5090 Public Health Administration Large Conference Room 2240 E. Gonzales, 2nd Floor Oxnard, CA 93036	Pre-hospital Services Committee Agenda	June 14, 2018 9:30 a.m.

I.	**Introductions**		
II.	**Approve Agenda**		
III.	**Minutes**		
IV.	**Medical Issues**		
	A. 504 – BLS And ALS Unit Equipment and Supplies		Dr. Shepherd
	B. 705.20 – Seizures (request by Greg Jelin)		Dr. Shepherd
V.	**New Business**		
	A. 318 - ALS Response Unit Staffing		Martha Garcia
	B. 618 – Unaccompanied Minors		Chris Rosa
	C. 705.12 – Heat Emergencies		Karen Beatty
	D. 705.13 – Hypothermia		Karen Beatty
	E. 705.16 – Neonatal Resuscitation		Karen Beatty
	F. 715 – Needle Thoracotomy		Dr. Shepherd
	G. 731 - Tourniquet Policy	(request by Chad Panke)	Dr. Shepherd
	H. 1000 – Documentation		Chis Rosa
	I. VF/VF Alarms after ROSC	(request by Chad Panke)	Dr. Shepherd
	J. Ambulance transport of children	(request by Greg Jelin)	Dr. Shepherd
VI.	**Old Business**		
	A. Other		
VII.	**Informational/Discussion Topics**		
	A. Air-Q		Dr. Shepherd
	B. Pediatric Intubation		Dr. Shepherd
	C. Cardiac Arrest Data for 2018		Katy Hadduck
	D. Trauma Destinations Report		Katy Hadduck
VIII.	**Policies for Review**		
	A. 615 – Organ Donor Information Search		
	B. 703 – Medical Control at Scene, Private Physician/Physician on Scene		
	C. 705.11 – Crush Injury		
IX.	**Agency Reports**		
	A. Fire Departments		
	B. Ambulance Providers		
	C. Base Hospitals		
	D. Receiving Hospitals		
	E. Law Enforcement		
	F. ALS Education Program		
	G. EMS Agency		
	H. Other		
X.	**Closing**		

Health Administration Large Conference Room 2240 E. Gonzales, 2nd Floor Oxnard, CA 93036	Pre-hospital Services Committee Minutes	April 12, 2018 9:30 a.m.

Topic	Discussion	Action	Approval
II. Approve Agenda		Approved	Motion: Tom O'Conner Seconded: Kyle Brooks Passed unanimous
III. Minutes		Approved	Motion: Ira Tilles Seconded: Tom O'Conner Passed unanimous
IV. **Medical Issues**			
V. New Business			
A. 504 – BLS and ALS Unit Equipment and Supplies		Approved with changes.	Motion: Kathy McShea Seconded: Jaime Villa Passed unanimous
B. 705 – Treatment Protocols		Approved with minor formatting changes. Change Page 3 to read "3 of 3" instead of "3 of 2".	Motion: Kathy McShea Seconded: Tom O'Connor Passed unanimous
C. 705.02 – Allergic/Adverse Reaction and Anaphylaxis		Approved with changes. Change "Epi-pen" to "auto injector". Chris will make changes and e-mail to committee prior to EMS Update.	Motion: Scott Zeller Seconded: Dr. Tilles Passed unanimous
D. 705.03 – Altered Neurologic Function		Approved with changes.	Motion: Kathy McShea Seconded: Dr. Tilles Passed unanimous
E. 705.17 – Nerve Agent Poisoning		Approved with changes.	Motion: Heather Ellis Seconded: Kyle Brooks Passed unanimous
F. 705.18 – Overdose/Poisoning	The committee agreed that all information in this policy regarding Organo Phosphate or Duo Dote should be moved to Policy 705.17. The committee requested that Dr. Shepherd meet with BLS agencies to discuss the use of Narcan auto injectors vs IN.	Approved with changes.	Motion: Tom O'Conner Seconded: Kathy McShea Passed unanimous

	Narcan – change “max of 6mg” to “max of 8mg”. Merge text boxes under BLS.		
G. 705.19 – Pain Control	The committee requested that the EMS Agency send out a variance letter to address the impending shortage of MS.		
H. 705.20 - Seizures		Approved	Motion: Jonathon Tolle Seconded: Jaime Villa Passed unanimous
I. 705.21 – Shortness of Breath - Pulmonary Edema		Removed Dopamine. Approved with change	Motion: James Rosolek Seconded: Jaime Villa Passed unanimous
J. 705.22 – Shortness of Breath – Wheezes/Other	The committee made additional changes to this policy during a lengthy discussion.	Merge peds and adult under BLS section. Change Epi-pen to auto injector. Remove ages under Epi. Remove profound shock. Approved with changes.	Motion: Tom O’Conner Seconded: Heather Ellis Passed unanimous
K. 705.26 – Suspected Stroke		Approved	Motion: Nicole Vorzimer Seconded: Tom O’Conner Passed unanimous
L. 723 – Continuous Positive Airway Pressure (CPAP)		Approved	Motion: Aaron Tapking Seconded: Tom O’Conner Passed unanimous
M. 803 – Emergency Medical Technician (EMT), AED Service Provider Program Standards	Updated to meet new Standard Scope changes. Note there is no Medical Director mandated.	Approved as presented.	Motion: Aaron Tapking Seconded: Joe Dullam Passed unanimous
N. 1601 – PSFA and CPR/ Tactical Casualty Care Training Program Approval and Checklist		Approved	Motion: Nicole Vorzimer Seconded: Joe Dullam Passed unanimous
VI. Old Business			
A. 603 – Refusal of EMS Services	The AMA Sub-committee met and made additional changes. Chris will add references to Policy 1000.	Approved with necessary changes.	Motion: Nicole Vorzimer Seconded: Tom O’Conner Passed unanimous
VII. Informational/Discussion Topics			
A. 705.07 – Cardiac Arrest, Asystole and PEA	Presented changes to Epi dose.	Approved	Motion: Sarah Melgoza Seconded: Joe Dullam

			Passed unanimous
B. 705.08 – Cardiac Arrest VF-VT	Presented changes to Epi dose.	Approved	Motion: Sarah Melgoza Seconded: Joe Dullam Passed unanimous
C. 802 – EMT AED Medical Director - Removal		Policy Removed	Motion: Sarah Melgoza Seconded: Joe Dullam Passed unanimous
D. 805 – EMT Medical Cardiac Arrest - Removal		Policy Removed	Motion: Sarah Melgoza Seconded: Joe Dullam Passed unanimous
E. 808 – EMT Defib. Integration with Public AED Operation - Removal		Policy Removed	Motion: Sarah Melgoza Seconded: Joe Dullam Passed unanimous
F. 1405 – Policy/Algorithm	Katy presented the changes that were made to this policy in the Trauma Committee.	No Action	
VIII. Policies for Review			
A. 615 – Organ Donor Information Search		Tabled	
B. 703 – Medical Control at Scene, Private Physician/Physician on Scene		Tabled	
X. Agency Reports			
A. Fire departments	**VCFPD** – CE day was a great success. Good Job Mark Komins! **VCFD –** none **OFD** – They will be participating in CPR Saturday. **Fed. Fire** – none **SPFD** – VCFPD and Santa Paula have an MOU in place. Consolidation has been approved for July. **FFD** – none		
B. Transport Providers	**LMT –** none **AMR/GCA** – none **AIR RESCUE –**none		
C. Base Hospitals	**SVH** – none **LRRMC** – none **SJRMC –** They currently have a temporary trailer in the parking lot at St. Johns. This should not impact ambulance and fire movement**.** **VCMC** – Sarah announced Bob Scott's party at Fillmore Fire.		
D. Receiving Hospitals	**PVH –** none		

	SPH – none **CMH** - none **OVCH** – none	
E. Law Enforcement	**VCSO –** none **CSUCI PD –** none	
F. ALS Education Programs	**Ventura College** – Paramedic graduation is in June. The college program was nominated for the Gold Star Award. Thank you to all the ambulance companies and fire agencies that helped their students.	
G. EMS Agency	**Steve –** The Ambulance Review Committee is being formed. The committee still needs 1 base hospital rep. and 1 receiving hospital rep. EMS is the lead agency for teaching/coordinating stop the bleed classes to the public. There will be "Train the Trainer" classes held for ambulance and fire personnel in the future. **Dr. Shepherd -** none **Chris** – none **Katy** – Dr. Duncan is hosting a Fall Prevention Class on April 28th at the Oxnard Family Clinic. **Karen** – none	
H. Other		
XI. Closing	**Meeting adjourned at 12:00**	

TEMPORARY

PARKING PASS

Expires June 14, 2018

Health Care Services
2240 E. Gonzales Rd
Oxnard, CA 93036

For use in "Green Permit Parking" Areas only, EXCLUDES Patient parking areas

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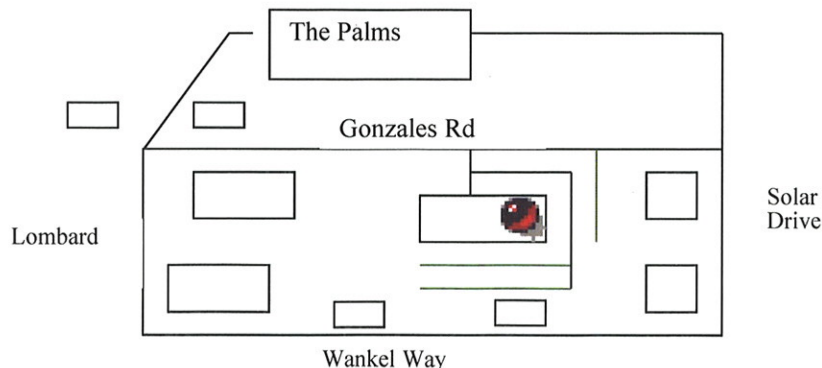
Parking Instructions: Parking at workshop venue is limited. Arrive early to allow for offsite parking if venue parking lot is full.

