

**County of Ventura  
Department of Public Health**

**Notice of Changes to Policy Manual**


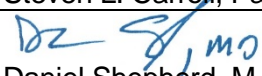
**Emergency Medical Services  
Policies and Procedures**

To: ALL VENTURA COUNTY EMS POLICY MANUAL HOLDERS

DATE: June 24, 2020

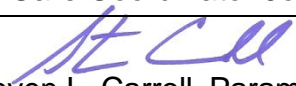

<b>Policy Status</b>	<b>Policy #</b>	<b>Title/New Title</b>	<b>Notes</b>
Replace	310	Paramedic Scope of Practice	Addition of Fentanyl
Replace	350	Prehospital Care Coordinator Job Duties	Changes made to review dates only
Replace	402	Patient Diversion and Emergency Department Closures	STEMI and TCASC diversion language added
Replace	430	STEMI Receiving Center Standards	Language added to reflect new Title 22 STEMI regulations for SRH designation
Replace	440	Code STEMI Interfacility Transfer	Language added for SRH
Replace	452	TCASC Standards	Changes made related to designation and data submission requirements
Replace	504	BLS and ALS Equipment and Supplies	Addition of fentanyl to required medications
Replace	604	Transport and Destination Guidelines	Updated language to match 705 treatment protocols
Replace	613	Do Not Resuscitate	Changes made to review dates only
Replace	705.05	Bites and Stings	Pain control language changes
Replace	705.06	Burns	Pain control language changes
Replace	705.07	Cardiac Arrest – Asystole/Pulseless Electrical Activity (PEA)	Changes to base order
Replace	705.08	Cardiac Arrest – VF/VT	Changes to base order, magnesium peds
Replace	705.09	Chest Pain	Fentanyl, changed base order
Replace	705.10	Childbirth	Changes made to review dates only
Replace	705.11	Crush Injury	Pain control changes
Replace	705.18	Overdose	ALS Prior to Base changed to ALS Standing Orders
Replace	705.19	Pain Control	Fentanyl
Replace	705.22	Shortness of Breath – Wheezes/Other	Small correction to titration statement for push dose Epi pediatrics

Replace	705.24	Symptomatic Bradycardia	Pain control, moved hyperkalemia from base order
Replace	705.25	Sustained VTach – Not in Arrest	Added pediatric treatment guidelines. Moved Magnesium out of BHO only section. Added Midazolam with Fentanyl
Replace	705.26	Suspected Stroke	ALS Prior to Base changed to ALS Standing Orders
Replace	705.28	Smoke Inhalation	Changes made to review dates only
Replace	710	Airway Management	Changes made to SGA use after intubation. Air-Q language changed.
Replace	0727	Transcutaneous Cardiac Pacing	Removed dopamine reference
Replace	0729	Supraglottic Airway Device	Name change, Air Q language changed
Add	0736	Leave at Home Naloxone Program	New policy

COUNTY OF VENTURA HEALTH CARE AGENCY		EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES	
Policy Title: Paramedic Scope of Practice		Policy Number: 310	
APPROVED: Administration:	 Steven L. Carroll, Paramedic	Date: July 1, 2020	
APPROVED: Medical Director:	 Daniel Shepherd, M.D.	Date: July 1, 2020	
Origination Date:	May, 1984	Effective Date: July 1, 2020	
Date Revised:	January 16, 2020		
Date Last Reviewed:	January 16, 2020		
Review Date:	January 31, 2022		

- I. PURPOSE: To define the scope of practice of a Paramedic accredited and practicing in Ventura County.
- II. AUTHORITY: Health and Safety Code Section 1797.172 and 1797.185. California Code of Regulations, Division 9, Chapter 4, Section 100145.
- III. POLICY:
  - A. A paramedic may perform any activity identified in the Scope of Practice of an EMT or Advanced EMT (AEMT) as defined in regulations governing those certification levels.
  - B. A paramedic trainee or paramedic accredited in Ventura County, while caring for patients in a hospital as part of their training or continuing education, under the direct supervision of a physician, registered nurse, or physician assistant, or while at the scene of a medical emergency, during transport, or during inter-facility transfer when medical direction is maintained by a physician or an MICN according to the policies and procedures approved by the Ventura County Emergency Medical Services Medical Director, may:
    1. Utilize electrocardiographic devices and monitor electrocardiograms (ECG), including 12-lead ECG.
    2. Perform pulmonary ventilation by use of oral endotracheal intubation or a Ventura County EMS approved alternative ALS airway management device.
    3. Utilize mechanical ventilation devices for continuous positive airway pressure (CPAP).
    4. Institute intravenous (IV) catheters, saline locks, needles or other cannulae (IV) lines, in peripheral veins.
    5. Monitor and access pre-existing peripheral and central vascular access lines.
    6. Institute intraosseous (IO) needles or catheters.
    7. Administer IV or IO glucose solutions and Normal Saline solutions.
    8. Obtain venous blood samples.
    9. Administer the following drugs:
      - a. Adenosine
      - b. Amiodarone

- c. Aspirin
  - d. Atropine sulfate
  - e. Bronchodilators, Nebulized beta-2 specific
  - f. Calcium chloride
  - g. Dextrose, 5%, 10%, 25%, and 50%
  - h. Diazepam
  - i. Diphenhydramine hydrochloride
  - j. Dopamine hydrochloride
  - k. Epinephrine
  - l. Fentanyl
  - m. Heparin (Interfacility transfers only)
  - n. Glucagon hydrochloride
  - o. Hydroxocobalamin
  - p. Lidocaine hydrochloride
  - q. Magnesium sulfate
  - r. Midazolam
  - s. Morphine sulfate
  - t. Naloxone hydrochloride
  - u. Nitroglycerin preparations: oral, IV (interfacility transfers only)
  - v. Ondansetron
  - w. Pralidoxime Chloride
  - x. Sodium bicarbonate
  - y. Tranexamic Acid
10. Perform defibrillation
  11. Perform synchronized cardioversion
  12. Perform transcutaneous pacing
  13. Visualize the airway by use of the laryngoscope and remove foreign body(ies) with Magill forceps
  14. Perform Valsalva maneuver
  15. Monitor thoracostomy tubes
  16. Monitor and adjust IV solutions containing potassium  $\leq 20$  mEq/L.
  17. Monitor Capnography/Capnometry
  18. Perform needle thoracostomy
  19. Perform blood glucose level determination

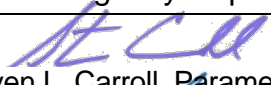

COUNTY OF VENTURA HEALTH CARE AGENCY		EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES	
Policy Title: Prehospital Care Coordinator Job Duties		Policy Number 350	
APPROVED: Administration:	 Steven L. Carroll, Paramedic	Date: June 1, 2017	
APPROVED: Medical Director:	 Daniel Shepherd, MD	Date: June 1, 2017	
Origination Date:	June 15, 1998		
Revised Date:	December 5, 2016	Effective Date: June 1, 2017	
Date Last Reviewed:	May 14, 2020		
Next Review Date:	May 31, 2023		

- I. PURPOSE: To provide guidelines for the role of the Prehospital Care Coordinator (PCC) in Ventura County.
- II. POLICY: A PCC will perform his/her role according to the following.
- III. DEFINITION: A PCC is a Registered Nurse designated by each BH (BH) to coordinate all prehospital and Mobile Intensive Care Nurse (MICN) activities sponsored by that BH in compliance with Ventura County Emergency Medical Services (VC EMS) policies, procedure and protocols and in accordance with the Health and Safety Code, Sections 1797-1799 et al, and in accordance with Title 22 of the California Code of Regulations. The PCC evaluates prehospital care, prehospital personnel and MICNs and collaborates with the BH Paramedic Liaison Physician (PLP) in medical direction.
- IV. PROFESSIONAL QUALIFICATIONS:
  - A. Licensed as a Registered Nurse in the State of California.
  - B. Current authorization as a Ventura County Mobile Intensive Care Nurse (MICN).
  - C. One year experience as an MICN in Ventura County. For those nurses with one year work experience as an MICN within the last 18 months, this may be reduced to 6 months.
  - D. Have at least three years emergency department experience.
- V. SPECIFIC RESPONSIBILITIES:
  - A. The PCC is a full-time or full-time equivalency employee whose responsibility is dedicated to the oversight and management of the prehospital / EMS duties of the BH.
  - A. Serve as Liaison by maintaining effective lines of communication with BH personnel, VCEMS, prehospital care providers and local receiving facilities.
  - B. In compliance with VCEMS Policies and Procedures the PCC will:
    1. Ensure a high level of competence and training by developing and instituting prehospital care education programs for MICNs and prehospital

personnel. Programs shall include, but not be limited to, specific issues identified by the VCEMS Continuous Quality Improvement Plan.

- a. Provide continuing education per policy requirements
  - b. Coordinate clinical experience as requested, for purposes of provider plan of action.
  - c. Provide special mandatory programs such as EMS Update classes, Paramedic Skills Labs and Paramedic Orientation.
  - d. Participate in process improvement teams as designated by VC EMS
2. Provide training for probationary MICNs and newly accrediting paramedics by coordinating necessary clinical experience and evaluating performance.
  3. Evaluate the performance of MICNs and submit recommendations for authorization and reauthorization to VC EMS. Such evaluation shall include, but not be limited to:
    - a. Direct observation of BH communications.
    - b. Audit of recorded communications
    - c. Observation of patient assessment and clinical judgment skills (in conjunction with the Emergency Department Nursing Supervisor).
    - d. Review of written documentation.
    - e. Provide written evaluation of the MICNs for hospital performance review.
  4. Provide ongoing evaluation of assessment, reporting, communication and technical skills of assigned paramedics. Such evaluation shall include, but not be limited to:
    - a. Audit of written and recorded communications
    - b. Review of EMS report forms
    - c. Direct field observation during the ride-along, including observation of the transfer of patient care upon arrival at the receiving facility.
    - d. Assess performance during scheduled clinical hours in the Emergency Department.
    - e. Evaluation of paramedic personnel for level advancement, through direct observation, recorded communication and paperwork audit, according to VC EMS Policy 318.

- f. Provide written evaluation of the paramedics, and MICNs
- g. Facilitate support services for prehospital and hospital EMS Staff, (i.e. Critical Incident Staff Management)
- h. Participate in Root Cause Analysis as indicated.
5. Report and investigate, and participate in prehospital care unusual occurrences as directed by VC EMS Policy 150.
6. Ensure the operation of the BH communication equipment.
  - a. In conjunction with the BH PLP, ensure that all personnel assigned to communicate with paramedics in the field have attended an MICN developmental course approved by VC EMS.
  - b. Ensure that the radio equipment is operational.
  - c. Ensure that ReddiNet System is operational and up to date.
7. Comply with data collection requirements as directed by VC EMS.
8. Ensure compliance with requirements for retention of recordings, MICN and prehospital care forms, logs and information sheets and maintaining retrieval systems in collaboration with hospital's Medical Records Department.
9. Develop and maintain education records as required by EMS.
  - a. Records must be kept for a period of four years
10. In conjunction with the BH PLP, report to the EMS agency any action of certified/licensed paramedics which results in an apparent deficiency in medical care or constitutes a violation under Section 1798.200 of the Health and Safety Code.
11. Represent the BH at the Prehospital Care Committee, PCC meeting and other associated task forces and special interest committees as directed by the EMS Agency.
12. Actively participate in the development, review and revision of Ventura County Policies and Procedures.

COUNTY OF VENTURA HEALTH CARE AGENCY		EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES	
Policy Title Patient Diversion/Emergency Department Closures		Policy Number: 402	
APPROVED: Administration:	 Steven L. Carroll, Paramedic	Date: July 1, 2020	
APPROVED: Medical Director:	 Daniel Shepherd, MD	Date: July 1, 2020	
Origination Date:	January 1990	Effective Date: July 1, 2020	
Revised Date:	December 10, 2019		
Date Last Reviewed:	December 10, 2019		
Review Date:	June 30, 2022		

- I. PURPOSE: To define the procedures by which Emergency Medical Services (EMS) providers and/or Base Hospitals (BH) may:
  - A. Transport emergency patients to the most accessible medical facility that is staffed, equipped, and prepared to administer emergency care appropriate to the needs of the patient.
  - B. Provide a mechanism for a hospital in the Ventura County (VC) EMS system to have patients diverted away from its emergency department when it has been determined that the hospital is not staffed, equipped, and/or prepared to care for additional or specific types of patients.
  - C. Assure that Advanced Life Support (ALS) units are not unreasonably removed from their area of primary response when transporting patients to a medical facility.
- II. AUTHORITY: California Administrative Code, Title 13, Section 1105(c): "In the absence of decisive factors to the contrary, ambulance drivers shall transport emergency patients to the most accessible medical facility equipped, staffed, and prepared to receive emergency cases and administer emergency care appropriate to the needs of the patient".
- III. POLICY: Hospitals may divert patients according to the conditions described below. This policy shall not negate prearranged interhospital triage and transport agreements approved by VC EMS Basic Life Support (BLS) patients will be transported to the nearest unless it is closed by internal disaster.
- IV. DEFINITIONS:
  - A. ALS Patient: A patient who meets the criteria for base hospital contact.
  - B. BLS Patient: A patient whose illness or injury requires BLS care or a patient in a BLS unit, irrespective of the level of care required for the patient's illness or injury.
- V. PROCEDURE
  - A. DIVERSION REQUEST CATEGORIES



A hospital may request that ambulances be diverted for the following reasons using the following terminology:

1. **Internal Disaster**

Hospital's emergency department cannot receive any patients because of a physical plant breakdown (e.g. fire, bomb threat, power outage, safety issues in the ED, etc.).

NOTE: Activation of a hospital's internal plan to handle diversions (see Section IV.D) does NOT constitute an internal disaster.

2. **Emergency Department Saturation**

The hospital's emergency department resources are fully committed to critically and/or seriously ill patients and are not available for additional ALS patients.

3. **Lack of Neurosurgical coverage**

Hospital is unable to provide appropriate care due to unavailability of a neurosurgeon, and is therefore not an ideal destination for patients likely to require these services.

4. **Intensive Care Unit (ICU) / Critical Care Unit (CCU) Saturation**

Hospital's ICUs do not have any available licensed beds to care for additional patients, and is therefore not an ideal destination for patients likely to require these services.

5. **CT Scanner Inoperative**

Hospital's CT scanner is not functioning and therefore not the ideal destination for patients with blunt or penetrating head trauma, truncal trauma, or a prehospital Stroke Alert patient.

6. **STEMI Receiving Center (SRC) Unavailable**

Hospital is unable to accept a "STEMI Alert" patient due to unavailability of their Cath lab or Cath lab staff. Must state reason in the "comment section" on ReddiNet as to why the Cath lab is unavailable. ROSC patients will not be diverted.

**Thrombectomy Capable Acute Stroke Center (TCASC) Unavailable**

7. Hospital is unable to accept an "ELVO Alert" patient due to unavailability of their Cath lab or Cath lab staff. Must state reason in the "comment section" on ReddiNet as to why the Cath lab is unavailable.

