td>Lovenox</td>
<td>enoxaparin</td>
</tr>
<tr>
<td>Pradaxa</td>
<td>dabigatran</td>
</tr>
<tr>
<td>Savaysa</td>
<td>edoxaban</td>
</tr>
<tr>
<td>Xarelto</td>
<td>rivaroxaban</td>
</tr>
</tbody>
</table>

### Antiplatelet Medications

<table>
<thead>
<tr>
<th>Brand Name</th>
<th>Generic Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspirin (325mg NOT 81mg)</td>
<td>acetylsalicylic acid</td>
</tr>
<tr>
<td>Brillinta</td>
<td>ticagrelor</td>
</tr>
<tr>
<td>Effient</td>
<td>prasugrel</td>
</tr>
<tr>
<td>Persantine</td>
<td>dipyridamole</td>
</tr>
<tr>
<td>Plavix</td>
<td>clopidogrel</td>
</tr>
<tr>
<td>Pletal</td>
<td>cilostazol</td>
</tr>
</tbody>
</table>

Updated 4/2/2015
# Symptomatic Bradycardia

<table>
<thead>
<tr>
<th>ADULT (HR &lt; 45 bpm)</th>
<th>PEDIATRIC (HR &lt; 60 bpm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BLS Procedures</strong></td>
<td></td>
</tr>
<tr>
<td>Administer oxygen as indicated</td>
<td>Administer oxygen as indicated</td>
</tr>
<tr>
<td>Supine position as tolerated</td>
<td>Assist ventilations if needed</td>
</tr>
<tr>
<td>If significant ALOC, initiate CPR</td>
<td></td>
</tr>
<tr>
<td><strong>ALS Prior to Base Hospital Contact</strong></td>
<td></td>
</tr>
<tr>
<td>IV access</td>
<td>IV access</td>
</tr>
<tr>
<td><strong>Atropine</strong></td>
<td><strong>Epinephrine 1:10,000</strong></td>
</tr>
<tr>
<td>- IV – 0.5 mg (1 mg/10 mL)</td>
<td>- IV/IO – 0.01 mg/kg (0.1 mL/kg) q 3-5 min</td>
</tr>
<tr>
<td><strong>Transcutaneous Pacing (TCP)</strong></td>
<td></td>
</tr>
<tr>
<td>Should be initiated only if patient has signs of hypoperfusion</td>
<td></td>
</tr>
<tr>
<td>Should be started immediately for 3rd heart blocks and 2nd Type 2 (Mobitz II) heart blocks</td>
<td></td>
</tr>
<tr>
<td>If pain is present during TCP o <strong>Morphine</strong> – per policy 705 - Pain Control</td>
<td></td>
</tr>
<tr>
<td><strong>Communication Failure Protocol</strong></td>
<td></td>
</tr>
<tr>
<td>If symptoms persist for 3 minutes after first atropine dose and if no capture with TCP</td>
<td></td>
</tr>
<tr>
<td><strong>Atropine</strong></td>
<td></td>
</tr>
<tr>
<td>- IV – 0.5 mg q 3-5 min</td>
<td></td>
</tr>
<tr>
<td>- Max 0.04 mg/kg</td>
<td></td>
</tr>
<tr>
<td><strong>Dopamine</strong></td>
<td></td>
</tr>
<tr>
<td>- IVPB – 10 mcg/kg/min</td>
<td></td>
</tr>
<tr>
<td>- Use if patient continues to be unresponsive to atropine and TCP</td>
<td></td>
</tr>
<tr>
<td><strong>Base Hospital Orders only</strong></td>
<td></td>
</tr>
<tr>
<td>For suspected hyperkalemia</td>
<td>Atropine</td>
</tr>
<tr>
<td><strong>Calcium Chloride</strong></td>
<td>- IV/IO – 0.02 mg/kg</td>
</tr>
<tr>
<td>- IV – 1 gm over 1 min</td>
<td>- Minimum dose – 0.1 mg</td>
</tr>
<tr>
<td>- Withhold if suspected digitalis toxicity</td>
<td></td>
</tr>
<tr>
<td><strong>Sodium Bicarbonate</strong></td>
<td></td>
</tr>
<tr>
<td>- IV – 1 mEq/kg</td>
<td></td>
</tr>
<tr>
<td><strong>Consult with ED Physician for further treatment measures</strong></td>
<td><strong>Consult with ED Physician for further treatment measures</strong></td>
</tr>
<tr>
<td><strong>Additional Information</strong></td>
<td></td>
</tr>
<tr>
<td>- Bradycardia does not require treatment unless signs and symptoms are present (chest pain, altered level of consciousness, abnormal skin signs, profound weakness, or low BP)</td>
<td></td>
</tr>
</tbody>
</table>