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.



Prehospital Services Committee 2018

For Attendance, please initial your name for the current month

Agency	LastName	FirstName	1/11/2018	2/8/2018	3/8/2018	4/12/2018	5/10/2018	6/14/2018	7/12/2018	8/9/2018	9/13/2018	10/11/2018	11/8/2018	12/11/2018	%
AMR	Stefansen	Adriane				AF									
AMR	Casey	Andrew	YC												
CMH - ER	Levin	Ross	NC		RL	RL									
CMH - ER	Querol	Amy													
OVCH - ER	Pulido	Ed	EP		EP	EP									
OVCH - ER	Ferguson	Catherine	CF		CF	CF									
CSUCI PD	Drehsen	Charles	CD		CD	CD									
CSUCI PD	DeBoni	Curtis	AC												
FFD	Herrera	Bill	BH		BH	BH									
FFD	Panke	Chad													
GCA	Villasenor	Alejandro													
GCA	Sanders	Mike			MS	MS									
Lifeline	Rosolek	James	JR			JR									
Lifeline	Williams	Joey			JW										
LRRMC - ER	Brooks	Kyle	KB			KB									
LRRMC - ER	Shaner	Meghan	MS		MS	MS									
OFD	Martin	Blair				SM									
OFD	Villa	Jaime	JV		JV	JV									
SJPVH - ER	Hutchison	Stacy	SD			SD									
SJPVH - ER	Sikes	Chris	JD		CS	CS									
SJRMC - ER	Larsen	Todd	TL		TL	TL									
SJRMC - ER	McShea	Kathy	KM		KM	KM									
SPFD	Zeller	Tyler	TZ			TZ									
SVH - ER	Tilles	Ira	IT		IT	IT									
SVH - ER	Vorzimer	Nicole	NV		NV	NV									
V/College	O'Connor	Tom	TO		TO	TO									
VCFD	Tapking	Aaron			AT	AT									
VCFD	Ellis	Heather			JH	HE									
VNC	Parker	Barry			SZ										
VNC	Dullam	Joe	JT			JT									
VNC - Dispatch	Gregson	Erica			EG	EG									
VCMC - ER	Chase	David			DC	DC									

Agency	LastName	FirstName	1/11/2018	2/8/2018	3/8/2018	4/12/2018	5/10/2018	6/14/2018	7/12/2018	8/9/2018	9/13/2018	10/11/2018	11/8/2018	12/11/2018	%
VCMC - ER	Gallegos	Tom	TG		TG	TG									
VCMC-SPH	Holt	Carrie	SM		SM	SM									
VCSO SAR	Hadland	Don	DH			DH									
VCSO SAR	Tolle	Jonathon													
VFF	Santillo	Dave													
VFF	Ruppert	Kent													
Below names a	**Date Change/cancelled - not counted against member for attendance**														
EMS	Carroll	Steve	SC		SC	SC									
EMS	Frey	Julie	JF		JF	JF									
EMS	Hadduck	Katy	KH		KH	KH									
EMS	Perez	Randy			RP	RP									
EMS	Shepherd	Daniel			DS	DS									
EMS	Rosa	Chris	CR		CR	CR									
EMS	Salvucci	Angelo													
EMS	Hansen	Erik													
EMS	Beatty	Karen	KB		KB	KB									
EMS	Garcia	Martha				MG									
LMT	Winter	Jeff	JW		JW	JW									
LMT	Frank	Steve													
State Parks	Futoran	Jack			JF	JF									
VCMC	Hill	Jessica													
VCMC	Duncan	Thomas				TD									
CMH	Hall	Elaina				EH									
VNC	James	Lauri													
VNC	Shedlosky	Robin	RS		RS	RS									
VNC	Komins	Mark	MK		MK	MK									

COUNTY OF VENTURA HEALTH CARE AGENCY		EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES
Policy Title: BLS And ALS Unit Equipment And Supplies		Policy Number: 504
APPROVED: Administration:	Steven L. Carroll, Paramedic	Date: June 1, 2018
APPROVED: Medical Director	Daniel Shepherd, MD	Date: June 1, 2018
Origination Date: Date Revised: Last Reviewed: Review Date:	May 24, 1987 April 12, 2018 April 12, 2018 April 30, 2021	Effective Date: June 1, 2018

I. PURPOSE: To provide a standardized list of equipment and supplies for response and/or transport units in Ventura County.

II. POLICY: Each response and/or transport unit in Ventura County shall be equipped and supplied according to the requirements of this policy.

III. AUTHORITY: California Health and Safety Code Section 1797.178, 1797.204, 1797.218, 1797.221 and California Code of Regulations Sections 100148, 100306, 100404

IV. PROCEDURE:

The following equipment and supplies shall be maintained on each response and/or transport unit in Ventura County.

Deviation from the standards outlined in this policy shall only be authorized with written approval from the VCEMS Medical Director.

	ALS / BLS Unit Minimum Amount	PSV/CCT Minimum Amount	FR/ALS Minimum Amount	Search and Rescue Minimum Amounts
A. ALL BLS AND ALS RESPONSE AND/OR TRANSPORT UNITS				
Clear masks in the following sizes: Adult Child Infant Neonate	1 each	1 each	1 each	1 adult 1 infant
Bag valve units Adult Child	1 each	1 each	1 each	1 adult
Nasal cannula Adult	3	3	3	3
Nasopharyngeal airway (adult and child or equivalent)	1 each	1 each	1 each	1 each
Continuous positive airway pressure (CPAP) device	1 per size	1 per size	1 per size	1 per size
Nerve Agent Antidote Kit	9	9	9	0
Blood glucose determination devices *(optional for non-911 BLS units)*	2	1	1	1
Oral glucose 15gm unit dose	1	1	1	1
Oropharyngeal Airways Adult Child Infant Newborn	1 each size	1 each size	1 each size	1 each size
Oxygen with appropriate adjuncts (portability required)	10 L/min for 20 minutes	10 L/min for 20 mins.	10 L/min for 20 mins.	10 L/min for 20 mins.
Portable suction equipment	1	1	1	1
Transparent oxygen masks Adult nonrebreather Child Infant	 3 3 2	 2 2 2	 2 2 2	 2 2 2
Bandage scissors	1	1	1	1
Bandages • 4"x4" sterile compresses or equivalent • 2",3",4" or 6" roller bandages • 10"x 30" or larger dressing	 12 6 	 12 2 0	 12 6 2	 5 4 2
Blood pressure cuffs Thigh Adult Child Infant	 1 1 1 1	 1 1 1 1	 1 1 1 1	 1 1 1 1
Emesis basin/bag	1	1	1	1
Flashlight	1	1	1	1
Traction splint or equivalent device	1	1	1	1
Pneumatic or rigid splints (capable of splinting all extremities)	4	4	4	4
Potable water or saline solution	4 liters	4 liters	4 liters	4 liters
Cervical spine immobilization device	2	2	2	2
Spinal immobilization devices KED or equivalent	1	1	1	1

	ALS / BLS Unit Minimum Amount	PSV/CCT Minimum Amount	FR/ALS Minimum Amount	Search and Rescue Minimum Amounts
60" minimum with at least 3 sets of straps	1	0	1	
Sterile obstetrical kit	1	1	1	1
Tongue depressor	4	4	4	4
Cold packs	4	4	4	4
Tourniquet	1	1	1	1
1 mL/3 mL syringes with IM needles	4	4	4	4
OPTIONAL EQUIPMENT				
Occlusive dressing or chest seal				
Hemostatic gauze per EMSA guidelines				
B. TRANSPORT UNIT REQUIREMENTS				
Ambulance cot and collapsible stretcher; or two stretchers, one of which is collapsible.	1	0	0	1
Automated External Defibrillator (if not equipped with ALS monitor/defibrillator)	1	1	1	1
Straps to secure the patient to the stretcher or ambulance cot, and means of securing the stretcher or ambulance cot in the vehicle.	1 Set	0	0	1 Set
Soft Ankle and wrist restraints.	1	0	0	0
Sheets, pillow cases, blankets and towels for each stretcher or ambulance cot, and two pillows for each ambulance	1	0	0	0
Bedpan	1	0	0	0
Urinal	1	0	0	0
Personal Protective Equipment per State Guideline #216				
Rescue helmet	2	1	0	0
EMS jacket	2	1	0	0
Work goggles	2	1	0	0
Tyvek suit	2 L / 2 XXL	1 L / 1 XXL	0	0
Tychem hooded suit	2 L / 2 XXL	1 L / 1 XXL	0	0
Nitrile gloves	1 Med / 1 XL	1 Med / 1 XL	0	0
Disposable footwear covers	1 Box	1 Box	0	0
Leather work gloves	3 L Sets	1 L Set	0	0
Field operations guide	1	1	0	0