**B. PATIENT DESTINATION**

1. Internal Disaster
  - a. A hospital on diversion due to internal disaster shall not receive patients.
  - b. Base hospitals shall not direct ALS units to transport patients to any medical facility that has requested diversion of ALS patients due to an internal disaster.
2. Diversion requests will be honored provided that:
  - a. The involved ALS unit estimates that it can reach an "open" facility without compromising the patient's condition by extending the Code 3 en route time from the incident location for hospitals on diversion due to:
    - 1) ICU/CCU saturation,
    - 2) Emergency Department saturation, or
    - 3) Neuro/CT scanner limitations for appropriately selected patients.
  - b. The patient does not exhibit an uncontrollable problem in the field. An "Uncontrollable Problem" is defined as:
    - 1) Unstable vital signs
    - 2) Cardiac Arrest
    - 3) Severe Respiratory Distress
    - 4) Unstable Airway
    - 5) Profound Shock
    - 6) Status Epilepticus
    - 7) OB patient with imminent delivery
    - 8) Life threatening arrhythmia
    - 9) Any Patient that the paramedic on scene or the BH MD feels would likely deteriorate due to diversion.
3. Destination while adjacent hospitals are on diversion
  - a. If adjacent hospitals within an area grouping are on diversion for the same diversion category, patients cannot be diverted for that reason, and the patient will be transported to the closest medical facility.
  - b. Guidelines for potential diversion destination when a hospital is on diversion based on patient location and estimated transport times are as follows:

### **Hospital Groupings/Areas**

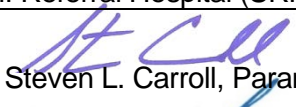

1. **Area 1 (Ojai):** Ojai Valley Community Hospital, Community Memorial Hospital, Ventura County Medical Center, Santa Paula Memorial Hospital
2. **Area 2 (Santa Paula/Fillmore):** Santa Paula Memorial Hospital, Ventura County Medical Center, Community Memorial Hospital, Ojai Valley Community Hospital
3. **Area 3 (Simi Valley):** Simi Valley Hospital, Los Robles Hospital and Medical Center, St. John's Pleasant Valley Hospital
4. **Area 4 (Thousand Oaks):** Los Robles Hospital and Medical Center, Simi Valley Hospital, St. John's Pleasant Valley Hospital
5. **Area 5 (Camarillo):** St. John's Pleasant Valley Hospital, St. John's Regional Medical Center, Los Robles Regional Medical Center, Simi Valley Hospital, Ventura County Medical Center, Community Memorial Hospital
6. **Area 6 (Oxnard):** St. John's Regional Medical Center, Ventura County Medical Center, Community Memorial Hospital, St. John's Pleasant Valley Hospital
7. **Area 7 (Ventura):** Ventura County Medical Center, Community Memorial Hospital, St. John's Regional Medical Center, Ojai Valley Community Hospital, Santa Paula Memorial Hospital.  
As needed, an MICN may divert a patient to a hospital outside of Ventura County.

4. BLS ambulances shall notify receiving hospitals of their impending arrival.
5. Notwithstanding any other provisions of this policy, and in accordance with VCEMS Policy 604, Patient Transport and Destination, final authority for patient destination rests with the Base Hospital.

### **C. PROCEDURE FOR REQUESTING DIVERSION OF ALS PATIENTS**

1. The hospital administrator or his/her designee must authorize the need for diversion.
2. To initiate, update or cancel a diversion, the Administrator or his/her designee shall make the status change via the ReddiNet system.
  - a. Hospitals on diversion status shall immediately update their status via the ReddiNet system.

- b. Problems with policy and procedure related to diversion notification will be directed to VC EMS during normal business hours or the on-call VC EMS administrator after normal business hours
    - c. Problems arising during a diversion, requiring immediate action should be directed to VC EMS during normal business hours or the on-call VC EMS administrator after normal business hours.
  - 3. VC EMS staff will perform unannounced site visits to hospitals on diversion status to ensure compliance with these guidelines.
- D. Hospitals shall develop internal policies and procedures for authorizing diversion of patients in accordance with this policy. These policies shall include internal activation of backup procedures. These policies and procedures shall be approved according to the hospital policy approval procedure and shall be available to the EMS staff for review.

COUNTY OF VENTURA HEALTH CARE AGENCY		EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES	
Policy Title: STEMI Receiving Center (SRC) Standards and STEMI Referral Hospital (SRH) Standards		Policy Number 430	
APPROVED: Administration:	 Steven L. Carroll, Paramedic	Date: July 1, 2020	
APPROVED: Medical Director:	 Daniel Shepherd, M.D.	Date: July 1, 2020	
Origination Date: July 28, 2006			
Date Revised: February 5, 2020		Effective Date: July 1, 2020	
Last Review: February 5, 2020			
Review Date: February 28, 2023			

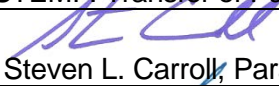

- I. PURPOSE: To define the criteria for designation as a STEMI Receiving Center in Ventura County.
- II. AUTHORITY: Health and Safety Code, Division 2.5, Sections 1798, 1798.101, 1798.105, 1798.2 and California Code of Regulations, Title 22, Section 100175, 100270.124 and 100270.125.
- III. DEFINITIONS: Refer to California Code of Regulations, Title 22, Chapter 7.1, Article 1.
- III. POLICY:
  - A. A STEMI Receiving Center (SRC), approved and designated by Ventura County EMS shall meet the following requirements:
    1. All the requirements of a Receiving Hospital in VCEMS Policy 420.
    2. All the requirements of an SRC in VCEMS Policy 440.
    3. The hospital shall have established protocols for triage, diagnosis, and Cath lab activation following field notification.
    4. The hospital shall have a single call activation system to activate the Cardiac Catheterization Team directly.
    5. Written protocols shall be in place for the identification of STEMI patients.
      - a. At a minimum, these written protocols shall be applicable in the ICU/Coronary Unit, Cath lab, and the Emergency Department.
    6. The hospital shall be available for treatment of STEMI patients 24 hours per day, 7 days a week, 365 days per year.
    7. The hospital shall have a process in place for the treatment and triage of simultaneous arriving STEMI patients.
    8. SRCs shall comply with the requirements for an annual minimum volume of procedures (25) required for designation by VCEMS.

9. The hospital shall have a STEMI program manager and a STEMI medical director.
  10. The hospital shall have job descriptions and organizational structure clarifying the relationship between the STEMI medical director, STEMI program manager, and the STEMI team.
  11. Operate a cardiac catheterization lab licensed by the Department of Health Services and approved for emergency percutaneous coronary interventions.
  12. A STEMI receiving center without cardiac surgery capability on-site shall have a written transfer plan and agreements for transfer to a facility with cardiovascular surgery capability.
  13. The hospital shall maintain daily STEMI team and Cardiac Catheterization team call rosters
  14. Have policies for patients to receive emergent angiography or emergent fibrinolysis, based on physician decisions for individual patients.
  15. The hospital shall participate in the local EMS agency quality improvement processes related to a STEMI critical care system.
  16. The hospital shall submit their data to the STEMI Registry System by the 15<sup>th</sup> of each month for the previous month patients.
  17. Will accept all ambulance-transported patients if the interpretation on the monitor meets the manufacturer guidelines for a POS STEMI ECG, except when on internal disaster or no cardiac catheterization lab is available, regardless of ICU/CCU or ED saturation status.
  18. Have policies and procedures that allow the automatic acceptance of any STEMI patient from a Ventura County Hospital upon notification by the transferring physician.
  19. The Cardiac Catheterization Team, including appropriate staff, shall be immediately available.
  20. Have policies in place for the transfer of STEMI patients.
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- B. A STEMI Referral Hospital (SRH), approved and designated by Ventura County EMS shall meet the following requirements:
1. All the requirements of a Receiving Hospital in VCEMS Policy 420.
  2. All the requirements of an SRH in VCEMS Policy 440.
  3. The hospital shall be available for treatment of STEMI patients 24 hours per day, 7 days a week, 365 days per year.
  4. Written protocols shall be in place to identify STEMI patients and provide an optimal reperfusion strategy using fibrinolytic therapy.
  5. The Emergency Department shall maintain a standardized procedure for the treatment of STEMI patients.
  6. The hospital shall have a transfer process through interfacility transfer agreements and have pre-arranged agreements with EMS ambulance providers for rapid transport of STEMI patients to an SRC.
  7. The hospital shall have a program to track and improve treatment of STEMI patients.
  8. The hospital must have a plan to work with an SRC and VCEMS on quality improvement processes.
- B. Designation
1. Application:  
Eligible hospitals shall submit a written request for SRC or SRH approval to the VC EMS, documenting the compliance of the hospital with Ventura County SRC or SRH Standards.
  2. Approval:  
SRC or SRH approval or denial shall be made in writing by VCEMS to the requesting Hospital within two weeks after receipt of the request for approval and all required documentation.
  3. VC EMS may deny, suspend, or revoke the approval of a SRC or SRH for failure to comply with any applicable policies, procedures, or regulations. Requests for review or appeal of such decisions shall be brought to the Ventura County Board of Supervisors for appropriate action.
  4. The VCEMS Medical Director may grant an exception to a portion of this policy upon substantiation of need by the PSC that compliance with the regulation would not be in the best interests of the persons served within the affected area.
  5. SRCs and SRHs shall be reviewed every three years.
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- a. SRCs or SRHs shall receive notification of evaluation from VCEMS.
- b. SRCs or SRHs shall respond in writing regarding program compliance.
- c. On-site SRC or SRH visits for evaluative purposes may occur.
- d. SRCs or SRHs shall notify VCEMS by telephone, followed by a letter or email within 48 hours, of changes in program compliance or performance.



COUNTY OF VENTURA HEALTH CARE AGENCY		EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES	
Policy Title: "Code STEMI" Transfer of Patients with STEMI for PCI		Policy Number 440	
APPROVED: Administration:	 Steven L. Carroll, Paramedic	Date: July 1, 2020	
APPROVED: Medical Director:	 Daniel Shepherd, MD	Date: July 1, 2020	
Origination Date:	July 1, 2007	Effective Date: July 1, 2020	
Date Revised:	February 5, 2020		
Last Reviewed:	February 5, 2020		
Review Date:	February 28, 2022		

- I. PURPOSE: To define the "Code STEMI" process by which patients with a STEMI are transferred to a STEMI Receiving Center (SRC) for emergency percutaneous coronary intervention (PCI).
- II. AUTHORITY: Health and Safety Code, Sections 1797.220 and 1798. California Code of Regulations, Title 22, Sections 100147, 100169, 100270.124 and 100270.125
- III. DEFINITIONS:
  - A. STEMI: ST Segment Elevation Myocardial Infarction.
  - B. STEMI Receiving Center (SRC): an acute care hospital with percutaneous coronary intervention (PCI) services that has been designated according to VC EMS Policy 430.
  - C. STEMI Referral Hospital (SRH): an acute care hospital in Ventura County that meets the requirements for a receiving hospital in VC EMS Policy 420 and has been designated according to VC EMS Policy 430.
  - D. PCI: Percutaneous Coronary Intervention.
- IV. POLICY:
  - A. STEMI Referral Hospitals will:
    1. Assemble and maintain a "STEMI Pack" in the emergency department to contain all of the following:
      - a. Checklist with phone numbers of Ventura County SRCs.
      - b. Preprinted template order sheet with recommended prior-to-transfer treatments. Treatment guidelines will be developed with input from the SRH and SRC cardiologists.
      - c. Patient Consent/Transfer Forms.
      - d. Treatment summary sheet.
      - e. Ventura County EMS Code STEMI data entry form.
    2. Have policies, procedures, and a quality improvement system in place to minimize door-to-ECG and STEMI-Dx-to-transfer times.

3. Establish policies and procedures to make personnel available to accompany the patient during the transfer to the SRC. These policies will include patient criteria for requiring an RN to accompany patient.

B. Ambulance Dispatch Center will:

1. Respond to a "Code STEMI" transfer request by immediately dispatching the closest available ALS ambulance to the requesting SRH.

C. Ambulance Companies

1. Ambulance Companies will:

- a. Respond immediately upon request for "Code STEMI" transfer.
- b. Staff all ambulances with a minimum of one paramedic who has been trained in the use of intravenous heparin and nitroglycerin drips, and the pump being used, according to VC EMS Policy 722.

2. Transports performed according to this policy are not to be considered an interfacility transport as it pertains to ambulance contract compliance.

D. STEMI Receiving Centers will:

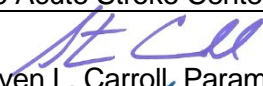

1. Maintain accurate status information on ReddiNet regarding the availability of a cardiac catheterization lab.
2. Publish a single phone number, that is answered 24/7, to receive notification of a STEMI transfer.
3. Immediately upon initial notification by a transferring physician at an SRH, accept in transfer all patients who have been diagnosed with a STEMI and who, in the judgment of the transferring physician, require urgent PCI.
4. Authorize the emergency physician on duty to confirm the acceptance in transfer of any patient with a STEMI.
5. Establish an internal communications plan that assures the immediate notification of all necessary individuals, including the cardiac catheterization services staff and on-call interventional cardiologist, of the transfer.
6. Adopt procedures to make an ICU/CCU bed available or to make alternate arrangements for post-PCI care.

V. PROCEDURE:

A. Upon diagnosis of STEMI, and after discussion with the patient, the SRH will:

1. Determine availability of the SRC by checking ReddiNet.
  2. Immediately call the Ventura County Fire Communication Center at 805-384-1500 for an ambulance.
-

3. Identify their facility to the dispatcher and advise they have a Code STEMI transfer to [SRC].
  4. After calling for ambulance, the SRH transferring physician will notify the SRC emergency physician of the transfer.
  5. Perform all indicated diagnostic tests and treatments.
  6. Complete transfer consent, treatment summary, and Code STEMI data forms.
  7. Include copies of the ED face sheet and demographic information.
  8. Arrange for one or more healthcare staff, as determined by the clinical status of the patient, to accompany the patient to the SRC.
    - a. If, because of unusual and unanticipated circumstances, no healthcare staff is available for transfer, the SRH may contact the responding ambulance company to make a paramedic or EMT available.
    - b. If neither the SRH or ambulance company has available personnel, a CCT transfer may be requested.
  9. Contact SRC for nurse report at the time of, or immediately after, the ambulance departs.
- B. Upon request for “Code STEMI” transfer, the dispatch center will dispatch the closest ALS ambulance and verbalize “MEDxxx Code STEMI from [SRH]”. The SRC 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 SRH will advise the responding ambulance personnel of the SRC.
- C. Upon notification, the ambulance will respond Code (lights and siren) and the ambulance personnel will notify their ambulance company supervisor of the “Code STEMI” 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. Any diagnostic test results may be relayed to the SRC at a later time.
  3. Intravenous drips may be discontinued or remain on the ED pump.
  4. Ambulance personnel will place defibrillation pads on the patient.
- F. Upon notification, the SRC will notify the interventional cardiologist and cardiac catheterization staff, who will respond immediately and prepare for the PCI procedure.
- G. The SRH and SRC shall review all STEMI 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 STEMI CQI Committee.
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COUNTY OF VENTURA HEALTH CARE AGENCY		EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES	
Policy Title: Thrombectomy Capable Acute Stroke Center (TCASC) Standards		Policy Number 452	
APPROVED: Administration:	 Steven L. Carroll, Paramedic	Date: July 1, 2020	
APPROVED: Medical Director:	 Daniel Shepherd, MD	Date: July 1, 2020	
Origination Date:	July 26, 2017		
Date Revised:	December 11, 2019	Effective Date: July 1, 2020	
Last Review:	December 11, 2019		
Review Date:	December 31, 2022		

- I. PURPOSE: To define the criteria for designation as a Thrombectomy Capable Acute Stroke Center (TCASC) in Ventura County.
- II. AUTHORITY: California Health and Safety Code, Sections 1797.114, 1797.220, 1798, 1798.2, 1798.101, and California Code of Regulations, Title 22, Section 100147 and 100169.
- III. DEFINITIONS:
  - Acute Stroke Center (ASC):** Hospital designated as an Acute Stroke Center, as defined in VCEMS Policy 450.
  - ELVO Alert:** A pre-arrival notification by pre-hospital personnel to the base hospital that a patient is suffering a possible Emergent Large Vessel Occlusion (ELVO) ischemic stroke.
  - Thrombectomy Capable Acute Stroke Center: (TCASC)** Acute Stroke Center (ASC) that has the capability to perform neuroendovascular procedures for acute stroke including thrombectomy and intra-arterial thrombolysis.
- IV. POLICY:
  - A. A Thrombectomy Capable Acute Stroke Center (TCASC), approved and designated by Ventura County EMS (VC EMS), shall meet the following requirements:
    1. All the requirements of an Acute Stroke Center (ASC) as defined in Policy 450.
    2. Certified as a Thrombectomy-Capable Stroke Center (TSC) by The Joint Commission or a Primary Plus by Det Norske Veritas, or a

Comprehensive Stroke Center (CSC) by either The Joint Commission or Det Norske Veritas