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Effective Date: December 1, 2010  
Date Revised: August, 2010  
Next Review Date: August, 2014  
Last Reviewed: August, 2012  
VCEMS Medical Director
Purpose: To establish a standard for the method, design, approval, and delivery of information to EMS personnel on new and amended policies as well as general EMS information.

Authority: Ventura County Emergency Medical Services Agency (VC EMS Agency).

Policy: VC EMS Agency will develop a method by which all EMS providers will be notified of changes or amendments in County EMS policies as well as general EMS information.

Procedure:

A. EMS Update will be presented in May and November of each year.
   1. Dates, times and locations for EMS Update will be determined by the base hospital PCCs and submitted to VC EMS Agency and providers no later than 30 days prior to the presentation of the first EMS Update.
   2. Each base station shall offer a minimum of three EMS Updates in May and in November.

B. EMS Update will consist of the following:
   1. All new and revised policies approved by the Prehospital Services Committee since the last EMS Update.
   2. Pertinent “information” items discussed at PSC not included in policy updates.
   3. Information submitted to the PCCs by the VC EMS Agency

C. EMS Update training materials will be designed by the EMS Update Design Team.
1. Dates and times of the EMS Update design meetings will be determined on an “as needed” basis by the EMS Update Design Team.

2. Membership of the EMS Design Team will include all PCC’s, a representative from the EMS Agency, and a BLS and ALS representative.

3. The training package will include the following materials:
   a. Power Point Presentation
   b. Instructional objectives
   c. Course outline
   d. Lesson plan
   e. Method of evaluation (written and/or skills competency based valuation tool).
   f. Make up exam.

4. The review, editing, and final approval of the EMS Update will be done by the VC EMS Staff.

D. Copies of the final EMS Update will be delivered via email by the VC EMS Agency to the EMS Update training providers prior to the first presentation.

E. BLS provider Agencies will receive a copy by e-mail to adapt materials for EMT-1 providers.

F. Changes to EMS Update following approval of final draft.
   1. Errors or omissions discovered following release of the final draft by VC EMS will be reported to VC EMS Agency CQI Coordinator who will be responsible for notifying all EMS training providers of the corrected information.

G. EMS Update Make-Up Session will be held two weeks after the last Update presentation. The Make-Up Session will be held on a date, time and location established by VC EMS Agency.
   1. The Power Point training package will used by VC EMS Agency
   2. A written post-test, developed by the EMS Update Design Team, will be administered by the VC EMS Agency.
   3. A minimum passing score of 85% must be achieved for successful course completion.
   4. VC EMS Agency staff will present the Make-Up Session.

H. Course completion records will include the following:
   1. Student course evaluation to be retained by training organization.
2. A copy of the continuing education roster shall be submitted to the VC EMS Agency immediately after the completion of each course offered.

3. Documentation of successful course completion for participants.
I. PURPOSE: To define the use of spinal immobilization by field personnel in Ventura County.

II. AUTHORITY: Health and Safety Code, Sections 1797.214, 1797.220, 1798, and 1798.200, CCR Division 9, Chapter 4, Sections 100175, 100179

II. POLICY: Field personnel in Ventura County may apply spinal immobilization devices under the following circumstances.

III. PROCEDURE: Patients who meet any of the criteria listed in Section A will be carefully evaluated according to criteria in Section B. Spinal immobilization will only be done on patients who meet the criteria of both Section A and Section B.

A. Patients who meet at least one of the following criteria will require further evaluation as listed in Section B to determine whether spinal immobilization is required. Patients who do not meet any of these criteria do not require spinal immobilization:

1. Any patient with head or neck trauma who complains of neck or back pain, or weakness, numbness or radiating pain in a trauma setting.
2. Any patient with altered level of consciousness, neurological deficit, or alcohol or drug intoxication to the extent that appreciation of pain is altered, or suffering from severe distracting painful injuries for whom the mechanism of injury is unknown or suspicious for spinal injury.