	ALS / BLS Unit Minimum Amount	PSV/CCT Minimum Amount	FR/ALS Minimum Amount	Search and Rescue Minimum Amounts
C. ALS TRANSPORT UNIT REQUIREMENTS				
Cellular telephone	1	1	1	1
Alternate ALS airway device	2	1	1	1
Arm Boards 9" 18"	 3 3	 0 0	 1 1	 0 0
Cardiac monitoring equipment	1	1	1	1
CO_2 monitor	1	1	1	1
Colorimetric CO2 Detector Device	1	1	1	1
Defibrillator pads or gel	3	3	3	1 adult – No Peds.
Defibrillator w/adult and pediatric paddles/pads	1	1	1	1
EKG Electrodes	10 sets	3 sets	3 sets	6 sets
Endotracheal intubation tubes, sizes 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5 with stylets	1 of each size	1 of each size	1 of each size	4, 5, 6, 6.5, 7, 7.5, 8
EZ-IO intraosseous infusion system	1 Each Size	1 Each Size	1 Each Size	1 Each Size
Intravenous Fluids (in flexible containers) • Normal saline solution, 500 ml • Normal saline solution, 1000 ml	 2 6	 1 2	 1 4	 1 3
IV admin set - microdrip	4	1	2	2
IV admin set - macrodrip	4	1	4	3
IV catheter, Sizes I4, I6, I8, 20, 22, 24	6 each 14, 16, 18, 20 3 each 22 3 each 24	2 each	2 each	2 each
Laryngoscope, replacement bulbs and batteries Curved blade #2, 3, 4 Straight blade #1, 2, 3	1 set 1 each 1 each	1 set 1 each 1 each	1 set 1 each 1 each	1 set 1 each 1 each
Magill forceps Adult Pediatric	 1 1	 1 1	 1 1	 1 1
Nebulizer	2	2	2	2
Nebulizer with in-line adapter	1	1	1	1
Needle Thoracostomy kit	2	2	2	2
Pediatric length and weight tape	1	1	1	1
SpO_2 Monitor (If not attached to cardiac monitor)	1	1	1	1
OPTIONAL ALS EQUIPMENT (No minimums apply)				
Flexible intubation stylet				
Cyanide Antidote Kit				

	BLS Unit Minimum Amount	ALS Unit Minimum Amount	PSV/CCT Minimum Amount	FR/ALS Minimum Amount	Search and Rescue Minimum Amounts
D. MEDICATION, MINIMUM AMOUNT					
Adenosine, 6 mg		3	3	3	3
Albuterol 2.5mg/3ml		6	2	3	1
Aspirin, 81mg		4 ea 81 mg	4 ea 81 mg	4 ea 81 mg	4 ea 81 mg
Amiodarone, 50mg/ml 3ml		6	3	6	3
Atropine sulfate, 1 mg/10 ml		2	2	2	2
Diphenhydramine (Benadryl), 50 mg/ml		2	1	1	2
Calcium chloride, 1000 mg/10 ml		2	1	1	1
Dextrose 5% 50ml		2	1	2	1
Dextrose 10% 250 ml		2	1	2	1
Dextrose 25% 2.5 GM 10ml		1	1	1	1
Dextrose 50%, 25 GM/50		5	2	2	2
Epinephrine					
• Epinephrine , 1mg/ml					
• 1 mL ampule / vial, OR	2	4	2	2	2
• Adult auto-injector (0.3 mg), AND	2	4	2	2	2
Peds auto-injector (0.15 mg)	2	4	2	2	2
• Epinephrine 0.1mg/ml (1 mg/10ml preparation)		6	3	6	4
• Epinephrine 1mg/ml, 30 ml multi-dose vial		1	1	1	1
Glucagon, 1 mg/ml		2	1	2	1
Lidocaine, 100 mg/5ml		2	2	2	2
Magnesium sulfate, 1 gm per 2 ml dilution		4 g	4 g1	4 g2	4 g2
Morphine sulfate, 10 mg/ml		2	2	2	2
Naloxone Hydrochloride (Narcan)					
• IN concentration - 4 mg in 0.1 mL (optional for ALS and non-911 BLS units), OR	2	5	5	5	5
• IM / IV concentration – 2 mg in 2 mL preload (optional for non-911 BLS units)	4	5	5	5	5
Nitroglycerine preparations, 0.4 mg		1 bottle	1 bottle	1 bottle	1 bottle
Normal saline, 10 ml		2	2	2	2
Sodium bicarbonate, 50 mEq/ml		2	1	1	1
Ondansetron 4 mg IV single use vial		4	4	4	4
Ondansetron 4 mg oral		4	4	4	4
Midazolam Hydrochloride (Versed)		5 mg/ml 2 vials	5 mg/ml 2 vials	5 mg/ml 2 vials	5 mg/ml 2 vials

Seizures

ADULT	PEDIATRIC
BLS Procedures	
Protect from injury Maintain/manage airway as indicated Administer oxygen as indicated	Protect from injury Maintain/manage airway as indicated For suspected febrile seizures, begin passive cooling measures. If seizure activity persists, see below Administer oxygen as indicated
ALS Prior to Base Hospital Contact	

IV/IO access
 	
Determine Blood Glucose level, and treat according to VC EMS policy 705.03 – Altered Neurologic Function
 	
Persistent Seizure Activity
• **Midazolam** (Give to ***actively seizing*** pregnant patients prior to magnesium)
  • IV/IO – 2 mg
    Repeat 1 mg q 2 min as needed
    Max 5 mg
  • IM – 0.1 mg/kg
    Max 5 mg
 	
FOR IV/IO USE:
Dilute 5 mg (1 mL) Midazolam with 4 mL NS for a final volume of 5 mL concentration of 1 mg/mL
 	
20 weeks gestation to one week postpartum & No Known Seizure History
• **Magnesium Sulfate**
  o IVPB – 4~~2~~ g~~m~~ in 50 mL D_5W infused over 10~~5~~ min
    • MUST Repeat x 1
    • Slow or stop infusion if bradycardia, heart block, or decreased respiratory effort occur
	Consider IV/IO access
	
	Determine Blood Glucose level, and treat according to VC EMS policy 705.03 – Altered Neurologic Function.
	
	Persistent Seizure Activity
	• **Midazolam**
	  o IM – 0.1 mg/kg
	    Max 5 mg

Base Hospital Orders only	
Consult with ED Physician for further treatment measures	Consult with ED Physician for further treatment measures

Additional Information:

- Patients with a known seizure disorder or uncomplicated, apparent pediatric febrile seizures, no longer seizing and with a normal postictal state, may be treated as a BLS call

VCEMS Medical Director

COUNTY OF VENTURA HEALTH CARE AGENCY	EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES
Policy Title: ALS Response Unit Staffing	Policy Number: 318
APPROVED: Administration: Steven L. Carroll, Paramedic	Date: July 13, 2017
APPROVED: Medical Director Daniel Shepherd, MD	Date: July 13, 2017
Origination Date: June 1, 1997 Date Revised: July 13, 2017 Date Last Reviewed: July 13, 2017 Review Date: July, 2020	Effective Date: July 13, 2017

I. PURPOSE: To establish medical control standards for ALS response unit paramedic staffing.

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

III. DEFINITIONS:

A. ALS Response Unit: First Response ALS Unit, Paramedic Support Vehicle, or ALS Ambulance per VCEMS Policies 506 and 508.

B. Definition of an ALS Patient Contact: A patient contact where the paramedic successfully performs an ALS skill listed in VCEMS Policy 310, with the exception of glucose testing, cardiac monitoring and pulse oximetry.

IV. POLICY:

A. All ALS Response Units must be staffed with a minimum of one Level II paramedic who meets the requirements in this policy.

B. Additional ALS Response Unit staff may be a Level I or II paramedic meeting the requirements in this policy and/or an EMT meeting requirements in VCEMS Policy 306. An ALS response unit may be staffed with a non-accredited Paramedic only when it is also staffed with an authorized Field Training Officer (FTO) or Paramedic Preceptor, unless the non-accredited Paramedic is functioning in a BLS capacity in accordance with VCEMS Policy 306.

C. ALS Patient Contact: A patient contact where the paramedic successfully performs an ALS skill listed in VCEMS Policy 310, with the exception of glucose testing, cardiac monitoring and pulse oximetry.

D. Field Training Officer (FTO): An agency designation for those personnel qualified to train others for the purposes of EMT ALS-Assist Authorization, Paramedic Accreditation, Level I or Level II Paramedic Authorization/Re-Authorization.

E. Paramedic Preceptor: A Paramedic, as identified in California Code of Regulations, qualified to train Paramedic Student Interns. A Paramedic Preceptor may also be a Field Training Officer, when designated by that individual's agency.

V. PROCEDURE:

A. Level I

1. A paramedic will have Level I status upon completion of the following:
    a. Current Paramedic Licensure by the State of California
    b. Current Accreditation in the County of Ventura per VCEMS Policy 315.
2. To maintain Level I status, the paramedic shall:
    a. Maintain employment with an approved Ventura County ALS service provider.
    b. Complete a minimum of 288 hours of practice as a paramedic or 30 patient contacts (minimum of 15 ALS) every six-month period (January 1 – June 30 and July 1 – December 31);
        1) With the approval of the EMS Medical Director, for those paramedics with a minimum of 1 year of field experience in Ventura County, are employed as a field paramedic in another county or work in an acute care setting (RN or LVN) on a full-time basis, complete a minimum of 144 hours of practice, or 20 patient contacts (minimum 10 ALS), in the previous 6 month period in Ventura County.
    c. Complete VCEMS continuing education requirements, as described in Section V.C.
3. If the paramedic fails to meet these requirements, s/he is no longer authorized as a Level I paramedic.
4. To be reauthorized as a Level I paramedic, the paramedic must complete a minimum of 48 hours as a second or third crewmember of direct field observation by an authorized Paramedic FTO, to include a minimum of 5 ALS contacts.