3. Neurointerventionist on call 24/7 and available on-site at TCASC within 45 minutes of notification of an ELVO alert.
  4. Neurosurgeon on call 24/7 and available to provide care as indicated.
  5. Neurologist, with hospital privileges to provide ICU level of care for acute stroke patients, on call 24/7 and available to provide care as indicated.
  6. An individual Neurointerventionist or Neurosurgeon may not be simultaneously on call for a separate hospital.
  7. Appropriate endovascular catheterization laboratory personnel available on-site within 45 minutes of notification of an ELVO alert
  8. Will create policies and procedures detailing how the TCASC will notify the appropriate personnel of an ELVO alert.
  9. Will accept all ELVO alert patients, regardless of ICU or ED saturation status, except in the event of internal disaster or no catheterization laboratory availability.
  10. Will create policies and procedures detailing how the TCASC will manage the presentation of concurrent ELVO alerts.
  11. Will create policies and procedures detailing how the TCASC plans to manage competing demands on the procedure suite (staffing, other cardiovascular procedures).
  12. Will create policies and procedures that allow the automatic acceptance of any ELVO patient from a Ventura County Hospital upon notification by the transferring physician.
  13. Ability to perform endovascular procedures as indicated for emergent large vessel occlusions.
  14. Have CT or MRI perfusion capabilities.
  15. Maintain appropriate staff and facility availability to address complications of emergent endovascular procedures.
  16. Will participate in the Ventura County Stroke Registry in accordance with policy 450.
-

B. Designation Process:

1. Application:  
Eligible hospitals shall submit a written request for TCASC designation to VC EMS no later than 30 days prior to the desired date of designation, documenting the compliance of the hospital with Ventura County TCASC Standards.
  2. Approval:
    - a. Upon receiving a written request for TCASC designation, VC EMS will arrange an on-site survey of the requesting hospital to assure compliance with stated requirements.
    - b. TCASC approval or denial shall be made in writing by VC EMS to the requesting hospital within two weeks after receipt of the request for approval and all required documentation and completion of the VC EMS site survey.
    - c. Certification as a TSC or Primary Plus, or a CSC by The Joint Commission or Det Norske Veritas shall occur no later than six months following designation as a TCASC by VC EMS.
  3. VCEMS may deny, suspend, or revoke the designation of an TCASC for failure to comply with any applicable policies, procedures, or regulations. Requests for review or appeal of such decisions shall be brought to the Ventura County Board of Supervisors for appropriate action.
  4. The VC EMS Medical Director may grant an exception to a portion of this policy upon substantiation of need by the TCASC that compliance with the regulation would not be in the best interests of the persons served within the affected area.
  5. TCASCs shall be reviewed on a biannual basis.
    - a. TCASCs shall receive notification of evaluation from the VCEMS.
    - b. TCASCs shall respond in writing regarding program compliance.
    - c. On-site TCASC visits for evaluative purposes may occur.
    - d. TCASCs shall notify VCEMS by telephone, followed by a letter or email within 48 hours, of changes in program compliance or performance.
-

C. Provisional Designation Process

VC EMS may grant provisional designation as a TCASC to a requesting hospital that has satisfied the requirements of a TCASC as outlined in section A of this policy but has yet to receive certification by an approving body. Only when the following requirements are satisfied will VC EMS grant a provisional designation:

1. Application:

Eligible hospitals shall submit a written request for provisional TCASC designation to VC EMS no later than 30 days prior to the desired date of provisional designation, documenting the compliance of the hospital with Ventura County TCASC Standards.

2. Provisional Approval:

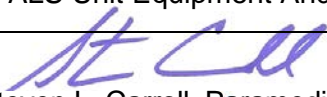

a. Upon receiving a written request for provisional TCASC designation, VC EMS will arrange an on-site survey of the requesting hospital to assure compliance with stated requirements.

b. Provisional TCASC approval or denial shall be made in writing by VC EMS to the requesting hospital within two weeks after receipt of the request for approval and all required documentation, as well as completion of the VC EMS site survey.

c. Certification as a Thrombectomy-capable Stroke Center, Primary Plus or Comprehensive Stroke Center by The Joint Commission or Det Norske Veritas shall occur no later than six months following provisional designation as an TCASC by VC EMS.

3. VC EMS may deny, suspend, or revoke the designation of an TCASC for failure to comply with any applicable policies, procedures, or regulations. Requests for review or appeal of such decisions shall be brought to the Ventura County Board of Supervisors for appropriate action.

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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: July 1, 2020	
APPROVED: Medical Director	 Daniel Shepherd, MD	Date: July 1, 2020	
Origination Date:	May 24, 1987	Effective Date: July 1, 2020	
Date Revised:	January 16, 2020		
Last Reviewed:	January 16, 2020		
Review Date:	January 31, 2021		

- 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 (see attached Equipment/Medication Waiver Request form) from the VCEMS Medical Director. Mitigation attempts should be documented in the comment section on the waiver request form, such as what vendors were contacted, etc.





	ALS / BLS Unit Minimum Amount	PSV/CCT Minimum Amount	FR/ALS Minimum Amount	Search and Rescue Minimum Amounts
<b>A. ALL BLS AND ALS RESPONSE AND/OR TRANSPORT UNITS</b>				
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 <i>(optional for non-911 BLS units)</i>	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  <ul style="list-style-type: none"> <li>• 4"x4" sterile compresses or equivalent</li> <li>• 2",3",4" or 6" roller bandages</li> <li>• 10"x 30" or larger dressing</li> </ul>	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, 5 mL, and 10 mL syringes with IM needles	4	4	4	4
Automated External Defibrillator (if not equipped with ALS monitor/defibrillator)	1	1	1	1
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
<b>OPTIONAL EQUIPMENT</b>				
Occlusive dressing or chest seal				
Hemostatic gauze per EMSA guidelines				
<b>B. TRANSPORT UNIT REQUIREMENTS</b>				
Ambulance cot and collapsible stretcher; or two stretchers, one of which is collapsible.	1	0	0	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

	ALS / BLS Unit Minimum Amount	PSV/CCT Minimum Amount	FR/ALS Minimum Amount	Search and Rescue Minimum Amounts
<b>C. ALS UNIT REQUIREMENTS</b>				
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 <sub>2</sub> monitor	1	1	1	1
Colorimetric CO <sub>2</sub> 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 6.0, 6.5, 7.0, 7.5, 8.0 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, 100 ml • Normal saline solution, 500 ml • Normal saline solution, 1000 ml	2 2 6	1 1 2	1 1 4	$\frac{1}{1}$ 1 3
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	1 set	1 set	1 set	1 set
Curved blade #2, 3, 4 Straight blade #1, 2, 3	1 each 1 each	1 each 1 each	1 each 1 each	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 <sub>2</sub> Monitor (If not attached to cardiac monitor)	1	1	1	1
<b>OPTIONAL ALS EQUIPMENT (No minimums apply)</b>				
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
<b>D. MEDICATION, MINIMUM AMOUNT</b>					
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, OR		2	1	2	1
• 10% 250 ml, OR		5	2	2	2
• 25% 2.5 GM 10ml, OR		1	1	1	1
• 50%, 25 GM/50		2	1	2	1
Epinephrine					
• Epinephrine , 1mg/ml					
• 1 mL ampule / vial, OR	2	5	5	5	5
• 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
Fentanyl, 50 mcg/mL		2	2	2	2
Glucagon, 1 mg/ml		2	1	2	1
Lidocaine, 100 mg/5ml		2	2	2	2
Magnesium sulfate, 1 gm per 2 ml		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
Morphine sulfate, 10 mg/ml (Only required during a Fentanyl shortage)		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)	2	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
Ondansetron (Zofran)					
• 4 mg IV single use vial		4	4	4	4
• 4 mg oral		4	4	4	4
Sodium Bicarbonate, 1 mEq/mL		2	1	1	1
Tranexamic Acid (TXA) 1 gm/10 mL		2	1	1	1

COUNTY OF VENTURA HEALTH CARE AGENCY		EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES	
Policy Title: Transport and Destination Guidelines		Policy Number 604	
APPROVED: Administration:	 Steven L. Carroll, Paramedic	Date: July 1, 2020	
APPROVED: Medical Director:	 Daniel Shepherd, M.D.	Date: July 1, 2020	
Origination Date:	June 3, 1986	Effective Date: July 1, 2020	
Date Revised:	March 12, 2020		
Date Last Reviewed:	March 12, 2020		
Review Date:	March 31, 2022		

- I. **PURPOSE:** To establish guidelines for determining appropriate patient destination, so that to the fullest extent possible, individual patients receive appropriate medical care while protecting the interests of the community at large by optimizing use and availability of emergency medical care resources.
- II. **AUTHORITY:** Health and Safety Code, Section 1317, 1797.106(b), 1797.220, and 1798 California Code of Regulations, Title 13, Section 1105(c) and Title 22, Section 100147.
- III. **POLICY:** In the absence of decisive factors to the contrary, patients shall be transported to the most accessible medical facility equipped, staffed, and prepared to receive emergency cases and administer emergency medical care appropriate to the needs of the patients.
- IV. **PROCEDURE:**
  - A. Hospitals unable to accept patients due to an internal disaster shall be considered NOT "prepared to receive emergency cases".
  - B. In determining the most accessible facility, transport personnel shall take into consideration traffic obstruction, weather conditions or other factors which might affect transport time.
  - C. **Most Accessible Facility**  
The most accessible facility shall ordinarily be the nearest hospital emergency department, except for:
    1. **Base Hospital Direction for ALS patients**
      - a. Upon establishment of voice communication, the Base Hospital is responsible for patient management until the patient reaches a hospital and medical care is assumed by the receiving hospital. Paramedics will continue to follow their ALS Standing Orders

- b. The Base Hospital may direct that the patient be transported to a more distant hospital which in the judgment of the BH physician or MICN is more appropriate to the medical needs of the patient.
      - c. Patients may be diverted in accordance with Policy 402.
    - 2. Patients transported in BLS ambulances demonstrating conditions requiring urgent ALS care (e.g., unstable vital signs, chest pain, shortness of breath, airway obstruction, acute unconsciousness, OB patient with contractions), shall be transported to the nearest hospital emergency department prepared to receive emergency cases.
- D. "Decisive Factors to the Contrary"  
Decisive factors to the contrary for BLS or ALS patients include, but are not limited to, the following:
  - 1. Prepaid Health Plans
    - a. EMS personnel shall not request information on insurance or delay transport or treatment while determining insurance status.
    - b. A member of a group practice prepayment health care service who volunteers such information and requests a specific facility may be transported according to that plan when the ambulance personnel or the Base Hospital determines that the condition of the member permits such transport. Therefore when the Base Hospital contact is made the Base Hospital must always be notified of the patient's request.
    - c. However, when the on duty supervisor determines that such transport would unreasonably remove the ambulance unit from the service area, the member may be transported to the nearest hospital capable of treating the member.
  - 2. Patient Requests
    - a. When a person or his/her legally authorized representative requests emergency transportation to a hospital other than the most accessible emergency department, which may include out of the county, the request should be honored when ambulance personnel, BH physician or MICN determines that the condition of the patient permits such transport. Therefore when the Base

Hospital contact is made the Base Hospital must always be notified of the patient's request.

- b. When it is determined by the on duty supervisor that such transport would unreasonably remove the ambulance unit from the service area, the patient may be transported to the nearest hospital capable of treating him/her.

3. Private Physician's Requests

When a treating physician requests emergency transportation to a hospital other than the most accessible acute care hospital, which may include out of the county, the request should be honored unless it is determined by the on duty supervisor that such transport would unreasonably remove the ambulance from the service area. In such cases:

- a. If the treating physician is immediately available, ambulance personnel shall confer with the physician regarding a mutually agreed upon destination.
- b. If the treating physician is not immediately available, the patient should be transported to the nearest hospital capable of treating him/her.
- c. If Base Hospital contact has been made due to the condition of the patient and the immediate unavailability of the treating physician, and the BH physician or MICN determines that the condition of the patient permits or does not permit such transport, BH directions shall be followed. If communication with the treating physician is possible, the BH should consult with the physician.

4. Physician on Scene per VC EMS Policy 703

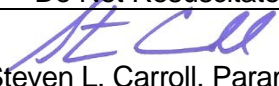

When a bystander identifies him/herself as a physician and offers assistance on scene, VC EMS Policy 702 shall be followed.

5. Direct Admits

When a patient's physician has arranged direct admission to a hospital, the patient should be transported to that hospital regardless of Emergency Department diversion status unless the Base Hospital determines that the patient's condition requires that s/he be transported to a more appropriate facility.

- E. “Medical facilities equipped, staffed and prepared to administer care appropriate to needs of the patients.”
1. Paramedics treating patients that meet trauma criteria Steps 1-3 in VCEMS Policy 1405 will make Base Hospital contact with a designated Trauma Center. The Trauma Center MICN or ED physician will direct the patient to either the Trauma Center or a non-trauma hospital.
  2. Patients who meet STEMI criteria in VC EMS Policy 726 will be transported to a STEMI Receiving Center.
  3. Patients who are treated for cardiac arrest and achieve sustained return of spontaneous circulation (ROSC) will be transported to a STEMI Receiving Center.
  4. Patients who meet Stroke criteria in VC EMS Policy 451 will be transported to an Acute Stroke Center.



COUNTY OF VENTURA HEALTH CARE AGENCY		EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES	
Policy Title: Do Not Resuscitate		Policy Number 613	
APPROVED: Administration:	 Steven L. Carroll, Paramedic	Date: July 1, 2020	
APPROVED: Medical Director:	 Daniel Shepherd, M.D.	Date: July 1, 2020	
Origination Date:	October 1, 1993	Effective Date: July 1, 2020	
Date Revised:	October 13, 2016		
Date Last Reviewed:	March 12, 2020		
Review Date:	March 31, 2022		

- I. PURPOSE: To establish criteria for a Do Not Resuscitate (DNR) Order, and to permit Emergency Medical Services personnel to withhold resuscitative measures from patients in accordance with their wishes.
- II. AUTHORITY: California Health and Safety Code, Sections 1797.220, 1798 and 7186 and Division 1, Part 1.85 (End of Life Option Act).  
California Probate Code, Division 4.7 (Health Care Decisions Law).  
California Code of Regulations, Title 22, Section 100170.
- III. DEFINITIONS:
  - A. "EMS Personnel": All EMTs, paramedics and RNs caring for prehospital or interfacility transfer patients as part of the Ventura County EMS system.
  - B. "Resuscitation": Medical interventions whose purpose is to restore cardiac or respiratory activity, and which are listed below:
    1. External cardiac compression (chest compressions).
    2. Defibrillation.\*
    3. Tracheal Intubation or other advanced airway.\*
    4. Assisted Ventilation for apneic patient.\*
    5. Administration of cardiotoxic medications.\*
  - C. "DNR Medallion": A permanently imprinted insignia, worn by a patient that has been manufactured and distributed by an organization approved by the California Emergency Medical Services Authority.
  - D. "DNR Order": An order to withhold resuscitation. A DNR Order shall be considered operative under any of the following circumstances. If there is a conflict between two DNR orders the one with the most recent date will be honored.

\* - Defibrillation, advanced airway, assisted ventilation, and cardiotoxic medications may be permitted in certain patients using a POLST form. Refer to VCEMS Policy 625.

1. A fully executed original or photocopy of the “Emergency Medical Services Prehospital DNR Form” has been read and reviewed on scene;
  2. The patient is wearing a DNR Medallion;
  3. A fully executed California Durable Power of Attorney For Health Care (DPAHC) form is seen, a health care agent designated therein is present, and that agent requests that resuscitation not be done;
  4. A fully executed Natural Death Act Declaration has been read and reviewed on scene;
  5. A fully executed California Advance Health Care Directive (AHCD) has been read and reviewed on scene and:
    - a. a health care agent designated therein is present, and that agent requests that resuscitation not be done, or
    - b. there are written instructions in the AHCD stating that the patient does not wish resuscitation to be attempted;
  6. A completed and signed Physician Orders for Life-Sustaining Treatment (POLST) form has been read and reviewed on scene, and in Section A, “Do Not Attempt Resuscitation/DNR” is selected;
  7. A fully executed Final Attestation Form, or;
  8. For patients who are in a licensed health care facility, or who are being transferred between licensed health care facilities, a written document in the patient’s permanent medical record containing the statement “Do Not Resuscitate”, “No Code”, or “No CPR,” has been seen. A witness from the health care facility must verbally document the authenticity of this document.
- E. “California Advance Health Care Directive (AHCD)”. As defined in California Probate Code, Sections 4600-4805.
- F. “California Durable Power of Attorney for Health Care (DPAHC)”: As defined in California Civil Code, Sections 2410-2444.
- G. “Natural Death Act Declaration”: As defined in the Natural Death Act of California, Health and Safety Code, Sections 7185-7195.
- H. “Physician Orders for Life-Sustaining Treatment (POLST)”. As defined in California Probate Code, Division 4.7 (Health Care Decisions Law).