B. Spinal immobilization will be done on patients who meet criteria listed in Section A above if they have at least one of the following:

1. Neck or spinal pain,
2. Spinal tenderness,
3. A painful distracting injury (e.g., long bone fracture),
4. Neurological deficit, OR
5. Inability to communicate effectively.

The awake, alert patient, not under the influence of alcohol or drugs to the extent that appreciation of pain is altered, with whom you can communicate effectively, who
denies spine pain or tenderness, is neurologically intact, does not have a distracting injury, does NOT require spinal immobilization.

C. Cervical immobilization is not necessary in the awake, alert patient, not under the influence of alcohol or drugs to the extent that appreciation of pain is altered, with whom you can communicate effectively who complains of isolated lumbar pain or tenderness but denies cervical pain or tenderness and does not have weakness or numbness in a trauma setting. Long board immobilization without cervical immobilization is adequate for this type of patient.

D. In patients with penetrating torso or neck injury and unstable vital signs, transportation must be expedited. For potential spinal injury, the patient should be placed on a backboard. The head should be taped if a cervical spine injury is suspected.

VI. Special Procedure for Care of Potentially Spine-Injured Football Athlete

A. The facemask should always be removed prior to transportation, regardless of current respiratory status.
   1. Tools for facemask removal include screwdriver, FM Extractor, Anvil Pruners, or ratcheting PVC pipe cutter should be readily accessible.
   2. All loop straps of the facemask should be cut and the facemask removed from the helmet, rather than being retracted.

B. The helmet should not be removed during the prehospital care of the football athlete with a potential spinal injury, unless:
   1. After a reasonable period of time, the face mask cannot be removed to gain access to the airway,
   2. The design of the helmet and chin strap is such that even after removal of the face mask, the airway cannot be controlled or ventilation provided,
   3. The helmet and chin straps do not hold the head securely such that immobilization of the helmet does not also immobilize the head, or
   4. The helmet prevents immobilization for transport in an appropriate position.

C. If the helmet must be removed, spinal immobilization must be maintained while removing.
   1. In most circumstances, it may be helpful to remove cheek padding and/or deflate the air padding prior to helmet removal.
   2. If the helmet is removed, the shoulder pads must be removed at the same time.

D. If needed, the front of the shoulder pads can be opened to allow access for CPR and defibrillation. They should only be removed if the helmet is removed at the same time.
COUNTY OF VENTURA
HEALTH CARE AGENCY

EMERGENCY MEDICAL SERVICES
POLICIES AND PROCEDURES

Policy Title: Safely Surrendered Babies
Policy Number: 619

APPROVED:
Administration: Steven L. Carroll, EMT-P Date: 06/01/2008

APPROVED:
Medical Director: Angelo Salvucci, MD Date: 06/01/2008

Origination Date: February 2003
Revised Date: November 8, 2007
Last Reviewed: August 13, 2009
Review Date: November 30, 2012
Effective Date: June 1, 2008

I. PURPOSE: This policy outlines the procedures whereby prehospital care providers accept a newborn under the California Safe Haven Law. This law as amended allows a person to surrender a minor child, less than 72 hours old to a person at any designated fire station, or emergency room without fear of arrest or prosecution, provided that the infant has not been abused or neglected. According to the law, “no person or entity that accepts a surrendered child shall be subject to civil, criminal, or administrative liability for accepting the child and caring for the child in the good faith belief that action is required or authorized by the bill, including but not limited to instances where the child is older than 72 hours or the person surrendering the child did not have lawful physical custody of the child”.

II. AUTHORITY: 1797.220, 1798 Health & Safety Code; CCR Division 9 Chapter 4, 100175; Senate Bill 1368, Chapter 824, and Statutes of 2000; and Ventura County Board of Supervisor Resolution dated May 6, 2003.

III. POLICY: Emergency Medical Services (EMS) personnel shall follow the procedures outlined in this document to ensure the surrendered infant is protected and medically cared for until delivered to the closest hospital emergency department.