B. Level II

1. A paramedic will have Level II status upon completion of the following:
    a. Employer approval.
    b. All of the requirements of Level I.
    c. A minimum of 240 hours of direct field observation by an authorized Ventura County Paramedic FTO.
        1) This will include a minimum of 30 patient contacts, (minimum 15 ALS contacts).
        2) If a paramedic has a minimum of 4000 hours of prehospital field experience performing initial ALS assessment and care, Paramedic FTO with the approval of the Paramedic FTO and PCC may be reduced to 144 hours or 20 patient contacts (minimum 10 ALS).
    d. Approval by the paramedic FTO who evaluated most of the contacts.
    e. Successful completion of competency assessments:

1. Scenario based skills assessment conducted by the candidate's preceptor, provider's clinical coordinator, PCC and PLP when possible.
    1) Written policy competency and arrhythmia recognition and treatment assessment administered by VCEMS. Minimum Passing score will be 80% on each assessment.
    2) Candidates who fail to attain 80% on either section V.B.e.2)-3) shall attend a remediation session with the Base Hospital PLP or designee or the provider's Medical Director prior to retaking either assessment. Written documentation of remediation will be forwarded to VCEMS.

f. Obtain favorable recommendations of the PCCs who have evaluated the paramedic during the upgrade process. The PCC's recommendations will be based upon a review of the completed performance evaluation standards, review of patient contacts and direct clinical observation.
    1) Delays in arranging or scheduling direct field observation shift(s) should not delay the Level II upgrade process. In the event an observation shift cannot be arranged with the PCC by the end of the 240 hour upgrade process, the observation requirement may be waived with VCEMS approval. Every attempt should be made to schedule this observation in advance, and conduct the shift prior to the completion of the 240 hour upgrade process.

g. Forward Appendix A, Appendix B and copies of the 30 patient contacts to VCEMS.
    1) Appendix A shall include all dates and times the upgrading paramedic has spent with the Paramedic FTO to total a minimum of 240 hours.
    2) Appendix B shall be completed each shift per the Method of Evaluation Key at the bottom of the form.
    3) Submit 30 patient contacts, 15 meeting criteria as defined in Section III, Definitions, ALS Patient Contact.

2. To maintain Level II status, the paramedic shall:
    a. Maintain employment with an approved Ventura County ALS service provider.
    b. Function as a paramedic for a minimum of 576 hours or have a minimum of 60 patient contacts (minimum 30 ALS), over the previous six-month period (January 1 – June 30 and July 1 – December 31).
        1) For those paramedics with a minimum of 3 years field experience, no more than 144 hours of this requirement may be met by documentation of actual instruction at approved PALS, PEPP, ACLS, PHTLS, BTLS, EMT-1 or Paramedic training programs.

2) With the approval of the EMS Medical Director, for those paramedics with a minimum of 3 years of field experience in Ventura County, are employed as a field paramedic in another county or work in an acute care setting (RN or LVN) on a full-time basis, complete a minimum of 288 hours of practice, or 30 patient contacts (minimum 15 ALS), in the previous 6 month period in Ventura County.

3) A paramedic whose primary duties are administering the ALS Program (90% of the time) for his/her agency and with approval of the EMS Medical Director may maintain his/her level II status by performing a minimum of 5 ALS calls per 6 months (January 1 – June 30 and July 1 – December 31).

4) If the paramedic fails to meet this requirement:

   a) His/her paramedic status reverts to Level I.

   b) If Level II authorization has lapsed for less than six months, reauthorization will require completion of a minimum of 96 hours of direct field observation by an authorized Ventura County Paramedic FTO, to include a minimum of 10 ALS patient contacts.

   c) If Level II authorization has lapsed for less than one year and the paramedic has not worked as a paramedic for 6 months or more during the lapse interval OR if Level II authorization has lapsed for greater than one year, reauthorization will require completion of all of the requirements in Section V.B.1. These requirements may be reduced at the discretion of the VCEMS Medical Director.

   d) If the paramedic has been employed as a paramedic outside of Ventura County or has worked in an acute care setting (RN or LVN) during the period of lapse of authorization, these requirements may be reduced at the discretion of the VCEMS Medical Director.

   e) Complete VCEMS continuing education requirements, as described in Section V.C.

C. Continuing Education Requirements

Fifty percent (50%) of all CE hours shall be obtained through Ventura County approved courses and 50% of total CE hours must be instructor based.

1. Advanced Cardiac Life Support (ACLS) certification shall be obtained within three months and either Pediatric Advanced Life Support (PALS) certification or Pediatric Education for Prehospital Providers (PEPP) shall be obtained within six months and remain current.

2. Field Care Audits (Field care audit): Twelve (12) hours per two years, at least 6 of which shall be attended in Ventura County. Base Hospitals will offer Field care audit sessions.

3. Periodic training sessions or structured clinical experience (Lecture/ Seminar) as follows:

   a. Attend one skills refresher session in the first year of the license period, one in the second year, and one every year thereafter.

b. Education and/or testing on updates to local policies and procedures.

c. Completion of Ventura County Multi-Casualty Incident training per VCEMS Policy 131.

d. Successful completion of any additional VCEMS-prescribed training as required. These may include, but not be limited to:

1) Education, and/or testing, in specific clinical conditions identified in the quality improvement program.

2) Education and/or testing for Local Optional Scope of Practice Skills.

3) The remaining hours may be earned by any combination of field care audit, Clinical hours, Self-Study/Video, Lecture, or Instruction at ALS/BLS level. Clinical hours will receive credit as 1-hour credit for each hour spent in the hospital and must include performance of Paramedic Scope of Practice procedures. The paramedic may be required by his/her employer to obtain Clinical Hours. The input of the Base Hospital Prehospital Care Coordinator and/or Paramedic Liaison Physician shall be considered in determining the need for Clinical Hours.

4) One endotracheal intubation refresher session per six (6) month period based on license cycle, to be held by a Base Hospital, ALS Provider Medical Director approved by the VCEMS Medical Director, or the VCEMS Medical Director.

5) Successfully complete a CPR skills evaluation using a recording/reporting manikin once per six (6) month period based on license cycle.

4. Courses shall be listed on the Ventura County Accreditation Continuing Education Log and submitted to VCEMS upon reaccreditation. Continuing education listed on the continuing education log is subject to audit.

D. The VCEMS Medical Director may temporarily suspend or withdraw Level I or Level II authorization pending clinical remediation.

E. Failure to comply with the standards of this policy will be considered to be operating outside of medical control.

F. ALS Service Providers must report any change in Level I/II status to VCEMS within 5 days of taking action.

Appendix A

PARAMEDIC UPGRADE EMPLOYER RECOMMENDATION FORM

Employer: Please instruct the paramedic to complete the requirements in the order listed. Employer shall contact PCC to schedule appointment.

____, paramedic has been evaluated and has met all criteria for upgrade to Level II status as defined in Ventura County EMS Policy 318.

Level II Paramedic

_____ All the requirement of level I met.
_____ Completion of 240 hrs of direct field observation by an authorized Paramedic FTO
_____ Approval by Paramedic FTO
_____ Submit all appropriate documentation to VCEMS including

	Date	**Hours**	**FTO** Print legibly		**Date**	**Hours**	**FTO** Print legibly
1				9			
2				10			
3				11			
4				12			
5				13			
6				14			
7				15			
8				16			
Total Hours Completed							

Please sign and date below for approval.

I have reviewed all supporting documentation and it is attached to this recommendation.

Paramedic FTO Signature	Print FTO name legibly	Date:
Employer Signature	Print Employer name legibly	Date

Per section V.B.1.c.2): PCC signature required if paramedic qualifies for shortened upgrade process.

PCC Signature	Print PCC signature legibly	Date

Appendix B

Ventura County EMS Upgrade Procedure			**240 hours or 10 shifts 30 patient contacts (minimum of 15 ALS)**		
Shift	**Policy**	**Procedure/Policy Title to Review**	**Date**	**Preceptor Signature**	**Method of Evaluation (see key)**
1	310	Paramedic Scope of Practice			
	704	Base Hospital Contact			
	705	General Patient Guidelines			
		SVT			
		VT			
		Cardiac Arrest – Asystole/PEA			
		Cardiac Arrest – VF/VT			
		Symptomatic Bradycardia			
		Acute Coronary Syndrome			
	726	Transcutaneous Cardiac Pacing			
	727	12 Lead ECG			
	334	Prehospital Personnel Mandatory Training Requirements			
		Notify PCC of Level II upgrade and schedule PCC ride-along.			
2	720	Limited Base Contact			
	705	Trauma Assessment/Treatment Guidelines			
		Altered Neurological Function			
		Overdose			
		Seizures			
		Suspected Stroke			
	614	Spinal Immobilization			
3	705	Behavioral Emergencies			
		Burns			
		Childbirth			
		Crush Injury			
		Heat Emergencies			
		Hypothermia			
		Hypovolemic Shock			
		Bites and Stings			
		Nerve Agent			
		Nausea/Vomiting			
		Pain Control			
		Sepsis Alert			
	451	Stroke System Triage			
4	705	Allergic/Adverse Reaction and Anaphylaxis			
		Neonatal Resuscitation			
		Shortness of Breath – Pulmonary Edema			
		Shortness of Breath – Wheezes/other			
	705	Trauma Assessment/Treatment Guidelines			
	1404	Guidelines for Inter-facility Transfer of Patients to a Trauma Center			
	1405	Trauma Triage and Destination Criteria			
	1000	Documentation of Prehospital Care			
5	710	Airway Management			
	715	Needle Thoracostomy			
	716	Pre-existing Vascular Access Device			
	717	Intraosseous Infusion			
	729	air-Q			
	722	Transport of Pt. with IV Heparin and NTG			