- I. "Final Attestation Form": As defined in the End of Life Option Act, California Health and Safety Code Section 443.11.
  - J. Comfort measures: Medical interventions used to provide and promote patient comfort. Comfort measures applicable to the End of Life Option Act may include airway positioning and suctioning.
- IV. PROCEDURE:
- A. All patients require an immediate medical evaluation.
  - B. Correct identification of the patient is crucial in this process. If not wearing a DNR Medallion, the patient must be positively identified as the person named in the DNR Order. This will normally require either the presence of a witness or an identification band.
  - C. When a DNR Order is operative:
    - 1. If the patient has no palpable pulse and is apneic, resuscitation shall be withheld or discontinued.
    - 2. The patient is to receive full treatment other than resuscitation (e.g., for airway obstruction, pain, dyspnea, hemorrhage, etc.).
    - 3. If the patient is taking high doses of opioid medication and has decreased respiratory drive, early base hospital contact should be made before administering naloxone. If base hospital contact cannot be made, naloxone should be administered sparingly, in doses no more than 0.1 mg every 2-3 minutes.
    - 4. If transport has been initiated, continue transporting the patient to the appropriate receiving facility and transfer care to emergency department staff.
      - a. If transport has not been initiated, but personnel are still on scene, patient should be left at scene, if not in a sensitive location (place of business, public place, etc.). The situation should be explained to the family or staff at the scene.
  - D. A DNR Order shall be considered null and void under any of the following circumstances:
    - 1. The patient is conscious and states that he or she wishes resuscitation.
    - 2. In unusual cases where the validity of the request has been questioned (e.g., a family member disputes the DNR, the identity of

the patient is in question, etc.), EMS prehospital personnel may temporarily disregard the DNR request and institute resuscitative measures while consulting the BH for assistance. Discussion with the family member, with explanation, reassurance, and emotional support may clarify any questions leading to validity of a DNR form.

**The underlying principle is that the patient's wishes should be respected.**

3. There is question as to the validity of the DNR Order.  
Should any of these circumstances occur, appropriate treatment should continue or immediately commence, including resuscitation if necessary. Base Hospital contact should be made when appropriate.
- E. Other advanced directives, such as informal "living wills" or written instructions without an agent in the California Durable Power of Attorney for Health Care, may be encountered. Should any of these occur, appropriate treatment will continue or immediately commence, including resuscitation if necessary. Base Hospital contact will be made as soon as practical.
- F. In case of cardiac arrest, if a DNR Order is operative, Base Hospital contact is not required and resuscitation should not be done. Immediate base hospital contact is strongly encouraged should there be any questions regarding any aspect of the care of the patient.
- G. If a DPAHC or AHCD agent requests that resuscitation not be done, the EMT shall inform the agent of the consequences of the request.
- H. DNR in a Public Place  
Persons in cardiac arrest with an operative DNR Order should not be transported. The Medical Examiner's office should be notified by law enforcement or EMS personnel. If possible, an EMS representative should remain on scene until a representative from law enforcement or the Medical Examiner's office arrives.
- I. For End-of-Life Option Act:
  1. The patient may at any time withdraw or rescind his or her request for an aid-in-dying drug regardless of the patient's mental state. In this instance, EMS personnel will provide medical care as per standard protocols and contact base hospital.

2. Family member(s) or significant other(s) may be at the scene of a patient who has self-administered an aid-in-dying drug. If there is objection to the End of Life Option Act:
  - a. BLS personnel will provide BLS airway management and bag-mask ventilation as needed until ALS arrives.
  - b. ALS personnel will provide BLS airway management and bag-mask ventilation as needed, or instruct BLS personnel to continue, and consult the base hospital physician.

V. DOCUMENTATION:

For all cases in which a patient has been treated under a DNR Order, the following documentation is required in the Ventura County Electronic Patient Care Report (VCePCR):

- A. Name of patient's physician signing the DNR Order.
- B. Type of DNR Order (DNR Medallion, Prehospital DNR Form, POLST Form, written order in a licensed health care facility, DPAHC, Natural Death Act Declaration, Final Attestation Form).
- D. For all cases which occur within a licensed health care facility, in addition to above, if the DNR Order was established by a written order in the patient's medical record, the name of the physician signing and the witness to that order.
- E. If resuscitation is not done because of the request of a healthcare agent designated in a DPAHC or AHCD, document the agent's name in the VCePCR narrative.

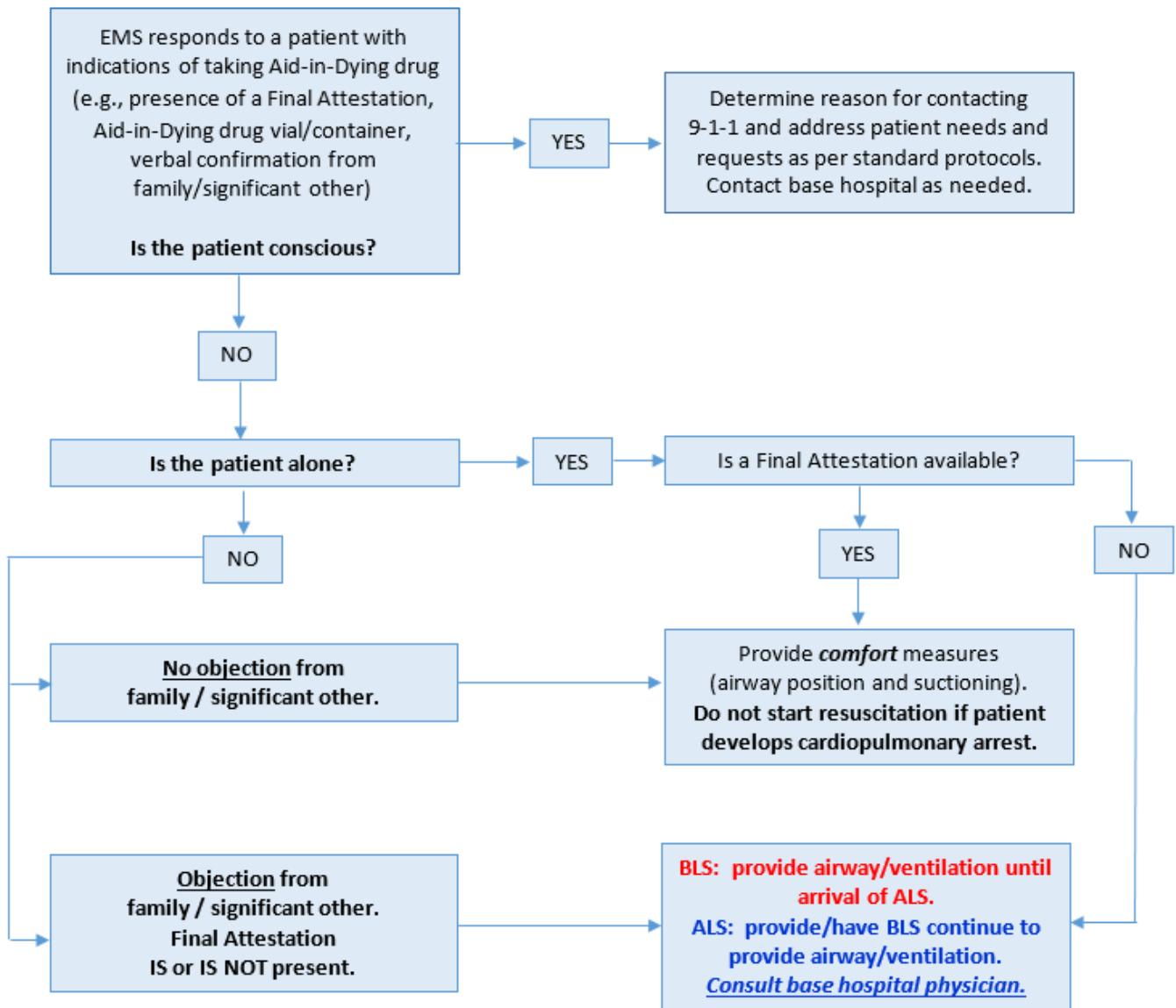
Appendix 1: Algorithm, Aid-in-Dying



**Appendix 1**  
**Ventura County EMS Policy 613, "Do Not Resuscitate (DNR)"**

**For End of Life Options Act only:**

***Patient has taken Aid-in-Dying drug, is NOT in cardiopulmonary arrest***



<b>Bites and Stings</b>	
<b>BLS Procedures</b>	
<p><u>Animal/insect bites:</u></p> <ul style="list-style-type: none"><li>• Flush site with sterile water</li><li>• Control bleeding</li><li>• Apply bandage</li></ul> <p><u>Snake bites/envenomation:</u></p> <ul style="list-style-type: none"><li>• Mark the edge of the wound ASAP and then every 10-15 minutes</li><li>• Remove rings and constrictions</li><li>• Immobilize the affected part in an <b>elevated</b> position</li><li>• Avoid excessive activity</li></ul> <p><u>Bee stings:</u></p> <ul style="list-style-type: none"><li>• If present, quickly remove stinger</li><li>• Apply ice pack</li></ul> <p><u>Jellyfish stings:</u></p> <ul style="list-style-type: none"><li>• Rinse thoroughly with normal saline<ul style="list-style-type: none"><li>○ <b>DO NOT:</b><ul style="list-style-type: none"><li>• Rinse with fresh water</li><li>• Rub with wet sand</li><li>• Apply heat</li></ul></li></ul></li></ul> <p><u>All other marine animal stings:</u></p> <ul style="list-style-type: none"><li>• If present, remove barb</li><li>• Immerse in hot water if available</li></ul> <p>Administer oxygen as indicated</p> <p>All bites other than snake bites may be treated as a BLS call</p>	
<b>ALS Standing Orders</b>	
IV access for snake bites	
Monitor for allergic reaction or anaphylaxis	
<b>Pain Control</b> – per Policy 705.19	
<b>Base Hospital Orders Only</b>	
Consult with ED Physician for further treatment measures	

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VCEMS Medical Director

<b>Burns</b>	
<b>ADULT</b>	<b>PEDIATRIC</b>
<b>BLS Procedures</b>	
<ul style="list-style-type: none"> <li>• Stop the burning process                             <ul style="list-style-type: none"> <li>○ Thermal                                     <ul style="list-style-type: none"> <li>▪ Put out fire using water or some other non-hazardous, non-flammable liquid. Fire extinguisher may be used.</li> </ul> </li> <li>○ Liquid Chemical                                     <ul style="list-style-type: none"> <li>▪ Flush area with water.</li> </ul> </li> <li>○ Powdered Chemical                                     <ul style="list-style-type: none"> <li>▪ Brush off as much as possible prior to flushing area with copious amounts of water.</li> </ul> </li> <li>○ Electrical                                     <ul style="list-style-type: none"> <li>▪ Turn off power source and safely remove victim from hazard area.</li> </ul> </li> </ul> </li> <li>• Remove rings, constrictive clothing and garments made of synthetic material</li> <li>• Assess for chemical, thermal, electrical, or radiation burns and treat accordingly</li> <li>• If less than 10% Total Body Surface Area (TBSA) is burned, cool with saline dressings.</li> <li>• For TBSA greater than 10%, cover burned area with dry sterile dressings first, followed by a clean dry sheet.</li> <li>• Once area is cooled, remove saline dressings and cover with dry, sterile burn sheets</li> <li>• Elevate burned extremities if possible</li> <li>• Maintain body heat at all times</li> <li>• Administer oxygen as indicated</li> </ul>	
<b>ALS Standing Orders</b>	
<p>IV/IO access <b>Pain Control</b> – per Policy 705.19</p> <p>If TBSA greater than 10% or hypotension is present:</p> <ul style="list-style-type: none"> <li>• <b>Normal Saline</b> <ul style="list-style-type: none"> <li>○ IV/IO bolus – 1 Liter</li> </ul> </li> </ul>	<p>IV/IO access <b>Pain Control</b> – per Policy 705.19</p> <p>If TBSA greater than 10% or hypotension is present:</p> <ul style="list-style-type: none"> <li>• <b>Normal Saline</b> <ul style="list-style-type: none"> <li>○ IV/IO bolus – 20 mL/kg</li> </ul> </li> </ul>
<b>Base Hospital Orders Only</b>	
<p>Consult with ED Physician for further treatment measures</p>	
<p>Additional Information</p> <ul style="list-style-type: none"> <li>• Hypothermia is a concern in patients with large body surface area burns. As moist dressings increase the risk of hypothermia, Morphine Sulfate is the preferred method of pain control in these patients.</li> </ul>	