IV. PROCEDURE:
A. When an infant is surrendered to a fire station, the personnel shall notify their dispatch center of the situation.
B. The dispatch center will dispatch the closest paramedic transport unit.
C. Fire station personnel will assess the newborn and treat as needed.
D. Initiate first responder form.
E. Open the Newborn Safe Surrender Kit, (available at the fire station).
F. Place a confidential coded bracelet on the infant’s ankle and wrist. (Record this number on the first responder form)
G. Provide the surrendering party the inner business reply mail envelope. This contains the Safe Haven medical questionnaire (English and Spanish version), an information sheet and a matching coded, confidential bracelet. Advise the surrendering party that provided that there has been no abuse or neglect, the parent may reclaim the infant within **14 days**, by taking the bracelet back to the hospital. Hospital personnel will provide information about the baby.

H. Upon arrival of the transport paramedic unit, the fire station personnel will provide a copy of the written report and a verbal report of the infants’ care and status.

I. If the infant appears to be greater than 72 hours old, abused or neglected, accept the infant and provide medical treatment as necessary.

J. The paramedic transport unit will initiate base station contact and begin transport to the closest appropriate hospital emergency department.

K. The paramedic transport unit will initiate care and treat the infant as needed.

L. The paramedic transport unit will complete a PCR via approved Ventura County Documentation System and will record the confidential coded ankle bracelet number.

M. Upon arrival at the receiving emergency department, the transporting paramedic will provide a verbal and written report.

N. Receiving hospital personnel will make verbal and written notification to the Ventura County HSA Department of Children and Family Services (DCFS).
# Neonatal Resuscitation

## BLS Procedures

### Newly Born Infant

- Provide warmth, dry briskly and discard wet linen
  - Suction ONLY if secretions, including meconium, cause airway obstruction

Assess while drying infant
1. Full term?
2. Crying or breathing?
3. Good muscle tone?

If “YES” to all three
- Place skin-to-skin with mother
- Cover both with dry linen
- Observe breathing, activity, color

If “NO” to any of three
- Stimulate briefly (<15 seconds)
  - Flick soles of infant's feet
  - Briskly rub infant's back
- Provide warm/dry covering
- Continue to assess

### Infant up to 48 hours old

- Provide warmth
  - Suction ONLY if secretions cause airway obstruction
  - Stimulate briefly (<15 seconds)
    - Flick soles of infant's feet
    - Rub infant's back with towel

Provide warm/dry covering
Continue to assess

## Assess Breathing

- If crying or breathing, assess circulation
- If apneic or gasping
  - Positive pressure ventilations (PPV) with BVM and ROOM AIR at 40-60 breaths per minute for 30 seconds
    - Continue PPV, reassessing every 30 seconds, until infant is breathing adequately
  - Reassess breathing, assess circulation

## Assess Circulation

- If HR between 60 and 100 bpm
  - PPV with BVM and ROOM AIR at 40-60 breaths per minute for 30 seconds
    - Continue PPV, reassessing every 30 seconds, until infant maintains HR >100 bpm
- If HR < 60 bpm
  - CPR at 3:1 ratio for 30 seconds
    - 90/min compressions
    - 30/min ventilations
    - Continue CPR, reassessing every 30 seconds, until HR > 60 bpm
  - If no improvement after 90 seconds of ROOM AIR CPR, add supplemental O₂ until HR > 100

## ALS Prior to Base Hospital Contact

Establish IO line only in presence of CPR

<table>
<thead>
<tr>
<th>Asystole OR Persistent Bradycardia &lt; 60 bpm</th>
<th>PEA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Epinephrine 1:10,000</strong></td>
<td><strong>Epinephrine 1:10,000</strong></td>
</tr>
<tr>
<td>o  IO – 0.01mg/kg (0.1mL/kg) q 3-5 min</td>
<td>o  IO – 0.01mg/kg (0.1mL/kg) q 3-5 min</td>
</tr>
<tr>
<td><strong>Normal Saline</strong></td>
<td><strong>Normal Saline</strong></td>
</tr>
<tr>
<td>o  IO bolus – 10mL/kg</td>
<td>o  IO bolus – 10mL/kg</td>
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## Base Hospital Orders only

Consult with ED Physician for further treatment measures

## Additional Information:

Effective Date: June 1, 2011
Next Review Date: June 1, 2012
Date Revised: April 14, 2011
Last Reviewed: April 14, 2011

VCEMS Medical Director
- Resuscitation efforts may be withheld for extremely preterm infants (< 21 weeks or < 9 inches long). Sensitivity to the desires of the parent(s) may be considered. If uncertain as to gestational age, begin resuscitation.
I. **PURPOSE:** To establish a procedure for the designation of Level II trauma centers in Ventura County

II. **AUTHORITY:** Health and Safety Code, §1797.160, §1797.161, and §1798, and California Code of Regulations, Title 22, §100255.