6	600 601 603 606 613 306	Medical Control on Scene Medical Control at the Scene – EMS Personnel Against Medical Advice Determination of Death Do Not Resuscitate EMT-I: Req. to Staff an ALS Unit			
7	402 612 618	Patient Diversion/ED Closure Notification of Exposure to a Communicable Disease Unaccompanied Minor ECG Review Radio Communication			
8	 131 607 1202 1203	Mega Codes MCI Hazardous Material Exposure-Prehospital Protocol Air Unit Dispatch for Emergency Medical Response. Criteria for Patient Emergency Transportation			
9		Multiple System Evaluation Review Head to Toe Assessments			
10		Review Policies and Procedures			
		VCEMS Policy and Arrhythmia Exams			

Paramedic Name: ___________________________ **License. #**_______________**Date**_____________

FTO Signature____**Date**____________________

PCC Signature____**Date**____________________

Employer Signature: ______________________________________**Date:** __________________

METHOD OF EVALUATION KEY

E = EMEDS Review
S = Simulation/Scenario
D = Demonstration
T = Test/Self Learning Module

DO = Direct Observation in the field or clinical setting
V = Verbalizes Understanding to Preceptor
NA = Performance Skill not applicable to this employee

Appendix C

*NAME:*____________________

EMPLOYER: __________________ LICENSE #: P________________

Ventura County Accreditation Requirements
Continuing Education Log

This form should be used to track your continuing education requirements. This form must be turned in when it is time for your reaccreditation. When attending a continuing education course, remember to get a course completion, as EMS will audit 10% of all paramedics reaccrediting and if you are randomly selected you must provide a course completion for each course attended in order to receive credit for that course. Course completions must have the name of the course, number of hours, date, provider agency and provider number.

When you complete the Ventura County continuing education standards per Policy 318 you will automatically meet the State of California requirements for re-licensure.

Remember that the Skills Refresher and intubation requirements are to be completed yearly based on license cycle.

The Skills Refresher, Intubation refresher session and the EMS Update requirements are mandatory and they must be completed in the stated time frames or negative action will be taken against your paramedic training level.

Field Care Audit Hours (12 hours are required, 6 hours must be completed in Ventura County)				
	Date	**Location**	**# Of Hours**	**Provider Number**
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

	Lecture Hours				
Required Courses		**Date**	**Location**	**# Of Hours**	**Provider Number**
1.	ACLS **(4 hours)**				
2.	PALS **(4 hours)**				

EMS Updates are held in May and November each year.
EMS Updates are completed as new or changed policies become effective. Enter ***ACTUAL*** Date of class attendance below:

3.	**EMS UPDATE #2** (1 hour)	Office Use Only	
	EMS UPDATE #2 (1 hour)	Office Use Only	
	EMS UPDATE #3 (1 hour)	Office Use Only	
	EMS UPDATE #4 (1 hour)	Office Use Only	
4.	**Ventura County MCI COURSE** (2 hours)	Office Use Only	

Skill Refreshers are held in March and September each year. The following requirements must be completed in each year of your license cycle (***for example:*** If your re-licensure month is June 2020, you must complete year one requirement between June 2018 and June 2019 and year two requirement between June 2019 and June 2020).

			Enter ***ACTUAL*** Date of class attendance below:
5.	**Skills Refresher year 1** (3 hours)	Office Use Only	
	Skills Refresher year 2 (3 hours)	Office Use Only	

6. **Endotracheal intubations refresher session (1 session every 6 months based on your license expiration date.)**

			Enter ***ACTUAL*** Date of class attendance below:
	#1 ET Tube Session	Office Use Only	
	#2 ET Tube Session	Office Use Only	
	#3 ET Tube Session	Office Use Only	
	#4 ET Tube Session	Office Use Only	

Additional Hours **(12 hours)**

(These hours can be earned with any combination of additional Field Care Audit, lecture, etc.)

	Date	**Location**	**# Of Hours**	**Provider Number**
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

COUNTY OF VENTURA HEALTH CARE AGENCY		EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES
Policy Title: Unaccompanied Minors		Policy Number 618
APPROVED: Administration:	Steven L. Carroll, EMT-P	Date: December 1, 2015
APPROVED: Medical Director:	Angelo Salvucci, M.D.	Date: December 1, 2015
Origination Date: Date Revised: Date Last Reviewed: Review Date:	May 1, 1995 June 11, 2015 June 11, 2015 June, 2018	Effective Date: December 1, 2015

I. PURPOSE: To describe the process to be followed when EMS personnel determine that an unaccompanied minor does not need ambulance transport.

II. AUTHORITY: Sections 1797.200 and 1798, California Health & Safety Code; Section 100148, Title 22, Division 9 California Code of Regulations.

III. POLICY: The following procedure will be followed when field personnel assess a minor patient who is unaccompanied by a responsible adult and who is determined not to have an illness or injury requiring ambulance transport.

IV. PROCEDURE:

A. The patient is assessed according to Policy 603. ~~EMS protocols.~~ Field personnel should consider using their cellular telephone to contact the parent(s) of the patient.

B. The currently approved ePCR ~~Patient Care Report~~ will be completed per Policy 603.~~, documenting that no illness or injuries requiring ambulance transport are present.~~

C. The field personnel will document the name/badge# of an officer who will assume responsibility for the child until his/her parent(s) arrive.

~~D. An AMA signature is not needed.~~

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<table>
<tr><th colspan="2">Heat Emergencies</th></tr>
<tr><th>ADULT</th><th>PEDIATRIC</th></tr>
<tr><th colspan="2">BLS Procedures</th></tr>
<tr><td colspan="2">Place patient in cool, shaded environment
Initiate active cooling measures
• Remove clothing
• Fan the patient, or turn on air conditioner
• Apply ice packs to axilla, groin, back of neck
• Other active cooling measures as available
Administer oxygen as indicated
If patient is altered, determine blood glucose level
If less than 60 mg/dl refer to Policy 705.03</td></tr>
<tr><th colspan="2">ALS Prior to Base Hospital Contact</th></tr>
<tr><td>If patient is altered, dDetermine bBlood gGlucose if not already performed by BLS personnel or post oral glucose administration
If less than 60 mg/dl, refer to Policy 705.03
IV/IO access
Normal Saline
• IV/IO bolus – 1 Liter
o Caution with cardiac and/or renal history</td><td>If patient is altered, dDetermine bBlood gGlucose if not already performed by BLS personnel or post oral glucose administration
If less than 60 mg/dl, refer to Policy 705.03
IV/IO access
Normal Saline
• IV/IO bolus – 20 mL/kg
o Caution with cardiac and/or renal history</td></tr>
<tr><th colspan="2">Communication Failure Protocol</th></tr>
<tr><td>If hypotensive after initial IV/IO fluid bolus:
• Repeat Normal Saline
o IV/IO bolus – 1 Liter</td><td>If hypotensive after initial IV/IO fluid bolus:
• Repeat Normal Saline
o IV/IO bolus – 20 mL/kg</td></tr>
<tr><th colspan="2">Base Hospital Orders only</th></tr>
<tr><td colspan="2">Consult with ED Physician for further treatment measures</td></tr>
</table>

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Hypothermia

BLS Procedures

Gently move patient to warm environment and begin passive warming

Increase ambulance cabin heat, if applicable

Remove wet clothing and cover patient, including head, with dry blankets

Administer oxygen as indicated

If patient is altered, determine blood glucose level
If less than 60 mg/dl refer to Policy 705.03

Monitor vital signs for 1 minute. If vital signs are within the acceptable range for severe hypothermia, do not initiate respiratory assistance or chest compressions

- Acceptable range for severe hypothermia:
  - Respiratory Rate: at least 4 breaths per minute
  - Heart rate: at least 20 beats per minute
- Expedite transport if no shivering (indicates core temp below 90°)

ALS Prior to Base Hospital Contact

~~IV access (if needed for medication or fluid administration)~~

If patient is altered, determine blood glucose if not already performed by BLS personnel or post oral glucose administration

If less than 60 mg/dl, refer to Policy 705.03

IV/IO access (if needed for medication or fluid administration)

- If administering fluid, avoid administering cold fluids.

Base Hospital Orders only

Consult with ED Physician for further treatment measures

Effective Date:	Dec 1, 2012	Date Revised:	August, 2012
Next Review Date:	Jan 31, 2017	Last Reviewed:	Jan 8, 2015

VCEMS Medical Director

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 O_2 until HR > 100

ALS Prior to Base Hospital Contact

Establish IO line only in presence of CPR

Asystole OR Persistent Bradycardia < 60 bpm

- **Epinephrine** **0.1mg/mL** ~~**1:10,000**~~
  - IO – 0.01mg/kg (0.1mL/kg) q 3-5 min

PEA

- **Epinephrine** **0.1mg/mL** ~~**1:10,000**~~
  - IO – 0.01mg/kg (0.1mL/kg) q 3-5 min
- **Normal Saline**
  - IO bolus – 10mL/kg

Base Hospital Orders only

Consult with ED Physician for further treatment measures

Additional Information:

- 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.

COUNTY OF VENTURA EMERGENCY MEDICAL SERVICES		HEALTH CARE AGENCY POLICIES AND PROCEDURES
Policy Title: Needle Thoracostomy		Policy Number: 715
APPROVED: Administration:	Steven L. Carroll, EMT-P	Date: June 1, 2013
APPROVED: Medical Director	Angelo Salvucci, M.D.	Date: June 1, 2013
Origination Date: Date Revised: Date Last Reviewed: Review Date:	August 2010 April 4, 2013 April 11, 2013 March 31, 2015	Effective Date: June 1, 2013

I. Purpose: To define the indications, procedure and documentation for needle thoracostomy use by paramedics.

II. Authority: Health and Safety Code, Sections 1797.220 and 1798. California Code of Regulations, Title 22, Sections 100145 and100169.