<b>Cardiac Arrest – Asystole/Pulseless Electrical Activity (PEA)</b>	
<b>ADULT</b>	<b>PEDIATRIC</b>
<b>BLS Procedures</b>	
Initiate Cardiac Arrest Management (CAM) Protocol Airway management per VCEMS policy	
<b>ALS Standing Orders</b>	
<p><b>Assess for and treat underlying cause</b></p> <p><b>IV/IO access</b></p> <ul style="list-style-type: none"> <li>• PRESTO Blood Draw</li> </ul> <p><b>Epinephrine* 0.1 mg/mL</b></p> <p><b>Administer ASAP goal ≤6 minutes</b></p> <ul style="list-style-type: none"> <li>• IV/IO 1 mg (10 mL) q 6 min</li> <li>• Repeat x 2, max of 3 doses during initial arrest.</li> <li>• If ROSC then re-arrest an additional 3 doses may be administered.</li> </ul> <p><b>Normal Saline</b></p> <ul style="list-style-type: none"> <li>• IV/IO bolus- 1 Liter</li> </ul> <p><b>ALS Airway Management</b></p> <ul style="list-style-type: none"> <li>• If unable to ventilate by BLS measures, initiate appropriate advanced airway procedures in accordance with policy 710.</li> </ul> <p><b>When one of the following is a suspected cause of arrest:</b> History of Renal Failure/Dialysis</p> <ul style="list-style-type: none"> <li>• <b>Calcium Chloride</b> <ul style="list-style-type: none"> <li>○ IV/IO – 1 g</li> <li>○ Repeat x 1 in 10 min</li> </ul> </li> <li>• <b>Sodium Bicarbonate</b> <ul style="list-style-type: none"> <li>○ IV/IO – 1 mEq/kg</li> <li>○ Repeat x 2 0.5 mEq/kg q 5 min</li> </ul> </li> </ul> <p>Tricyclic Antidepressant Overdose</p> <ul style="list-style-type: none"> <li>• <b>Sodium Bicarbonate</b> <ul style="list-style-type: none"> <li>○ IV/IO – 1 mEq/kg</li> <li>○ Repeat x 2 0.5 mEq/kg q 5 min</li> </ul> </li> </ul> <p>Beta Blocker Overdose</p> <ul style="list-style-type: none"> <li>• <b>Glucagon</b> <ul style="list-style-type: none"> <li>○ IV/IO – 2 mg up to 10 mg when available</li> </ul> </li> </ul> <p>Calcium Channel Blocker Overdose</p> <ul style="list-style-type: none"> <li>• <b>Calcium Chloride</b> <ul style="list-style-type: none"> <li>○ IV/IO – 1 g</li> <li>○ Repeat x 1 in 10 min</li> </ul> </li> <li>• <b>Glucagon</b> <ul style="list-style-type: none"> <li>○ IV/IO – 2 mg up to 10 mg when available</li> </ul> </li> </ul>	<p><b>Assess for and treat underlying cause</b></p> <p><b>IV/IO access</b></p> <ul style="list-style-type: none"> <li>• PRESTO Blood Draw</li> </ul> <p><b>Epinephrine* 0.1mg/mL</b></p> <p><b>Administer ASAP goal ≤6 minutes</b></p> <ul style="list-style-type: none"> <li>• IV/IO 0.01mg/kg (0.1 mL/kg) q 6 min</li> <li>• Repeat x 2, max of 3 dose during initial arrest.</li> <li>• If ROSC then re-arrest an additional 3 doses may be administered.</li> </ul> <p><b>Normal Saline</b></p> <ul style="list-style-type: none"> <li>• IV/IO bolus- 20 mL/kg</li> </ul> <p><b>ALS Airway Management</b></p> <ul style="list-style-type: none"> <li>• If unable to ventilate by BLS measures, initiate appropriate advanced airway procedures in accordance with policy 710.</li> </ul> <p><b>When one of the following is a suspected cause of arrest:</b> History of Renal Failure/Dialysis</p> <ul style="list-style-type: none"> <li>• <b>Calcium Chloride</b> <ul style="list-style-type: none"> <li>○ IV/IO – 20 mg/kg</li> <li>○ Repeat x 1 in 10 min</li> </ul> </li> <li>• <b>Sodium Bicarbonate</b> <ul style="list-style-type: none"> <li>○ IV/IO – 1 mEq/kg</li> <li>○ Repeat x 2 0.5 mEq/kg q 5 min</li> </ul> </li> </ul> <p>Tricyclic Antidepressant Overdose</p> <ul style="list-style-type: none"> <li>• <b>Sodium Bicarbonate</b> <ul style="list-style-type: none"> <li>○ IV/IO – 1 mEq/kg</li> <li>○ Repeat x 2 0.5 mEq/kg q 5 min</li> </ul> </li> </ul> <p>Beta Blocker Overdose</p> <ul style="list-style-type: none"> <li>• <b>Glucagon</b> <ul style="list-style-type: none"> <li>○ IV/IO – 0.1 mg/kg up to 10 mg when available</li> </ul> </li> </ul> <p>Calcium Channel Blocker Overdose</p> <ul style="list-style-type: none"> <li>• <b>Calcium Chloride</b> <ul style="list-style-type: none"> <li>○ IV/IO – 20 mg/kg</li> <li>○ Repeat x 1 in 10 min</li> </ul> </li> <li>• <b>Glucagon</b> <ul style="list-style-type: none"> <li>○ IV/IO – 0.1 mg/kg up to 10 mg when available</li> </ul> </li> </ul>
<b>Base Hospital Orders Only</b>	
<b>*Consult with ED Physician for further treatment measures</b>	
<p>Additional Information:</p> <ul style="list-style-type: none"> <li>• If sustained ROSC (&gt; 30 seconds), activate VF/VT alarm and initiate post arrest resuscitation as outlined in Policy 733: Cardiac Arrest management and Post Arrest Resuscitation.</li> <li>• For termination of resuscitation, transport decisions, and use of base hospital consult reference Policy 733: Cardiac Arrest Management and Post Arrest Resuscitation.</li> <li>• If patient is <b>hypothermic</b> – only ONE round of medication administration prior to Base Hospital contact. Field determination of death is discouraged in these patients and they should be transported to the most accessible receiving facility.</li> </ul>	

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VCEMS Medical Director

<b>Cardiac Arrest – VF/VT</b>	
<b>ADULT</b>	<b>PEDIATRIC</b>
<b>BLS Procedures</b>	
Initiate Cardiac Arrest Management (CAM) Protocol Airway management per VCEMS policy	
<b>ALS Standing Orders</b>	
<p><b>Defibrillate</b></p> <ul style="list-style-type: none"> <li>Use the biphasic energy settings that have been approved by service provider medical director</li> <li>Repeat every 2 minutes as indicated.</li> <li>If VF/VT stops then recurs use last successful Joules setting.</li> </ul> <p><b>IV or IO access</b></p> <ul style="list-style-type: none"> <li>PRESTO Blood Draw</li> </ul> <p><b>Epinephrine* 0.1 mg/mL</b> <b>Administer ASAP goal ≤6 minutes</b></p> <ul style="list-style-type: none"> <li>IV/IO –1 mg (10 mL) q 6min</li> <li>Repeat x 2 for max of 3 doses during initial arrest.</li> <li>If ROSC then re-arrest an additional 3 doses may be administered.</li> </ul> <p><b>Amiodarone</b></p> <ul style="list-style-type: none"> <li>IV/IO – 300 mg – after second defibrillation</li> <li>If VT/VF persists, 150 mg IV/IO in 3-5 minutes</li> </ul> <p><b>Normal Saline</b></p> <ul style="list-style-type: none"> <li>IV/IO bolus 1 Liter</li> </ul> <p><b>ALS Airway Management</b></p> <ul style="list-style-type: none"> <li>If unable to ventilate by BLS measures, initiate appropriate advanced airway procedures in accordance with policy 710.</li> </ul> <p><b>When Torsades de Pointes is identified:</b></p> <ul style="list-style-type: none"> <li><b>Magnesium Sulfate</b> <ul style="list-style-type: none"> <li>IV/IO – 2 g over 2 min</li> <li>Repeat x 1 in 5 min</li> </ul> </li> </ul> <p><b>Treat underlying causes when identified:</b> Renal Failure / History of Dialysis:</p> <ul style="list-style-type: none"> <li><b>Calcium Chloride</b></li> <li>IV/IO – 1g</li> <li>Repeat x 1 in 10 min</li> <li><b>Sodium Bicarbonate</b> <ul style="list-style-type: none"> <li>IV/IO – 1 mEq/kg</li> <li>Repeat 0.5 mEq/kg x 2 q 5 min</li> </ul> </li> </ul> <p>Tricyclic Antidepressant Overdose</p> <ul style="list-style-type: none"> <li><b>Sodium Bicarbonate</b> <ul style="list-style-type: none"> <li>IV/IO – 1 mEq/kg</li> <li>Repeat 0.5 mEq/kg x 2 q 5 min</li> </ul> </li> </ul>	<p><b>Defibrillate</b> – 2 Joules/kg</p> <ul style="list-style-type: none"> <li>If patient still in VF/VT at rhythm check, increase to 4 Joules/kg</li> <li>Repeat every 2 minutes as indicated</li> <li>If VF/VT stops then recurs use last successful Joules setting.</li> </ul> <p><b>IV or IO access</b></p> <ul style="list-style-type: none"> <li>PRESTO Blood Draw</li> </ul> <p><b>Epinephrine* 0.1mg/mL</b> <b>Administer ASAP goal ≤ 6 minutes</b></p> <ul style="list-style-type: none"> <li>IV/IO – 0.01mg/kg (0.1 mL/kg) q 6 min</li> <li>Repeat x 2 for max of 3 dose during initial arrest.</li> <li>If ROSC then re-arrest and additional 3 doses may be administered.</li> </ul> <p><b>Amiodarone</b></p> <ul style="list-style-type: none"> <li>IV/IO – 5 mg/kg – after second defibrillation</li> <li>If VT/VF-persists, 2.5 mg/kg IV/IO in 3-5 minutes</li> </ul> <p><b>Normal Saline</b></p> <ul style="list-style-type: none"> <li>IV/IO 20 mL/kg bolus</li> </ul> <p><b>ALS Airway Management</b></p> <ul style="list-style-type: none"> <li>If unable to ventilate by BLS measures, initiate appropriate advanced airway procedures in accordance with policy 710.</li> </ul> <p><b>When Torsades de Pointes is identified:</b></p> <ul style="list-style-type: none"> <li><b>Magnesium Sulfate</b> <ul style="list-style-type: none"> <li>IV/IO – 40 mg/kg over 2 min</li> <li>Repeat x 1 in 5 min</li> </ul> </li> </ul> <p><b>Treat underlying causes when identified:</b> Renal failure / History of Dialysis:</p> <ul style="list-style-type: none"> <li><b>Calcium Chloride</b></li> <li>IV/IO – 20 mg/kg</li> <li>Repeat x 1 in 10 min</li> <li><b>Sodium Bicarbonate</b> <ul style="list-style-type: none"> <li>IV/IO – 1 mEq/kg</li> <li>Repeat 0.5 mEq/kg x 2 q 5 min</li> </ul> </li> </ul> <p>Tricyclic Antidepressant Overdose</p> <ul style="list-style-type: none"> <li><b>Sodium Bicarbonate</b> <ul style="list-style-type: none"> <li>IV/IO – 1 mEq/kg</li> <li>Repeat 0.5 mEq/kg x 2 q 5 min</li> </ul> </li> </ul>
<b>Base Hospital Orders Only</b>	
<b>Consult with ED Physician for further treatment measures*</b>	
<p>Additional Information:</p> <ul style="list-style-type: none"> <li>If sustained ROSC (&gt;30 seconds), activate VF/VT alarm and initiate post arrest resuscitation as outlined in Policy 733: Cardiac Arrest management and Post Arrest Resuscitation.</li> <li>For termination of resuscitation, transport decisions, and use of base hospital consult reference Policy 733: Cardiac Arrest Management and Post Arrest Resuscitation</li> <li>If patient is <u>hypothermic</u>–only ONE round of medication administration and limit <i>defibrillation to 6 times</i> prior to Base Hospital contact. Field determination of death is discouraged in these patients and they should be transported to the most accessible receiving facility</li> <li>Ventricular tachycardia (VT) is a rate &gt; 150 bpm</li> </ul>	

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 VCEMS Medical Director

## Chest Pain – Acute Coronary Syndrome

### BLS Procedures

Administer oxygen if dyspnea, signs of heart failure or shock, or SpO<sub>2</sub> < 94%  
Assist patient with prescribed Nitroglycerin as needed for chest pain

- Hold if SBP less than 100 mmHg

### ALS Standing Orders

Perform 12-lead ECG

- Expedite transport to closest STEMI Receiving Center if monitor interpretation meets the manufacturer guidelines for a positive STEMI ECG and/or physician states ECG is positive for STEMI.
- Notify Base hospital within 10 minutes of monitor interpretation of a positive STEMI ECG
- Document all initial and ongoing rhythm strips and ECG changes

For chest pain consistent with ischemic heart disease:

- **Aspirin**
  - PO – 324 mg
- **Nitroglycerin (DO NOT administer if ECG states inferior infarct)**
  - SL or lingual spray – 0.4 mg q 5 min for continued pain
    - No max dosage
    - Maintain SBP greater than 100 mmHg

IV/IO access

If pain persists and not relieved by NTG:

- **Pain Control**– per policy 705.19
  - Maintain SBP greater than 90 mmHg

If patient presents or becomes hypotensive:

- Lay Supine
- **Normal Saline**
  - IV/IO bolus – 500 mL -may repeat x1 for total 1000 mL.
    - Unless CHF is present

If hypotensive (SBP less than 90 mmHg) and signs of CHF are present or no response to fluid therapy\*:

- **Epinephrine 10mcg/mL**
  - 1mL (10mcg) q 2 minutes, slow IV/IO push
  - Titrate to SBP of greater than or equal to 90mm/Hg

For ventricular irritability resulting in runs of ventricular tachycardia (>3 consecutive ventricular complexes):

- **Amiodarone IV/IOPB - 150 mg in 50 mL D5W infused over 10 minutes**

### Base Hospital Orders Only

Consult with ED Physician when orders are needed for interventions within scope but not addressed in policy.

Additional Information:

- Nitroglycerin is contraindicated in inferior infarct or when phosphodiesterase inhibitor medications [Sildenafil (Viagra and Revatio), Vardenafil (Levitra), and Tadalafil (Cialis)] have been recently used (Viagra or Levitra within 24 hours; Cialis within 48 hours). These medications are most commonly used to treat erectile dysfunction or pulmonary hypertension. NTG then may only be given by ED Physician order
- Appropriate dose of Aspirin is 324mg. Aspirin may be withheld if able to confirm that patient has received appropriate dose prior to arrival. If unable to confirm appropriate dose, administer Aspirin, up to 324mg.

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VCEMS Medical Director

<b>Childbirth</b>			
<b>BLS Procedures</b>			
<p>Determine</p> <ul style="list-style-type: none"> <li>• Number of pregnancies (gravida)</li> <li>• Number of deliveries (para)</li> <li>• Due date (weeks of gestation)</li> <li>• Onset/duration/frequency/intensity of contractions</li> <li>• If a rupture of membranes has occurred (including color/date/time)</li> <li>• If any expected complications during pregnancy are present</li> <li>• Presence of crowning or any abnormal presenting part at perineum</li> </ul>			
<b>PROLAPSED CORD</b>		<b>OTHER PRESENTING PART</b>	
Cover cord with wet saline dressing Place mother in left-lateral Trendelenberg position Provide constant manual pressure on presenting part to avoid cord compression  Initiate Code-3 transport if there is partial delivery of the infant and no further progress after 1-2 minutes	<b>DELIVERING</b>	<b>NOT DELIVERING</b>	
	Elevate hips Assist delivery while initiating Code-3 transport Assist with breech delivery while supporting the infant's body (covering to maintain body warmth)	Place mother in left-lateral Trendelenberg position Initiate Code-3 transport	
<p>If the HEAD is crowning, prepare to assist mother with delivery –            Guide baby out  <b>ONLY IF SECRETIONS, INCLUDING MECONIUM, CAUSE AIRWAY OBSTRUCTION:</b> suction mouth, then nose            Dry and stimulate (rub gently, but briskly with warm towel, provide stocking cap if available)            While drying infant, assess for prematurity, poor respiratory effort, or lack of muscle tone. If any exist, double clamp and cut cord, and begin resuscitation according to VC EMS Policy 705.16, "Neonatal Resuscitation"            Place infant skin-to-skin with mother, cover both with dry linen, and observe for breathing, activity, and color            Double clamp cord and cut with sterile scissors between clamps            Note time of birth            Begin transport. To help prevent heat loss from infant, turn up the heat in the treatment area of the ambulance</p> <ul style="list-style-type: none"> <li>• Do not wait for placenta to deliver</li> </ul> <p>If placenta delivers, assist and package, then gently massage fundus</p> <ul style="list-style-type: none"> <li>• Do not massage fundus until the placenta has delivered</li> </ul> <p>Newborn assessment – at 1 minute and 5 minutes post-delivery (Note: if infant requires resuscitation at birth, defer APGAR scoring to a later time. Resuscitation should not be delayed to assess for APGAR score.</p>			
<b>APGAR score</b>	<b>0</b>	<b>1</b>	<b>2</b>
<b>A - Appearance</b>	Blue/Pale	Pink w/ blue extremities	Pink
<b>P - Pulse</b>	Absent	< 100 bpm	> 100 bpm
<b>G - Grimace (reflex irritability)</b>	Absent	Grimace	Cough/Cry/Sneeze
<b>A - Activity (muscle tone)</b>	Limp	Some flexion	Active
<b>R - Respirations</b>	Absent	Slow	Good cry
<b>ALS Standing Orders</b>			
IV/IO Access			
<b>Base Hospital Orders Only</b>			
Consult with ED Physician for further treatment measures			
Additional Information <ul style="list-style-type: none"> <li>• If a patient is in an area where the most accessible hospital does not have obstetric services, consult with the Base Hospital for destination determination.</li> </ul>			