III. **POLICY:**

A. **Trauma Center Designation**

   1. Ventura County Emergency Medical Services Agency will issue a request for proposal (RFP) for the designation of the Level II trauma center(s). The RFP will include:

      a. Introduction and background information about Ventura County’s trauma system.

      b. General information and instructions about trauma center designation including eligibility for application, primary service areas, fees and EMS’s no guarantee policy of the minimum number of trauma patients

      c. Reference to Title 22 and the American College of Surgeons “Resource for Optimal Care of the Injured Patient 2006” as the criteria for designation. Applicants will be required to describe their current compliance with these criteria or to indicate plans to achieve compliance within 6 months of the nomination for designation.

      d. List of the minimal requirements for designation that includes: hospital organization, medical staff support, the
trauma program, the trauma medical director, the trauma resuscitation team, the trauma service, the trauma program manager, the trauma registrar and interventional radiology services on site. (Please see page 31-35 of the “Resource for Optimal Care of the Injured Patient 2006” for full description of the above).

e. A list of Level II trauma center conditions and requirements, which the applicant will be required to accept.

f. A contract between the applicant hospital and Ventura County Emergency Medical Services Agency to be completed when the hospital’s application has been approved. Applicants will be required to indicate their acceptance of the contract or to submit alternative language for any clause which they are unwilling to accept.

g. A schedule of fees for Level II trauma center applications and ongoing designation/contracts.

2. The RFP will be sent by registered, return-receipt-requested mail to those hospitals in Ventura County who submitted the required letter of interest. Any hospital wishing to respond to the RFP will be required to complete the RFP as outlined in the RFP and submit the application fee by a specified date and time. Thereafter, all communication regarding the process will be sent only to hospitals that have indicated their interest.

3. EMS will host a mandatory pre-proposal conference

4. Hospitals will have up to 60 days to submit an original and six copies of the proposal to ACS. Other submission requirements will be outlined in the RFP.

5. The independent review panel (IRP) will include experts as appropriate for the level of designation such as a trauma surgeon(s), emergency physician(s), trauma program manager(s), hospital administrator(s), EMS Agency administrator(s) and/or individuals with similar qualifications. The IRP shall be composed of individuals who work outside of the County of Ventura and have no affiliation or allegiance to any hospital within the County, and who are selected and approved by the Trauma Working
Group.
6. The proposal review process will be contracted to American College of Surgeons which will include a site visit for the purpose of confirming the information submitted as well as an evaluation of the hospital's capability and commitment to serve as a Level II trauma center. The IRP will evaluate proposals according to but not limited to:
   a. Compliance with minimum standards
   b. Quality and scope of service
   c. Applicant's demonstrated commitment to the care of major trauma patients
   d. Comprehensiveness
   e. Cost effectiveness of the proposed service
   f. Actuality of the demonstrated ability to provide Level II trauma services versus a stated plan to provide the service
7. The nominated designated hospital must agree to obtain verification by the American College of Surgeons as a Level II trauma center within 3 years of designation at cost to the hospital.

B. Designation
1. Following the site visits, the IRP will report on its findings and decision on designation of trauma hospitals. This will include any recommended corrective action plan that would be required to meet trauma center requirements.
2. IRP recommendations will be forwarded to the Ventura County Board of Supervisors for final designation.
3. Reports of the IRP will be made available upon request.

C. Appeals
1. Notices of findings and copies of reports specific to each applicant will be sent to the appropriate applicant. Applicants will have 10 working days to appeal from the day of receipt of the preliminary recommendations of IRP. Grounds for appeals are limited to alleged failure to follow the RFP or proposal review process. Expert judgments or analyses of the survey team are not subject to appeal.
2. A three-member appeal panel whose members have expertise in proposal reviews, and have no allegiance or affiliation with any hospital
within the County or to any member of the IRP, and who are selected and approved by the Trauma Working Group, will review the appeal and make a decision. All decisions are final and cannot be appealed further.

3. A fee of $5,000 will be required to request an appeal. These funds shall be used by the County to recover costs of resources used to reply to the appeal.