III. Policy: Paramedics may perform needle thoracostomy on patients with a suspected tension pneumothorax in accordance with this policy.

IV. Procedure:

A. Indications

1. Patients with **ALL** of the following:

a. Clinical suspicion of pneumothorax (e.g., trauma, dyspnea, chest pain),

b. Systolic Blood Pressure less than 90, and

c. Absent or significantly decreased breath sounds on the affected side.

B. Contraindications: None in this setting

C. Equipment

1. Povidone-iodine prep swab
2. 10 ml syringe
3. 8.0 ~~5.0 - 6.0~~ cm, 14 ~~12-16~~ gauge over-the-needle catheter
4. Connection tubing
5. Heimlich valve
6. Tape

D. Placement

1. Attach the syringe to the needle/catheter.
2. Identify and prep the site:

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- The lateral placement is the preferred method which is the fourth intercostal space in the mid-axillary line.
- If unable to access lateral placement due to patient size, position, or failed attempt, locate the second intercostal space in the mid-clavicular line.Locate the second intercostal space in the mid-clavicular line.
- If unable to place anteriorly, lateral placement is in the fourth intercostal space in the mid-axillary line.
- Prepare the site with antiseptic solution.

2.3. Insert the needle/catheter perpendicular to the skin over the rib and direct it just over the top of the rib into the intercostal space.

3.4. After inserting the needle under the skin, maintain negative pressure in the syringe.

4.5. Advance the needle/catheter through the parietal pleura until a "pop" is felt and/or air or blood enters the syringe, then advance **ONLY** the catheter (not the syringe/needle) until the catheter hub is against the skin.

CAUTION: Do not reinsert needle into cannula due to danger of shearing cannula.

5.6. Hold the catheter in place and remove and discard the syringe and needle.

6.7. Attach tubing and Heimlich valve.

7.8. Secure the catheter hub to the chest wall with dressings and tape.

8.9. Reevaluate the patient (VS, lung sounds).

E. Documentation

1. All needle thoracostomy attempts must be documented in the Ventura County Electronic Patient Care Reporting System (VCePCR).
2. Documentation will include location, size of equipment, number of attempts, success, complications, patient response and any applicable comments..

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COUNTY OF VENTURA EMERGENCY MEDICAL SERVICES		HEALTH CARE AGENCY POLICIES AND PROCEDURES
Policy Title: Tourniquet Use		Policy Number: 731
APPROVED: Administration:	Steven L. Carroll, EMT-P	Date: December 1, 2015
APPROVED: Medical Director	~~Angelo Salvucci, M.D.~~	Date: ~~December 1, 2015~~June 14, 2018
Origination Date: Date Revised: Date Last Reviewed: Review Date:	July 2010 August 13, 2015 August 13, 2015 August, 2017	Effective Date: December 1, 2015

I. Purpose: To define the indications, procedure and documentation for tourniquet use by EMTs and paramedics.

II. Authority: Health and Safety Code, Sections 1797.220 and 1798.

III. Policy: EMTs and Paramedics may utilize tourniquets on patients in accordance with this policy.

IV. Procedure:

A. Indications

1. Life threatening extremity hemorrhage that cannot be controlled by other means.

B. Contraindications

1. Non-extremity hemorrhage.
2. Proximal extremity location where tourniquet application is not practical.

C. Tourniquet Placement:

1. Visually inspect injured extremity and avoid placement of tourniquet over joint, angulated or open fracture, stab or gunshot wound sites.
2. Assess and document circulation, motor and sensation distal to injury site.
3. Apply tourniquet proximal to wound (usually 2-4 inches).
4. Tighten tourniquet rapidly to least amount of pressure required to stop bleeding.
5. Cover wound with appropriate sterile dressing and/or bandage.
6. Do not cover tourniquet- the device must be visible.
7. Re-assess and document absence of bleeding distal to tourniquet.
8. Remove any improvised tourniquet that may have been previously applied.
9. Tourniquet placement time must be documented on the tourniquet device.
10. Ensure receiving facility staff is aware of tourniquet placement and time tourniquet was placed.

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D. Tourniquet r~~R~~emoval ~~(Paramedic only)~~, replacement, ~~-~~or repositioning

BLS providers may reposition an improperly placed tourniquet or replace a malfunctioning device. Only ALS personnel may formally remove a tourniquet to assess if it is still necessary.

1. Indications
   a.~~a. Releasing the tourniquet should only be considered if applied for 60 minutes or longer.~~ Improperly placed tourniquet
   b. Poorly functioning device
   c~~b~~. Absence of bleeding distal to the tourniquet should be confirmed after manipulation and/or adjustment.

2. Procedure
   a. Obtain IV/IO access
   b. Maintain continuous ECG monitoring.
   c. Hold firm direct pressure over wound for at last 5 minutes before releasing tourniquet.
   d. Gently release the tourniquet and monitor for reoccurrence of bleeding.
   e. Document time tourniquet was released.
   f. Bandage wound and re-assess and document circulation, motor and sensation distal to the wound site regularly.
   g. If bleeding resumes, requiring a tourniquet, re-application will be in accordance with application procedures outlined in Section IV of this policy.

E. Documentation
1. All tourniquet uses must be documented in the Ventura County Electronic Patient Care Reporting System.
2. Documentation will include location of tourniquet, time of application, and person at the receiving hospital to whom the tourniquet is reported.

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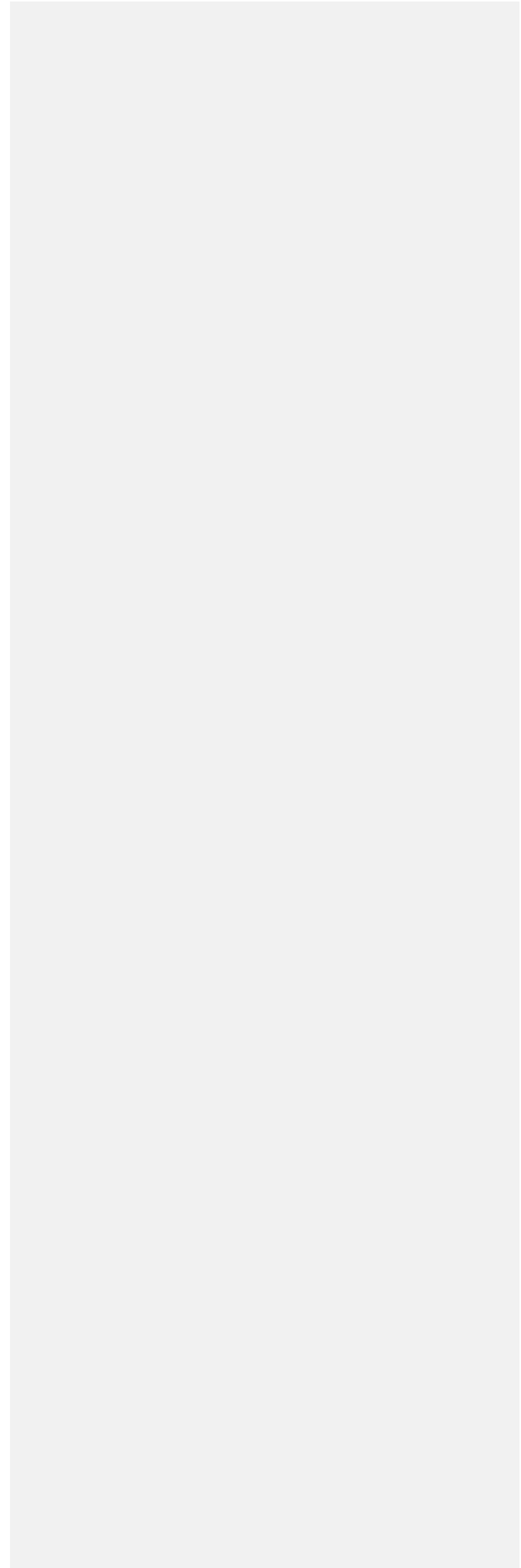


2018 Ventura County	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
ALL ETIOLOGIES													
Total resuscitation attempted	62	36	49										147
Total PAD Applied	0	0	0										0
Total PAD Shock	0	0	0										0
Total PRESTO draw	55	25	31										111
Total PRESTO %	88.7%	69.4%	63.3%										75.5%
Determined dead on scene	35	17	26										78
Determined dead on scene %	56.5%	47.2%	53.1%										53.1%
Total ROSC	16	10	12										38
Total ROSC %	25.8%	27.8%	24.5%										25.9%
Tx with ROSC, pronounced in ED	5	3	1										9
Tx without ROSC, pronounced in ED	8	8	9										25
Bystander CPR provided	31	16	21										68
Bystander CPR %	50.0%	44.4%	42.9%										46.3%
Presumed cardiac	49	18	33										100
Drowning	0	1	1										2
Electrocution	0	0	0										0
Respiratory/asphyxia	1	4	2										7
Trauma	2	3	2										7
Drug overdose	3	4	8										15
Exsanguination/hemorrhage	1	1	0										2
Other	6	5	3										14
Total discharged alive	4	4	5										13
Total discharged alive %	6.5%	11.1%	10.2%										8.8%
Discharged CPC 1 / CPC 2	4	3	4										11
Discharged CPC 1 / CPC 2 %	6.5%	8.3%	8.2%										7.5%
Discharged CPC 3 / CPC 4	0	1	1										2
Discharged CPC 3 / CPC 4 %	0.0%	2.8%	2.0%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	1.4%