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VCEMS Medical Director

<b>Crush Injury/Syndrome</b>	
<b>ADULT</b>	<b>PEDIATRIC</b>
<b>BLS Procedures</b>	
Perform spinal precautions as indicated Determine Potential vs. Actual Crush Syndrome Administer oxygen as indicated Maintain body heat	
<b>ALS Standing Orders</b>	
Potential for Crush Syndrome <ul style="list-style-type: none"> <li>• IV/IO access</li> <li>• Release compression</li> <li>• Monitor for cardiac dysrhythmias</li> </ul>	
<b>Communication Failure Protocol</b>	
Crush Syndrome <ul style="list-style-type: none"> <li>• Initiate 2<sup>nd</sup> IV/IO access</li> <li>• <b>Normal Saline</b> <ul style="list-style-type: none"> <li>○ IV/IO bolus – 1 Liter                             <ul style="list-style-type: none"> <li>• Caution with cardiac and/or renal history</li> </ul> </li> </ul> </li> <li>• <b>Sodium Bicarbonate</b> <ul style="list-style-type: none"> <li>○ IV/IO mix – 1 mEq/kg                             <ul style="list-style-type: none"> <li>• Added to 1<sup>st</sup> Liter of Normal Saline</li> </ul> </li> </ul> </li> <li>• <b>Albuterol</b> <ul style="list-style-type: none"> <li>○ Nebulizer – 5 mg/6 mL                             <ul style="list-style-type: none"> <li>• Repeat as needed</li> </ul> </li> </ul> </li> <li>• <b>Pain Control</b>– Per Policy 705.19</li> <li>• Release compression</li> <li>• Monitor for cardiac dysrhythmias</li> <li>• For cardiac dysrhythmias:                             <ul style="list-style-type: none"> <li>○ <b>Calcium Chloride</b> <ul style="list-style-type: none"> <li>• IV/IO – 1 g over 1 min</li> </ul> </li> </ul> </li> </ul> For continued shock <ul style="list-style-type: none"> <li>• <b>Repeat Normal Saline</b> <ul style="list-style-type: none"> <li>○ IV/IO bolus – 1 Liter</li> </ul> </li> </ul>	Crush Syndrome <ul style="list-style-type: none"> <li>• Initiate 2<sup>nd</sup> IV/IO access if possible or establish IO</li> <li>• <b>Normal Saline</b> <ul style="list-style-type: none"> <li>○ IV/IO bolus – 20 mL/kg                             <ul style="list-style-type: none"> <li>• Caution with cardiac and/or renal history</li> </ul> </li> </ul> </li> <li>• <b>Sodium Bicarbonate</b> <ul style="list-style-type: none"> <li>○ IV/IO mix– 1 mEq/kg                             <ul style="list-style-type: none"> <li>• Added to 1<sup>st</sup> Liter of Normal Saline</li> </ul> </li> </ul> </li> <li>• <b>Albuterol</b> <ul style="list-style-type: none"> <li>○ <b>Patient less than 30 kg</b> <ul style="list-style-type: none"> <li>• Nebulizer – 2.5 mg/3 mL</li> <li>○ Repeat as needed</li> </ul> </li> <li>○ <b>Patient greater than 30 kg</b> <ul style="list-style-type: none"> <li>• Nebulizer – 5 mg/6 mL</li> <li>○ Repeat as needed</li> </ul> </li> </ul> </li> <li>• <b>Pain Control</b>– Per Policy 705.19</li> <li>• Release compression</li> <li>• Monitor for cardiac dysrhythmias</li> <li>• For cardiac dysrhythmias:                             <ul style="list-style-type: none"> <li>○ <b>Calcium Chloride</b> <ul style="list-style-type: none"> <li>• IV/IO – 20 mg/kg over 1 min</li> </ul> </li> </ul> </li> </ul> For continued shock <ul style="list-style-type: none"> <li>• <b>Repeat Normal Saline</b> <ul style="list-style-type: none"> <li>○ IV/IO bolus – 20 mL/kg</li> </ul> </li> </ul>
<b>Base Hospital Orders Only</b>	
For persistent hypotension after fluid bolus: <ul style="list-style-type: none"> <li>• Epinephrine 10 mcg/mL                             <ul style="list-style-type: none"> <li>○ 1 mL (10 mcg) q 2 minutes, slow IV/IO push</li> <li>○ Titrate to SBP of greater than or equal to 90 mm/Hg</li> </ul> </li> </ul> Consult with ED Physician for further treatment measures	For persistent hypotension after fluid bolus: <ul style="list-style-type: none"> <li>• Epinephrine 10 mcg/mL                             <ul style="list-style-type: none"> <li>○ 0.1 mL/kg (1 mcg/kg) q 2 minutes, slow IV/IO push</li> <li>○ Max single dose of 1 mL or 10 mcg</li> <li>○ Titrate to SBP of greater than or equal to 80 mm/Hg</li> </ul> </li> </ul> Consult with ED Physician for further treatment measures
Additional Information: <ul style="list-style-type: none"> <li>• Refer to VCEMS Policy 735 for additional information on preparing push dose epinephrine solution.</li> <li>• Potential Crush Syndrome – Continuous crush injury to torso or extremity above wrist or ankle for 2 hours or less.</li> <li>• Crush Syndrome – Continuous crush injury to torso or extremity above wrist or ankle for greater than 2 hours.</li> <li>• If elderly or cardiac history is present, use caution with fluid administration. Reassess and treat accordingly.</li> <li>• Dysrhythmias are usually secondary to Hyperkalemia. ECG monitor may show: Peaked T-waves, Absent P-waves, widened QRS complexes, bradycardia</li> <li>• Calcium Chloride and Sodium Bicarbonate precipitate when mixed. Strongly consider starting a second IV (if feasible) for administration of Calcium Chloride</li> </ul>	

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VCEMS Medical Director

<b>Overdose</b>	
<b>ADULT</b>	<b>PEDIATRIC</b>
<b>BLS Procedures</b>	
Decontaminate if indicated and appropriate  Administer oxygen and support ventilations as indicated  Suspected opioid overdose with respirations less than 12/min and significant ALOC: <ul style="list-style-type: none"> <li>• <b>Naloxone</b> <ul style="list-style-type: none"> <li>○ IN – 4 mg in 0.1 mL, may repeat X 1, Max of 8 mg</li> <li>○ IM – 2 mg, may repeat X 1, Max of 4 mg</li> </ul> </li> </ul>	
<b>ALS Standing Orders</b>	
IV/IO access  Suspected opioid overdose with respirations less than 12/min and significant ALOC <ul style="list-style-type: none"> <li>• <b>Naloxone, if not already administered by BLS personnel or if patient continues with decreased resp rate and significant ALOC</b> <ul style="list-style-type: none"> <li>○ IN – 4 mg in 0.1 mL, may repeat x1, Max of 8 mg</li> <li>○ IM – 2 mg q 5 min</li> <li>○ IV/IO – 0.4 mg q 1min                             <ul style="list-style-type: none"> <li>• Initial max 6 mg</li> </ul> </li> <li>○ May repeat as needed to maintain respirations greater than 12/min</li> </ul> </li> </ul> Dystonic Reaction <ul style="list-style-type: none"> <li>• <b>Benadryl</b> <ul style="list-style-type: none"> <li>○ IV/IO/IM – 50 mg</li> </ul> </li> </ul>	IV/IO access  Suspected opioid overdose with respirations less than 12/min and significant ALOC: <ul style="list-style-type: none"> <li>• <b>Naloxone, if not already administered by BLS personnel or if patient continues with decreased resp rate and significant ALOC</b> <ul style="list-style-type: none"> <li>○ IM – 0.1 mg/kg                             <ul style="list-style-type: none"> <li>• Initial max of 2 mg</li> </ul> </li> <li>○ IV/IO – 0.1 mg/kg                             <ul style="list-style-type: none"> <li>• Initial max 2 mg</li> </ul> </li> <li>○ May repeat as needed to maintain respirations greater than 12/min</li> </ul> </li> </ul> Dystonic Reaction <ul style="list-style-type: none"> <li>• <b>Benadryl</b> <ul style="list-style-type: none"> <li>○ IV/IO/IM – 1 mg/kg                             <ul style="list-style-type: none"> <li>▪ Max 50 mg</li> </ul> </li> </ul> </li> </ul>
<b>Base Hospital Orders Only</b>	
Tricyclic Antidepressant Overdose <ul style="list-style-type: none"> <li>• <b>Sodium Bicarbonate</b> <ul style="list-style-type: none"> <li>○ IV/IO – 1 mEq/kg</li> </ul> </li> </ul> Beta Blocker Overdose <ul style="list-style-type: none"> <li>• <b>Glucagon</b> <ul style="list-style-type: none"> <li>○ IV/IO – 2 mg                             <ul style="list-style-type: none"> <li>• May give up to 10mg if available</li> </ul> </li> </ul> </li> </ul> Calcium Channel Blocker Overdose <ul style="list-style-type: none"> <li>• <b>Calcium Chloride</b> <ul style="list-style-type: none"> <li>○ IV/IO – 1 g over 1 min</li> </ul> </li> <li>• <b>Glucagon</b> <ul style="list-style-type: none"> <li>○ IV/IO – 2 mg                             <ul style="list-style-type: none"> <li>• May give up to 10 mg if available</li> </ul> </li> </ul> </li> </ul> Stimulant/Hallucinogen Overdose <ul style="list-style-type: none"> <li>• <b>Midazolam</b> <ul style="list-style-type: none"> <li>○ IV/IO – 2 mg                             <ul style="list-style-type: none"> <li>• Repeat 1 mg q 2 min as needed</li> <li>• Max 5 mg</li> </ul> </li> <li>○ IM – 0.1 mg/kg                             <ul style="list-style-type: none"> <li>• Max 5 mg</li> </ul> </li> </ul> </li> </ul>	Tricyclic Antidepressant Overdose <ul style="list-style-type: none"> <li>• <b>Sodium Bicarbonate</b> <ul style="list-style-type: none"> <li>○ IV/IO – 1 mEq/kg</li> </ul> </li> </ul> Beta Blocker Overdose <ul style="list-style-type: none"> <li>• <b>Glucagon</b> <ul style="list-style-type: none"> <li>○ IV/IO – 0.1 mg/kg                             <ul style="list-style-type: none"> <li>• May give up to 10 mg if available</li> </ul> </li> </ul> </li> </ul> Calcium Channel Blocker Overdose <ul style="list-style-type: none"> <li>• <b>Calcium Chloride</b> <ul style="list-style-type: none"> <li>○ IV/IO – 20 mg/kg over 1 min</li> </ul> </li> <li>• <b>Glucagon</b> <ul style="list-style-type: none"> <li>○ IV/IO – 0.1 mg/kg                             <ul style="list-style-type: none"> <li>• May give up to 10 mg if available</li> </ul> </li> </ul> </li> </ul> Stimulant/Hallucinogen Overdose <ul style="list-style-type: none"> <li>• <b>Midazolam</b> <ul style="list-style-type: none"> <li>○ IM – 0.1 mg/kg                             <ul style="list-style-type: none"> <li>• Max 5 mg</li> </ul> </li> </ul> </li> </ul>
Additional Information: <ul style="list-style-type: none"> <li>• Refer to VCEMS Policy 705.17-Nerve Agent Poisoning for nerve agent exposure treatment guidelines.</li> <li>• If chest pain present, refer to chest pain policy. DO NOT GIVE ASPIRIN OR NITROGLYCERIN (Consult with ED Physician)</li> <li>• Narcan – it is not necessary that the patient be awake and alert. Administer until max dosage is reached <u>or</u> RR greater than 12/min. When given to chronic opioid patients, withdrawal symptoms may present. IM dosing is the preferred route of administration.                             <ul style="list-style-type: none"> <li>○ If base hospital contact cannot be made, naloxone should be administered sparingly, in doses no more than 0.1 mg every 2-3 minutes.</li> </ul> </li> </ul>	

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VCEMS Medical Director

## Pain Control

### BLS Procedures

Place patient in position of comfort  
Administer oxygen as indicated

### ALS Standing Orders

IV/IO access

Cardiac Monitor

**Pain 5 out of 10 or greater and SBP > 90 mmHg**

#### Fentanyl

- IV/IO - 1 mcg/kg over 1 minute, OR IN/IM – 1mcg/kg
- Max single dose 100 mcg
- May repeat q 5 minutes for persistent pain to a max total dose 200 mcg
- Repeat doses should be administered IV/IO if vascular access obtained

**If Fentanyl unavailable;**

#### Ondansetron (for patients 4 years old and older)

- IV/IM/ODT – 4 mg
- Repeat x 1 in 10 minutes for nausea or > 2 doses of Morphine

#### Morphine

- IV/IO - 0.1 mg/kg over 1 minute
- Max single dose 10 mg
- May repeat ½ initial dose x 2 q 5 min

OR

#### Morphine

- IM - 0.1 mg/kg
- Max single dose 10 mg
- May repeat ½ initial dose x 2 q 15 min

### Base Hospital Orders only

Consult with ED Physician when orders are needed for interventions within scope but not addressed in policy.

#### Additional Information

**1. Consider administering ½ normal dose of Opiate pain control;**

- Patients 65 years of age and older
- Patients with past adverse reaction to opiates
- Patients with suspected cardiac ischemia or active TCP
- Patients with traumatic injuries who are at risk for hemodynamic decompensation

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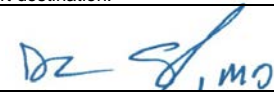
Date Revised: January 16, 2020  
Last Reviewed: January 16, 2020

  
VCEMS Medical Director

<b>Shortness of Breath – Wheezes/Other</b>	
<b>ADULT</b>	<b>PEDIATRIC</b>
<b>BLS Procedures</b>	
<p>Administer oxygen as indicated</p> <p>Initiate CPAP for both moderate and severe distress – 8 years of age and older</p> <p>Assist patient with prescribed Metered Dose Inhaler if available</p> <p>Severe Distress Only</p> <ul style="list-style-type: none"> <li>• Epinephrine 1 mg/mL               <ul style="list-style-type: none"> <li>○ If Under 30 kg                   <ul style="list-style-type: none"> <li>• IM 0.15 mg                       <ul style="list-style-type: none"> <li>▪ May repeat x1 in 5 minutes if patient still in distress</li> </ul> </li> </ul> </li> <li>○ If 30 kg and Over                   <ul style="list-style-type: none"> <li>• IM – 0.3 mg                       <ul style="list-style-type: none"> <li>▪ May repeat x 1 in 5 minutes if patient still in distress</li> </ul> </li> </ul> </li> </ul> </li> </ul>	
<b>ALS Standing Orders</b>	
<p>Perform Needle Thoracostomy if indicated per VCEMS Policy 715</p> <p>If not already performed by BLS personnel, consider CPAP for both moderate and severe distress</p> <p>Moderate Distress</p> <ul style="list-style-type: none"> <li>• <b>Albuterol</b> <ul style="list-style-type: none"> <li>○ Nebulizer – 5 mg/6 mL               <ul style="list-style-type: none"> <li>• Repeat as needed</li> </ul> </li> </ul> </li> </ul> <p>Severe distress</p> <ul style="list-style-type: none"> <li>• <b>Epinephrine 1 mg/mL</b>, if not already administered by BLS personnel               <ul style="list-style-type: none"> <li>○ IM - 0.3mg                   <ul style="list-style-type: none"> <li>▪ May repeat q 5 minutes if patient still in distress and unable to establish IV/IO</li> </ul> </li> </ul> </li> <li>• <b>Albuterol</b> <ul style="list-style-type: none"> <li>○ Nebulizer – 5 mg/6 mL               <ul style="list-style-type: none"> <li>• Repeat as needed</li> </ul> </li> </ul> </li> <li>• Establish IV/IO and make BHC in anticipation of push dose epi orders</li> </ul> <p>If hypotensive, consider alternative etiologies and refer to additional treatment protocols</p>	<p>Perform Needle Thoracostomy if indicated per VCEMS Policy 715</p> <p>If not already performed by BLS personnel, consider CPAP if age 8 years old and greater</p> <p>Moderate Distress</p> <ul style="list-style-type: none"> <li>• <b>Albuterol</b> <ul style="list-style-type: none"> <li>○ <b>Patient less than 30 kg</b> <ul style="list-style-type: none"> <li>• Nebulizer – 2.5 mg/3 mL               <ul style="list-style-type: none"> <li>○ Repeat as needed</li> </ul> </li> </ul> </li> <li>○ <b>Patient greater than 30 kg</b> <ul style="list-style-type: none"> <li>• Nebulizer – 5 mg/6 mL               <ul style="list-style-type: none"> <li>○ Repeat as needed</li> </ul> </li> </ul> </li> </ul> </li> </ul> <p>Severe Distress</p> <ul style="list-style-type: none"> <li>• <b>Epinephrine 1 mg/mL</b>, if not already administered by BLS personnel               <ul style="list-style-type: none"> <li>○ IM – 0.01 mg/kg up to 0.3mg                   <ul style="list-style-type: none"> <li>• May repeat q 5 minutes, if patient remains in distress</li> </ul> </li> </ul> </li> <li>• <b>Albuterol</b> <ul style="list-style-type: none"> <li>○ <b>Patient less than 30 kg</b> <ul style="list-style-type: none"> <li>• Nebulizer – 2.5 mg/3 mL               <ul style="list-style-type: none"> <li>○ Repeat as needed</li> </ul> </li> </ul> </li> <li>○ <b>Patient greater than 30 kg</b> <ul style="list-style-type: none"> <li>• Nebulizer – 5 mg/6 mL               <ul style="list-style-type: none"> <li>○ Repeat as needed</li> </ul> </li> </ul> </li> </ul> </li> <li>• Establish IV/IO and make BHC in anticipation of push dose epi orders</li> </ul> <p>Suspected Croup</p> <ul style="list-style-type: none"> <li>• <b>Normal Saline</b> <ul style="list-style-type: none"> <li>○ Nebulizer/Aerosolized Mask – 5 mL</li> </ul> </li> </ul> <p>If hypotensive, consider alternative etiologies and refer to additional treatment protocols</p>
<b>Base Hospital Orders Only</b>	
<p>Severe Distress, not improving with prior epinephrine administration</p> <ul style="list-style-type: none"> <li>• <b>Epinephrine 10 mcg/mL</b> <ul style="list-style-type: none"> <li>○ 1 mL (10 mcg) q 2 minutes, slow IV/IO push</li> <li>○ Titrate to overall improvement in work of breathing</li> </ul> </li> </ul>	<p>Suspected Croup and no improvement with Normal Saline nebulizer</p> <ul style="list-style-type: none"> <li>• Less than 30 kg               <ul style="list-style-type: none"> <li>○ <b>Epinephrine 1mg/mL</b> <ul style="list-style-type: none"> <li>• Nebulizer/Aerosolized Mask – 2.5 mg/2.5mL</li> </ul> </li> </ul> </li> <li>• 30 kg and greater               <ul style="list-style-type: none"> <li>○ <b>Epinephrine 1mg/mL</b> <ul style="list-style-type: none"> <li>• Nebulizer/Aerosolized Mask – 5mg/5 mL</li> </ul> </li> </ul> </li> </ul> <p>Severe Distress, not improving with prior epinephrine administration</p> <ul style="list-style-type: none"> <li>• <b>Epinephrine 10mcg/mL</b> <ul style="list-style-type: none"> <li>○ 0.1mL/kg (1mcg/kg) every 2 minutes, slow IV/IO push</li> <li>○ Max single dose of 1mL or 10mcg</li> <li>○ Titrate to overall improvement in work of breathing.</li> </ul> </li> </ul>
Consult with ED Physician for further treatment measures	
<p>Additional Information:</p> <ul style="list-style-type: none"> <li>• Refer to VCEMS Policy 735 for additional information on preparing push dose epinephrine solution.</li> <li>• Use of a metered dose inhaler (Albuterol 90 mcg/puff) is indicated for fireline paramedics, in accordance with VCEMS Policy 627.</li> <li>• High flow O<sub>2</sub> is indicated for severe respiratory distress, even with a history of COPD</li> <li>• COPD patients have a higher susceptibility to spontaneous pneumothorax due to disease process</li> <li>• If suspected Arterial Gas Embolus/Decompression Sickness secondary to SCUBA emergencies, transport patient in supine position on 15L/min O<sub>2</sub> via mask. Early BH contact is recommended to determine most appropriate transport destination.</li> </ul>	

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VCEMS Medical Director



<b>Symptomatic Bradycardia</b>	
<b>ADULT (HR less than 45 bpm)</b>	<b>PEDIATRIC (HR less than 60 bpm)</b>
<b>BLS Procedures</b>	
Administer oxygen as indicated Supine position as tolerated	Administer oxygen as indicated Assist ventilations if needed If significant ALOC, initiate CPR
<b>ALS Standing Orders</b>	
<b>IV/IO access</b>  <b>Obtain 12-lead ECG</b>  <b>Atropine</b> <ul style="list-style-type: none"> <li>• IV/IO – 0.5 mg (1 mg/10 mL)</li> </ul> <b>Transcutaneous Pacing (TCP)</b> <ul style="list-style-type: none"> <li>• Should be initiated only if patient has signs of hypoperfusion</li> <li>• Should be started immediately for 3<sup>o</sup> heart blocks and 2<sup>o</sup> Type 2 (Mobitz II) heart blocks</li> <li>• If pain is present during TCP                             <ul style="list-style-type: none"> <li>○ <b>Pain Control</b>– per policy 705.19</li> </ul> </li> </ul> If patient remains hypotensive (SBP less than 90mmHg) <ul style="list-style-type: none"> <li>• <b>Epinephrine 10 mcg/mL</b> <ul style="list-style-type: none"> <li>○ 1 mL (10 mcg) q 2 minutes, slow IV/IO push</li> </ul> </li> </ul> Titrate to SBP of greater than or equal to 90 mm/Hg  For suspected hyperkalemia <ul style="list-style-type: none"> <li>• <b>Calcium Chloride</b> <ul style="list-style-type: none"> <li>○ IV/IO – 1 g                             <ul style="list-style-type: none"> <li>• Withhold if suspected digitalis toxicity</li> </ul> </li> </ul> </li> <li>• <b>Sodium Bicarbonate</b> <ul style="list-style-type: none"> <li>○ IV/IO – 1 mEq/kg</li> </ul> </li> </ul>	<b>If CPR indicated, initiate CAM and reference appropriate cardiac arrest treatment protocol</b>  <b>IV/IO access</b> <ul style="list-style-type: none"> <li>• IV/IO access only if patient in extremis</li> <li>• <b>Epinephrine 10 mcg/mL</b> <ul style="list-style-type: none"> <li>○ 0.1 mL/kg (1 mcg/kg) q 2 minutes, slow IV/IO push</li> <li>○ Max single dose of 1 mL or 10 mcg</li> <li>○ Titrate to SBP of greater than or equal to 80 mm/Hg</li> </ul> </li> </ul>
<b>Base Hospital Orders Only</b>	
	<b>Atropine</b> <ul style="list-style-type: none"> <li>• IV/IO – 0.02 mg/kg                             <ul style="list-style-type: none"> <li>○ Minimum dose – 0.1 mg</li> </ul> </li> </ul>
<b>Consult with ED Physician for further treatment measure</b>	
Additional Information <ul style="list-style-type: none"> <li>• Bradycardia does not require treatment unless signs and symptoms are present (chest pain, altered level of consciousness, abnormal skin signs, profound weakness, shortness of breath or low BP)</li> <li>• Refer to VCEMS Policy 735 for additional information on preparing push dose epinephrine solution.</li> </ul>	

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VCEMS Medical Director

<b>Ventricular Tachycardia Sustained – Not in Arrest</b>	
<b>Adult</b>	<b>Pediatric</b>
<b>BLS Procedures</b>	
Administer oxygen as indicated	
<b>ALS Standing Orders</b>	
<p>IV/IO Access</p> <p><u>Stable</u> – Mild to moderate chest pain/SOB</p> <ul style="list-style-type: none"> <li>• <b>Amiodarone</b> <ul style="list-style-type: none"> <li>○ IV/IOPB - 150 mg in 50mL D<sub>5</sub>W infused over 10 minutes.</li> </ul> </li> </ul> <p><u>Unstable</u> – ALOC, signs of shock or CHF</p> <ul style="list-style-type: none"> <li>• <b>Synchronized Cardioversion</b> <ul style="list-style-type: none"> <li>○ Use the biphasic energy settings that have been approved by service provider medical director</li> <li>○ Consider sedation prior to cardioversion for special circumstances*</li> </ul> </li> </ul> <p><u>Unstable polymorphic (irregular) VT:</u></p> <ul style="list-style-type: none"> <li>• <b>Defibrillation</b> <ul style="list-style-type: none"> <li>○ Use the biphasic energy settings that have been approved by service provider medical director</li> <li>○ Consider sedation prior to defibrillation as outlined below for special circumstances*</li> </ul> </li> </ul> <p><u>Torsades de Pointes</u></p> <ul style="list-style-type: none"> <li>• <b>Magnesium Sulfate</b> <ul style="list-style-type: none"> <li>○ IV/IOPB – 2 g in 50 mL D<sub>5</sub>W infused over 5 min                             <ul style="list-style-type: none"> <li>• May repeat x 1 if Torsades continues or recurs</li> </ul> </li> </ul> </li> </ul> <p><u>Special Circumstances*</u></p> <ul style="list-style-type: none"> <li>• <b>Fentanyl</b> <ul style="list-style-type: none"> <li>○ 1 mcg/kg IV/ IO / IN prior to electrical therapy.</li> </ul> </li> </ul> <p>If recurrent VT, perform synchronized cardioversion or defibrillation at last successful Joules setting.</p> <p>After successful cardioversion, obtain an ECG per Policy 726.</p>	<p>IV/IO Access</p> <p><u>Stable</u> – Mild to moderate chest pain/SOB</p> <ul style="list-style-type: none"> <li>• <b>Amiodarone</b> <ul style="list-style-type: none"> <li>○ IV/IOPB – 5 mg/kg (max 150 mg) in 50mL D<sub>5</sub>W infused over 10 minutes.</li> </ul> </li> </ul> <p><u>Unstable</u> – ALOC, signs of shock or CHF</p> <ul style="list-style-type: none"> <li>• <b>Synchronized Cardioversion</b> <ul style="list-style-type: none"> <li>○ Use the biphasic energy settings that have been approved by service provider medical director</li> <li>○ Consider sedation prior to cardioversion for special circumstances*</li> </ul> </li> </ul> <p><u>Unstable polymorphic (irregular) VT:</u></p> <ul style="list-style-type: none"> <li>• <b>Defibrillation</b> <ul style="list-style-type: none"> <li>○ Use the biphasic energy settings that have been approved by service provider medical director</li> <li>○ Consider sedation prior to defibrillation as outlined below for special circumstances*</li> </ul> </li> </ul> <p><u>Torsades de Pointes</u></p> <ul style="list-style-type: none"> <li>• <b>Magnesium Sulfate</b> <ul style="list-style-type: none"> <li>○ IV/IOPB – 40 mg/kg (max 2 g) in 50 mL D<sub>5</sub>W infused over 5 min                             <ul style="list-style-type: none"> <li>• May repeat x 1 if Torsades continues or recurs</li> </ul> </li> </ul> </li> </ul> <p><u>Special Circumstances*</u></p> <ul style="list-style-type: none"> <li>• <b>Fentanyl</b> <ul style="list-style-type: none"> <li>○ 1 mcg/kg IV / IO / IN prior to electrical therapy.</li> </ul> </li> </ul> <p>If recurrent VT, perform synchronized cardioversion or defibrillation at last successful Joules setting.</p> <p>After successful cardioversion, obtain an ECG per Policy 726.</p>
<b>Base Hospital Orders only</b>	
<p><u>ED Physician Order Only:</u> After synchronized cardioversion or defibrillation, if patient converts to narrow complex rhythm greater than 50 bpm and not in 2<sup>nd</sup> or 3<sup>rd</sup> degree heart block, and amiodarone not already given, consider amiodarone - 150 mg IV/IOPB in D<sub>5</sub>W infused over 10 minutes.</p>	
<p>Additional Information:</p> <ul style="list-style-type: none"> <li>• *Special circumstances for sedation prior to cardioversion include Fully awake and alert, patients with unstable vital signs.</li> <li>• Early base hospital contact is recommended in unusual circumstances, e.g. Torsades de Pointes, Tricyclic OD and renal failure.</li> <li>• Ventricular tachycardia (VT) is a rate greater than 150 bpm</li> </ul>	

Effective Date: July 1, 2020  
Next Review Date: June 30, 2022

Date Revised: June 5, 2020  
Last Reviewed: June 5, 2020



VCEMS Medical Director

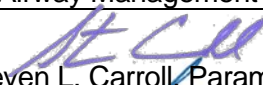

<b>Suspected Stroke</b>	
<b>ADULT</b>	
<b>BLS Procedures</b>	
Cincinnati Stroke Scale (CSS)	
Administer oxygen as indicated	
Administer oxygen if SpO2 less than 94% or unknown	
Determine Blood Glucose level, treat according to VC EMS policy 705.03 – Altered Neurologic Function	
<b>ALS Standing Orders</b>	
IV/IO access	
Cardiac monitor – document initial and ongoing rhythm strips	
If not already performed by BLS personnel, determine Blood Glucose level, treat according to VC EMS policy 705.03 – Altered Neurologic Function	
Patients meeting Stroke Alert criteria as defined in VC EMS Policy 451:	
<ul style="list-style-type: none"> <li>• Notify Base hospital within 10 minutes of identifying a Stroke Alert</li> <li>• Expedite transport to appropriate Acute Stroke Center (ASC).</li> </ul>	
Patients meeting ELVO Alert criteria as defined in VC EMS Policy 451:	
<ul style="list-style-type: none"> <li>• Notify TCASC within 10 minutes of identifying an ELVO Alert</li> <li>• Expedite transport to appropriate Thrombectomy Capable Acute Stroke Center (TCASC).</li> </ul>	
<b>Base Hospital Orders Only</b>	
Consult with ED Physician for further treatment measure	
<b>Additional Information</b>	
<u>Cincinnati Stroke Scale (CSS)</u>	<u>Ventura County ELVO Score (VES)</u>
Facial Droop	Forced Eye Deviation
Normal: Both sides of face move equally	
Abnormal: One side of face does not move normally	
Arm Drift	Aphasia
Normal: Both arms move equally or not at all	
Abnormal: One arm does not move, or one arm drifts down compared with the other side	Neglect
Speech	Obtundation
Normal: Patient uses correct words with no slurring	
Abnormal: Slurred or inappropriate words or mute	Refer to VC EMS Policy 451 for Detailed VES.
<ul style="list-style-type: none"> <li>• Patients must meet Stroke Alert criteria in order to continue to VES</li> <li>• Document name and phone number in ePCR of person who observed patient's Time Last Known Well (TLKW), and report this information to the receiving facility.</li> <li>• Stroke patients in cardiac arrest with sustained ROSC (greater than 30 seconds) shall be transported to the nearest STEMI Receiving Center (SRC).</li> <li>• For seizure activity, refer to VC EMS Policy 705.20 Seizure.</li> </ul>	

<b>Smoke Inhalation</b>	
<b>ADULT</b>	<b>PEDIATRIC</b>
<b>BLS Procedures</b>	
Remove individual from the environment Consider gross decontamination Assess ABCs Assess for trauma and other acute medical conditions Administer high flow oxygen as indicated, or with evidence of smoke inhalation and ALOC or significant headache	
<b>ALS Standing Orders</b>	
Airway support in accordance with Policy 710 – Airway Management  IV/IO access as indicated  If Wheezes present <ul style="list-style-type: none"> <li>• <b>Albuterol</b> <ul style="list-style-type: none"> <li>○ Nebulizer – 5 mg/6 mL                             <ul style="list-style-type: none"> <li>▪ Repeat as needed</li> </ul> </li> </ul> </li> </ul> If smoke inhalation AND unconscious or ALOC <ul style="list-style-type: none"> <li>• <b>Hydroxocobalamin – If Available</b> <ul style="list-style-type: none"> <li>○ IV/IO – 5 g in 200 mL NS over 15 minutes</li> </ul> </li> </ul>	Airway support in accordance with Policy 710 – Airway Management  IV/IO access as indicated  If Wheezes present <ul style="list-style-type: none"> <li>• <b>Albuterol</b> <ul style="list-style-type: none"> <li>○ <b>Patient less than 30 kg</b> <ul style="list-style-type: none"> <li>• Nebulizer – 2.5 mg/3 mL</li> <li>○ Repeat as needed</li> </ul> </li> <li>○ <b>Patient greater than 30 kg</b> <ul style="list-style-type: none"> <li>• Nebulizer – 5 mg/6 mL</li> <li>○ Repeat as needed</li> </ul> </li> </ul> </li> </ul> If smoke inhalation AND unconscious or ALOC <ul style="list-style-type: none"> <li>• <b>Hydroxocobalamin – If Available</b> <ul style="list-style-type: none"> <li>○ IV/IO – 70 mg/kg to a max of 5 g in 200 mL NS over 15 minutes</li> </ul> </li> </ul>
<b>Base Hospital Orders Only</b>	
Continued unconscious/ALOC OR poor response to initial dose <ul style="list-style-type: none"> <li>• <b>Hydroxocobalamin</b> <ul style="list-style-type: none"> <li>○ IV/IO – 5 g in 200 mL NS over 15 to 120 minutes, depending on clinical presentation.</li> </ul> </li> </ul>	Continued unconscious/ALOC OR poor response to initial dose <ul style="list-style-type: none"> <li>• <b>Hydroxocobalamin</b> <ul style="list-style-type: none"> <li>○ IV/IO – 70 mg/kg to a max of 5 g in 200 mL NS over 15 to 120 minutes, depending on clinical presentation.</li> </ul> </li> </ul>
Consult with ED Physician for further treatment measures.	
Additional Information: <ul style="list-style-type: none"> <li>• If monitoring equipment is available, the patient's carboxyhemoglobin levels should be checked if smoke inhalation is suspected.</li> <li>• Evidence of smoke inhalation includes soot around mouth and/or nares, increased work of breathing, wheezing</li> <li>• If additional IV/IO medications are indicated, establish a second IV or IO. DO NOT administer other medications with hydroxocobalamin through the same IV/IO line.</li> <li>• DO NOT administer hydroxocobalamin if patient has a known allergy to hydroxocobalamin or cyanocobalamin</li> </ul>	