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
PRESUMED CARDIAC ETIOLOGY													
Total presumed cardiac	49	18	33										100
ROSC, presumed cardiac	13	4	7										24
ROSC %	26.5%	22.2%	21.2%										24.0%
Determined to be dead on scene	27	10	17										54
Determined to be dead on scene %	55.1%	55.6%	51.5%										54.0%
Bystander CPR provided	27	6	13										46
Bystander CPR %	55.1%	33.3%	39.4%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	46.0%
Admitted to hospital	12	2	7										21
Admitted to hospital %	24.5%	11.1%	21.2%										21.0%
Discharged alive	3	2	4										9
Discharged alive %	6.1%	11.1%	12.1%										9.0%
Discharged CPC 1 / CPC 2	3	2	3										8
Discharged CPC 1 / CPC 2 %	6.1%	11.1%	9.1%										8.0%
Discharged CPC 3 / CPC 4	0	0	1										1
Discharged CPC 3 / CPC 4 %	0.0%	0.0%	3.0%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	1.0%
UTSTEIN: PRESUMED CARDIAC, BYSTANDER WITNESSED, SHOCKABLE RHYTHM													
Total Utstein criteria	6	5	3										14
Total ROSC	4	1	1										6
Total ROSC %	66.7%	20.0%	33.3%										42.9%
Bystander CPR provided	5	2	0										7
Bystander CPR %	83.3%	40.0%	0.0%										50.0%
Admitted to hospital	5	1	1										7
Admitted to hospital %	83.3%	20.0%	33.3%										50.0%
Discharged alive	2	1	1										4
Discharged alive %	33.3%	20.0%	33.3%										28.6%
Discharged CPC 1 / CPC 2	2	1	1										4
Discharged CPC 1 / CPC 2 %	33.3%	20.0%	33.3%										28.6%
Discharged CPC 3 / CPC 4	0	0	0										0
Discharged CPC 3 / CPC 4 %	0.0%	0.0%	0.0%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.0%

Ventura County EMS: Prehospital Step 1-3 Destinations, 2018

Step 1	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**TOTAL**
VCMC	13	11	25	13	11								73
LRHMC	10	12	6	8	3								39
SVH													0
SJRMC		1		1	1								3
SJPVH													0
CMH					1								1
SPH													0
OVH	1												1
HMNMH	1												1
Holy Cross													0
TOTAL	25	24	31	22	16								118
% to TC	96.0%	95.8%	100%	95.5%	87.5%								95.8%
Step 2	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**TOTAL**
VCMC	3	5	9	14	7								38
LRHMC	3	4	2	0	4								13
SVH													
SJRMC		1											1
SJPVH													
CMH													
SPH													
OVH													
Holy Cross													
TOTAL	6	10	11	14	11								52
% to TC	100%	90%	100%	100%	100%								98.1%
Step 3	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**TOTAL**
VCMC	23	12	13	19	20								87
LRHMC	13	15	8	15	13								64
SVH		1(1)											1
SJRMC		3(1)		3	2(1)								8
SJPVH				1									1
CMH	1		1	1	1								4
SPH				1									1
OVH	2(2)		1		1								4
Holy Cross													0
HMNMH	1		3		1								5
KCMC													0
SB Cottage													0
TOTAL	40	31	26	40	38								175
% to TC	92.6%	87.1%	92.3%	85%	89.5%								89.1%
TOTAL 1-3	71	65	68	76	65								345
% to TC	94.4%	90.8%	97.1%	90.8%	90.1%								92.8%

Note: EMS transports to non-trauma center hospitals, then transfer to trauma center, are indicated by parentheses ( )

Ventura County EMS: Prehospital Step 4 Destinations, 2018

Incident City	Destination	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Ventura Saticoy	CMH	31 (1)	32	20(1)	31(1)	31								
	OVH	1	0	0	0	1								
	SJRMC	3	3	3	2	0								
	VCMC	12	8	11	15	14								
	LRHMC	0	0	0	0	1								
	SB Cottage	0	0	0	2	1								
	SPH	0	1	0	0	0								
Camarillo Somis	CMH	1	0	0	1	1								
	LRHMC	5	4	3	5	5								
	SJPVH	18	25	18(1)	25(1)	22								
	SJRMC	0	3	3(1)	3	2								
	VCMC	1	0	1	0	0								
Oxnard Port Hueneme Malibu	CMH	4 (1)	1	3	4	2								
	LRHMC	1	2	0	1	1								
	SJPVH	0	0	0	0	1								
	SJRMC	44	51	57	56(2)	66(2)								
	VCMC	5	2	3	6	7								
Thousand Oaks Newbury Park Agoura Hills	LRHMC	22	35	23	45	42								
	VCMC	1	0	0	0	0								
	SVH	0	0	0	0	0								
	SJPVH	0	0	0	0	0								
Simi Valley Rocketdyne	Kaiser WH	0	0	1	0	0								
	LRHMC	3	3	2	2	4								
	SVH	11	5	13	10	18								
	West Hills	0	0	0	0	0								
Moorpark	LRHMC	0	2	2	3	3								
	SJPVH	0	0	0	0	0								
	SVH	0	0	0	0	1								
Ojai Oak View	CMH	0	0	0	1	1								
	OVH	9	9	8	8(1)	5								
	VCMC	3	1	2	0	0								
	LRHMC	0	0	0	0	0								
Santa Paula	CMH	1	0	0	1	1								
	SPH	2	2	3	2	2								
	SJRMC	0	0	0	0	0								
	VCMC	1	2	3	2	0								
Fillmore	SPH	2	1	1	1	1								
	VCMC	1	0	0	1	0								
	CMH	0	0	1	0	0								
	HMNMH	0	0	0	0	0								
Frazier Park	HMNMH	0	0	0	2	1								
Piru	HMNMH	1	0	0	0	0								
	TOTAL	183	192	181	229	234								

<table>
<tr><td colspan="2">COUNTY OF VENTURA
HEALTH CARE AGENCY</td><td colspan="2">EMERGENCY MEDICAL SERVICES
POLICIES AND PROCEDURES</td></tr>
<tr><td colspan="3">Policy Title:
Organ Donor Information Search</td><td>Policy Number
615</td></tr>
<tr><td>APPROVED:
Administration:</td><td colspan="2">Steven L. Carroll, EMT-P</td><td>Date: June 1, 2013</td></tr>
<tr><td>APPROVED:
Medical Director:</td><td colspan="2">Angelo Salvucci, M.D.</td><td>Date: June 1, 2013</td></tr>
<tr><td>Origination Date:
Date Revised:
Date Last Reviewed:
Review Date:</td><td>October 1, 1993
February 14, 2013
February 14, 2013
January 31, 2015</td><td colspan="2">Effective Date: June 1, 2013</td></tr>
</table>

I. PURPOSE: To establish guidelines for Emergency Medical Services (EMS) field personnel to meet requirements that they search for organ donor information on adult patients for whom death appears to be imminent.

II. AUTHORITY: Health and Safety Code Section 7152.5(b)

III. POLICY: EMS field personnel shall make a brief reasonable search to determine the presence or absence of an organ donor card on adult patients for whom death appears to be imminent. This brief search shall not interfere with patient care, and must be done in the presence of a witness, preferably a public safety officer, unless extenuating circumstances make having a witness clearly infeasible.

IV. DEFINITIONS:

A. "Reasonable Search": A brief attempt by EMS field personnel to locate documentation that may identify a patient as a potential organ donor, or one who has refused to make an anatomical gift. This search shall be limited to a wallet, purse or other personal belongings on or near the individual likely to contain a driver's license or other identification card with this information. A REASONABLE SEARCH SHALL NOT TAKE PRECEDENCE OVER PATIENT CARE/TREATMENT.

B. "Imminent Death": A condition wherein illness or injuries are of such severity that in the opinion of EMS field personnel, death is likely to occur before the patient arrives at a hospital. For purposes of this policy, this definition does not include any conscious patient regardless of the severity of illness or injury.

C. "Receiving Hospital": The hospital to which the patient is being transported.

IV. PROCEDURE:

A. When EMS field personnel encounter an unconscious adult patient for whom it appears that death is imminent (that is, death prior to arrival at a hospital), they shall attempt a "reasonable search" as defined in Section III. A. This search must be done in the presence of a witness, preferably a public safety officer, unless extenuating circumstances make having a witness clearly infeasible. If a family member or patient representative is the only witness available, EMS field personnel should clearly and carefully explain the intent of the brief search. The identity of the witness to the brief search will be documented on the approved Ventura County Documentation System.

B. Treatment and transport of the patient remains the highest priority for EMS field personnel. This search shall not interfere with patient care or transport.

C. EMS field personnel shall notify the receiving hospital if organ donor information is discovered. Advanced Life Support (ALS) units shall notify the base hospital in addition to the receiving hospital.

D. Any organ donor document that is discovered should be transported to the receiving hospital with the patient unless it is requested by the investigating law enforcement officer. If the investigating law enforcement officer retains the organ donor card, the presence of the card will be documented on the approved Ventura County documentation system. In the event that the patient is not transported, any document will remain with the patient.

E. Field personnel should briefly note the results of the search, notification of hospital, and witness name(s) in the narrative section of the VCePCR.

F. No search is to be made by EMS field personnel after patient death occurs.

G. If a member of the patient's immediate family or other patient representative objects to the search for an organ donor document at the scene, no search shall be made, and their response to a question about the patient's organ donor wishes may be considered to satisfy the requirement of this policy. This information shall be documented on the approved Ventura County Documentation System.

<table>
<tr><td colspan="2">COUNTY OF VENTURA
HEALTH CARE AGENCY</td><td>EMERGENCY MEDICAL SERVICES
POLICIES AND PROCEDURES</td></tr>
<tr><td colspan="2">Policy Title:
Medical Control At Scene,
Private Physician/Physician On Scene</td><td>Policy Number:
703</td></tr>
<tr><td>APPROVED:
Administration:</td><td>Steven L. Carroll, EMT-P</td><td>Date: June 1, 2008</td></tr>
<tr><td>APPROVED:
Medical Director:</td><td>Angelo Salvucci, M.D.</td><td>Date: June 1, 2008</td></tr>
<tr><td>Origination Date:
Revised Date:
Date Last Reviewed:
Review Date:</td><td>January, 1985
March 13, 2008
September 12, 2013
September, 2015</td><td>Effective Date: June 1, 2008</td></tr>
</table>

I. Purpose: To establish guidelines for medical control of patient care at the scene of a medical emergency. To assist the paramedic who, arrives on the scene of a patient who is being attended by a California licensed physician.

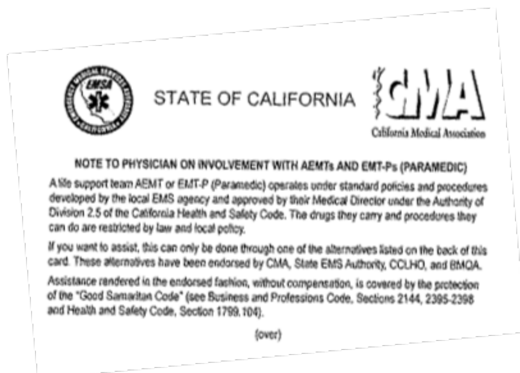
II. Authority: Health and Safety Code, Division 2.5, Sections 1798 & 1798.6. California Code of Regulations, Title 22, Division 9, Section 100175.

III. Policy: paramedics shall use the following procedure to determine on-scene authority for patient care.

IV. Procedure:

A. When a bystander at the scene of a medical emergency identifies himself/herself as a physician, the paramedic shall:

1. Obtain proper identification from the individual (preferably California licensure as M.D., or D.O.) and document name on the PCR.
2. Present the CMA card "Note to Physician on Involvement with EMT-II and Paramedic" to him/her to read and choose level of involvement.



STATE OF CALIFORNIA

California Medical Association

NOTE TO PHYSICIAN ON INVOLVEMENT WITH AEMTs AND EMT-Ps (PARAMEDIC)

A life support team AEMT or EMT-P (Paramedic) operates under standard policies and procedures developed by the local EMS agency and approved by their Medical Director under the Authority of Division 2.5 of the California Health and Safety Code. The drugs they carry and procedures they can do are restricted by law and local policy.

If you want to assist, this can only be done through one of the alternatives listed on the back of this card. These alternatives have been endorsed by CMA, State EMS Authority, CCLHO, and BMQA.

Assistance rendered in the endorsed fashion, without compensation, is covered by the protection of the "Good Samaritan Code" (see Business and Professions Code, Sections 2144, 2395-2398 and Health and Safety Code, Section 1799.104).

(over)

ENDORSED ALTERNATIVES FOR PHYSICIAN INVOLVMENT

After identifying yourself by name as a physician licensed in the state of California, and if requested, showing proof of identity, you may choose to do one of the following:

1. Offer your assistance with another pair of eyes, hands, or suggestions, but let the life support team remain under the base hospital control; or,

2. Request to talk to the base station physician and directly offer your medical advice and assistance; or,

3. Take total responsibility for the care given by the life support team and physically accompany the patient until the patient arrives at a hospital and responsibility is assumed by the receiving physician. In addition, you must sign for all instructions given in accordance with local policy and procedure. (Whenever possible, remain in contact with the base station physician.)

(REV. 1/12) 12 49638 Provided by the Emergency Medical Services Authority
OSP 12 126336

3. Contact the Base Hospital and advise them that there is a physician on scene.
4. Determine the level of involvement the physician wishes to have and inform the Base Hospital.

B. If the physician chooses not to assume patient care, the Base Hospital shall retain medical control and the paramedic's will utilize the physician as an "assistant" in patient care activities.

C. If the physician chooses to take medical control, the paramedic's will instruct the physician in radio operation procedures and have the physician at the scene communicate with the Base Hospital physician. The Base Hospital physician may do either of the following:

   1. Retain medical control, but consider and/or utilize suggestions offered by the physician at the scene.
   2. Request that the physician at the scene function in an observer capacity only.
   3. Delegate medical control to the physician at the scene.
   4. If the physician at the scene has been given medical control by the Base Hospital physician, the paramedic shall:
      a. Make ALS equipment and supplies available to the physician and offer assistance.
      b. Ensure that the physician accompany the patient in the ambulance to the hospital, and signs for all instructions and medical care given.
      c. Keep the Base Hospital advised.

D. The paramedic, while under the direction of a physician at the scene, shall perform only those procedures and administer only those drugs for which he/she is accredited for in Ventura County. Paramedics shall be held accountable and possibly liable for performing a procedure or treatment outside the paramedic scope of practice. If a physician at the scene wishes such a procedure or treatment performed, he/she may perform that procedure. The paramedic should attempt to have the on-site physician call the Base Hospital physician regarding the treatment.

E. The Base Hospital shall:

   1. Speak to the physician on scene, unless a delay would be detrimental to patient care, or the physician is the patient's personal physician, to determine qualification regarding emergency treatment and level of involvement chosen by the physician.
   2. Document the physician's intent to assume patient care responsibility.
   3. Relinquish patient care to the patient's personal physician, if he/she has arrived after Base Contact has been made and wishes to assume control.

4. In cases where a dispute arises regarding medical care, the ultimate decision as to patient care shall be made by the Base Hospital, except when the personal physician is present.

F. Private Physician On Scene

1. If the private physician is present and assumes responsibility for the patient care, the paramedic shall advise the Base Hospital that the patient is under the care of his/her private medical doctor (PMD) and inform the Base Hospital of the PMD's instructions.
2. The paramedic, while under the direction of a physician at the scene, shall perform only those procedures and administer only those drugs for which he/she is accredited for in Ventura County. Paramedics shall be held accountable and possibly liable for performing a procedure or treatment outside the paramedic scope of practice. If a physician at the scene wishes such a procedure or treatment performed, he/she may perform that procedure. The paramedic should attempt to have the on-site physician call the Base Hospital physician regarding the treatment.

Crush Injury/Syndrome

ADULT	PEDIATRIC

BLS Procedures

Perform spinal precautions as indicated
Determine Potential vs. Actual Crush Syndrome
Administer oxygen as indicated

ALS Prior to Base Hospital Contact

Potential for Crush Syndrome

- IV access
- Maintain body heat
- Release compression
- Monitor for cardiac dysrhythmias

Communication Failure Protocol

ADULT

Crush Syndrome

- Initiate 2nd IV/IO access
- **Normal Saline**
  - IV/IO bolus – 1 Liter
    - Caution with cardiac and/or renal history
- **Sodium Bicarbonate**
  - IV mix – 1 mEq/kg
    - Added to 1st Liter of Normal Saline
- **Albuterol**
  - Nebulizer – 5 mg/6 mL
    - Repeat x 2
- **Morphine** – Per Policy 705 - Pain Control
- Maintain body heat
- Release compression
- Monitor for cardiac dysrhythmias
- For cardiac dysrhythmias:
  - **Calcium Chloride**
    - IV/IO – 1 g over 1 min

For continued shock

- *Repeat* **Normal Saline**
  - IV/IO bolus – 1 Liter

PEDIATRIC

Crush Syndrome

- Initiate 2nd IV access if possible or establish IO
- **Normal Saline**
  - IV/IO bolus – 20 mL/kg
    - Caution with cardiac and/or renal history
- **Sodium Bicarbonate**
  - IV mix– 1 mEq/kg
    - Added to 1st Liter of Normal Saline
- **Albuterol**
  - Less than 2 years old
    - Nebulizer – 2.5 mg/3 mL
      - Repeat x 2
  - 2 years old and greater
    - Nebulizer – 5 mg/6 mL
      - Repeat x 2
- Maintain body heat
- Release compression
- Monitor for cardiac dysrhythmias
- For cardiac dysrhythmias:
  - **Calcium Chloride**
    - IV/IO – 20 mg/kg over 1 min

For continued shock

- *Repeat* **Normal Saline**
  - IV/IO bolus – 20 mL/kg

Base Hospital Orders only

ADULT

For persistent hypotension after fluid bolus:

- **Dopamine**
  - IV/IOPB – 10 mcg/kg/min

Consult with ED Physician for further treatment measures

PEDIATRIC

For persistent hypotension after fluid bolus:

- **Dopamine**
  - IV/IOPB – 10 mcg/kg/min

Consult with ED Physician for further treatment measures

Additional Information:

- Potential Crush Syndrome – Continuous crush injury to torso or extremity above wrist or ankle for 2 hours or less.
- Crush Syndrome – Continuous crush injury to torso or extremity above wrist or ankle for greater than 2 hours.
- If elderly or cardiac history is present, use caution with fluid administration. Reassess and treat accordingly.
- Dysrhythmias are usually secondary to Hyperkalemia. ECG monitor may show: Peaked T-waves, Absent P-waves, widened QRS complexes, bradycardia
- Calcium Chloride and Sodium Bicarbonate precipitate when mixed. Strongly consider starting a second IV (if feasible) for administration of Calcium Chloride

Effective Date: June 1, 2015
Next Review Date: March 31, 2017
Date Revised: March 12, 2015
Last Reviewed: March 12, 2015

VCEMS Medical Director