Effective Date: June 1, 2018  
Next Review Date: January 31, 2022

Date Revised:  
Last Reviewed: January 16, 2020

  
 VCEMS Medical Director

COUNTY OF VENTURA HEALTH CARE AGENCY		EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES	
Policy Title: Airway Management		Policy Number 710	
APPROVED: Administration:	 Steven L. Carroll, Paramedic	Date: July 1, 2020	
APPROVED: Medical Director:	 Daniel Shepherd, MD	Date: July 1, 2020	
Origination Date:	June 1986		
Date Revised:	January 16, 2020	Effective Date: July 1, 2020	
Date Last Reviewed:	January 16, 2020		
Review Date:	January 31, 2022		

- I. PURPOSE: To define the indications, procedure and documentation for airway management by Ventura County EMS personnel.
- II. AUTHORITY: California Health and Safety Code, §1798, §1798.2; §1798.160 and §1798.170 and California Code of Regulations, Title 22, §100145 and §100146.
- III. Policy: Airway management shall be performed on all patients that are unable to maintain their own airway. Paramedics may utilize oral endotracheal intubation on adult patients. Paramedics may utilize oral endotracheal intubation on pediatric patients who are longer than the standard pediatric weight and length tape. Pediatric patients who fit on a pediatric length and weight tape will not be intubated by pre-hospital personnel.
- IV. Definitions: Attempt: An interruption of ventilation, with, 1) laryngoscope insertion for the purpose of inserting an endotracheal tube (ETT), or 2) lifting of tongue for the purpose of insertion of a supraglottic airway device.
- V. Procedure:
  - A. Bag-Valve-Mask (BVM) ventilations
    1. Indications
      - a. Respiratory arrest or severe respiratory compromise
      - b. Cardiac arrest – according to VCEMS Policy 705
    2. Contraindications
      - a. None
    3. Equipment
      - a. Pediatric, below 15 kg (below white on Broselow or equivalent) infant BVM (240 ml with manometer) and mask with infant ETCO<sub>2</sub> adaptor (< 0.5ml sidestream, < 1ml mainstream).

- b. Pediatric, above 15 kg and below 36 kg (white through green on Broselow or equivalent) child BVM (500ml with manometer) with pediatric/adult ETCO<sub>2</sub> sidestream (6.6 ml) or adult mainstream adaptor (< 5 ml) adaptor.
- c. Adult and pediatric above 36 kg, small adult BVM (1,000 ml with manometer) and mask with pediatric/adult ETCO<sub>2</sub> sidestream adaptor or adult mainstream adaptor.

B. Endotracheal Intubation (ETI)

4. Indications

- a. Cardiac arrest – according to VCEMS Policy 705 – ONLY if unable to adequately ventilate with BVM
- b. Respiratory arrest or severe respiratory compromise **AND** unable to adequately ventilate with BVM
- c. After Base Hospital (BH) contact has been made, the BH Physician may order endotracheal intubation in other situations.

5. Contraindications

- a. Intact gag reflex.

6. Intubation Attempts

- a. There shall be no more than two (2) attempts to perform ETI, lasting no longer than 40 seconds each, and prior to BH contact. For patients in cardiac arrest, each ETI attempt shall interrupt chest compressions for no longer than 20 seconds.
- b. The patient shall be ventilated with 100% O<sub>2</sub> by BVM for one minute before each attempt.
- c. If ETI cannot be accomplished in 2 attempts, the VCEMSA approved supraglottic airway device will be inserted in accordance with policy 729.
- d. If attempts at ETI and the supraglottic airway device insertion are unsuccessful, the airway will be managed using BLS techniques..

7. Special considerations

- a. Flexible Stylet. A flexible stylet may be used for any ETI attempt that involves an ETT size of at least 6.0 mm.

1. Two Person Technique (recommended when visualization is less than ideal):
  - a. Visualize as well as possible.
  - b. Place stylet just behind the epiglottis with the bent tip anterior and midline.
  - c. Gently advance the tip through the cords maintaining anterior contact.
  - d. Use stylet to feel for tracheal rings.
  - e. Advance stylet past the black mark. A change in resistance indicates the stylet is at the carina.
  - f. Withdraw the stylet to align the black mark with the teeth.
  - g. Have your assistant load and advance the ETT tip to the black mark.
  - h. Have your assistant grasp and hold steady the straight end of the stylet.
  - i. While maintaining laryngoscope blade position, advance the ETT.
  - j. At the glottic opening turn the ETT 90 degrees counter-clockwise to assist passage over the arytenoids.
  - k. Advance the ETT to 22 cm at the teeth.
  - l. While maintaining ETT position, withdraw the stylet.
- 2) One Person Technique (recommended when visualization is good but cords are too anterior to pass ET tube).
  - a. Load the stylet into the ETT with the bent end approximately 4 inches (10 cm) past the distal end of the ETT.
  - b. Pinch the ETT against the stylet.
  - c. With the bent tip anterior, while visualizing the cords advance the stylet through the cords.
  - d. Maintain laryngoscope blade position.

- e. When the black mark is at the teeth ease your grip to allow the tube to slide over the stylet. If available have an assistant stabilize the stylet.
  - f. At the glottic opening turn the ETT 90 degrees counter-clockwise to assist passage over the arytenoids.
  - g. Advance the ETT to 22 cm at the teeth.
  - h. While maintaining ETT position, withdraw the stylet.
- b. Tracheal stoma intubation
- 1. Select the largest endotracheal tube that will fit through the stoma without force (it should not be necessary to use lubricant).
  - 2. Do not use stylet.
  - 3. Pass ETT until the cuff is just past the stoma.
  - 4. Inflate cuff.
  - 5. Attach the CO<sub>2</sub> measurement device to the ETT and confirm placement (as described below).
  - 6. Secure tube.
8. Confirmation of Placement – It is the responsibility of the paramedic who has inserted the ETT to personally confirm and document proper placement. Responsibility for the position of the ETT shall remain with the intubating paramedic until a formal transfer of care has been made.
- a. Prior to intubation, prepare the CO<sub>2</sub> measurement device (capnography).
  - b. Insert ETT, advance, and hold at the following depth:
    - 1. Less than 5 ft. tall: balloon 2 cm past the vocal cords.
    - 2. 5'-6'6" tall: 22 cm at the teeth.
    - 3. Over 6'6" tall: 24 cm at the teeth or 2 cm past the vocal cords.
  - c. After inserting the ETT, in the patient requiring CPR, resume chest compressions while confirming ETT placement.
  - d. Inflate the ETT cuff, attach the CO<sub>2</sub> measurement device, and begin ventilations. During the first 5-6 ventilations, auscultate both lung fields (in the axillae) and the epigastrium.



1. A regular waveform with each ventilation should be seen with tracheal placement. If the patient has been in cardiac arrest for a prolonged time (more than 5-10 minutes) the waveform may be diminished or, very rarely, absent. In the patient with spontaneous circulation, if a regular waveform with a CO<sub>2</sub> of 25 or higher is not seen, that is a strong indicator of esophageal intubation. If the CO<sub>2</sub> measurement device fails, and an alternative is not immediately available, use a colorimetric CO<sub>2</sub> detector.
  2. If a colorimetric CO<sub>2</sub> detector device is used for placement confirmation, observe the color at the end of exhalation after six ventilations. Yellow indicates the presence of >5% exhaled CO<sub>2</sub> and tan 2-5% CO<sub>2</sub>. Yellow or tan indicates tube placement in the trachea. Purple indicates less than 2% CO<sub>2</sub> and in the patient with spontaneous circulation, is a strong indicator of esophageal intubation.
- d. Using information from auscultation and CO<sub>2</sub> measurement, determine the ETT position.
1. If breath sounds are equal, there are no sounds at the epigastrium, and the CO<sub>2</sub> measurement device indicates tracheal placement, secure the ETT using an ETT holder.
  2. If auscultation or the CO<sub>2</sub> measurement device indicates that the ETT may be in the esophagus, immediately reevaluate the patient. If you are not CERTAIN that the ETT is in the trachea, the decision to remove the ETT should be based upon the patients overall clinical status (e.g., skin color, respirations, pulse oximetry)
  3. If breath sounds are present but unequal, the ETT position may be adjusted as needed.
- e. Once ETT position has been confirmed, reassessment using CO<sub>2</sub> measurement, pulse oximetry (if able to obtain), and auscultation of breath sounds should be performed each time patient is moved.
- f. Continue to monitor the CO<sub>2</sub> measurement device during treatment and transportation. If a change occurs from positive

(yellow/tan) to negative (purple), or the waveform diminishes or disappears, reassess the patient for possible accidental extubation or change in circulation status.

g. The typical normal range of exhaled carbon dioxide is 35-45 mmHg. Patients with underlying pulmonary conditions may have baseline values higher than this. Target 40mmHg if no known such history. Otherwise, higher values may be acceptable (40-50mmHg).

h. After confirmation of proper ETT placement, and prior to movement, all intubated patients shall have their head and neck maintained in a neutral position with head supports. A cervical collar will only be used if a cervical spine injury is suspected.



1. Reconfirm ETT placement after any manipulation of the head or neck, including positioning of a head support, and after each change in location of the patient.
2. Report to nurse and/or physician that the head support is for the purpose of securing the ETT and not for trauma (unless otherwise suspected).

9. Documentation

- a. All ETI attempts must be documented in the "ALS Airway" section of the Ventura County Electronic Patient Care Report (VCePCR).
- b. If a video laryngoscope is used, the video file will be uploaded per policy.
- c. All validated fields related to an advanced airway attempt shall be completed on the VCePCR. Anything related to the advanced airway attempt that does not have an applicable corresponding field in VCePCR, but needs to be documented, shall be entered into the report narrative. All data related to an advanced airway attempt (successful or not) shall be documented on a VCePCR. In addition, an electronic signature shall be captured on the mobile device used to document the care provided. The treating emergency room physician will sign the 'Advanced Airway Verification' section of the VCePCR, as well as document the

supporting information (placement, findings, method, comments, name, and date). In the event the patient was not transported, another on scene paramedic (if available) will sign and complete the verification section.

- d. Documentation of the intubation in the approved Ventura County Documentation System must include the following elements. The acronym for the required elements is “SADCASES.”
  1. Size of the ETT
  2. Attempts, number
  3. Depth of the ETT at the patient's teeth
  4. Confirmation devices used and results. For capnography, recording of waveform at the following points:
    - a. Initial ETT placement confirmation;
    - b. Movement of patient; and
    - c. Transfer of care.
  5. Auscultation results
  6. Secured by what means
  7. ETCO<sub>2</sub>, initial value
  8. Support of the head or immobilization of the cervical spine.  
An electronic upload of Cardiac Monitor data, including ETCO<sub>2</sub> waveform “snapshots” the VCePCR is required. In the event an upload cannot occur, a printed code summary, mounted and labeled, displaying capnography waveform at the key points noted above is required. This printed code summary shall be scanned and attached to the VCePCR.
10. Supraglottic Airway Device indications, contraindications, placement and documentation in accordance with policy 729.

COUNTY OF VENTURA HEALTH CARE AGENCY		EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES	
Policy Title: Transcutaneous Cardiac Pacing		Policy Number: 727	
APPROVED: Administration:	 Steven L. Carroll, Paramedic	Date: July 1, 2020	
APPROVED: Medical Director	 Daniel Shepherd, MD	Date: July 1, 2020	
Origination Date:	December 1, 2008	Effective Date: July 1, 2020	
Date Revised:	May 14, 2020		
Date Last Reviewed:	May 14, 2020		
Next Review Date:	May 31, 2022		

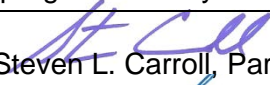

- I. PURPOSE: To define the indications, procedure and documentation for the use of transcutaneous cardiac pacing by paramedics
- II. AUTHORITY: Health and Safety Code, Sections 1797.220 and 1798. California Code of Regulations, Title 22, Sections 100145 and 100169.
- III. POLICY: Paramedics may utilize transcutaneous cardiac pacing (TCP) on adult patients (age > 12) in accordance with Ventura County Policy 705 – Symptomatic Bradycardia, Adult.
- IV. PROCEDURE:
  - A. Training: Prior to using TCP the paramedic must successfully complete a training program approved by the VC EMS Medical Director, which includes operation of the device to be used.
  - B. Indications: Symptomatic bradycardia (heart rate <45 with one or more of the following signs or symptoms):
    1. Altered level of consciousness
    2. Chest pain
    3. Abnormal skin signs
    4. Profound weakness
    5. Shortness of breath
    6. Hypotensive (Systolic BP < 90mm Hg)
  - C. Contraindications:
    1. Absolute
      - a. Asystole
    2. Relative:
      - a. Hypothermia – patient warming measures have precedence. (Base Hospital contact required).
  - D. Patient Treatment
    1. Patient assessment and treatment per 705: Bradycardia treatment protocol. If IV/IO access not promptly available, proceed to pacing.

2. Explain procedure to the patient.
3. Place pacing electrodes and attach pacing cable to pacing device per manufacturer's recommendations.
4. Set pacing mode to demand mode, pacing rate to 70 BPM, and current at 40 milliamps (mA), or manufacturer recommendation.
5. If required, provide patient pain relief. Patients with profound shock and markedly altered level of consciousness may not require pain relief
6. Activate pacing device and increase the current in 10 mA increments until capture is achieved (i.e., pacemaker produces pulse with each paced QRS complex).
7. Assess patient for mechanical capture and clinical improvement (BP, pulses, skin signs, LOC).

NOTE: Patients with high grade AV block (second degree type II or third-degree block) who do not have symptoms do not require pacing. However, equipment should be immediately available if symptoms arise. Patients with symptoms who respond initially to atropine should have pacing equipment immediately available.

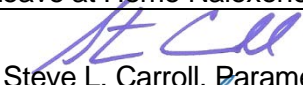
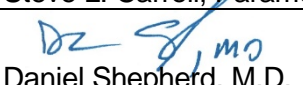
E. Documentation

1. The use of TCP must be documented.
  2. Vital signs must be documented every 5 minutes.
-

COUNTY OF VENTURA HEALTH CARE AGENCY		EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES	
Policy Title: Supraglottic Airway Devices		Policy Number: 729	
APPROVED: Administration:	 Steven L. Carroll, Paramedic	Date: July 1, 2020	
APPROVED: Medical Director:	 Daniel Shepherd, MD	Date: July 1, 2020	
Origination Date:	November 13, 2014	Effective Date: July 1, 2020	
Date Revised:	January 16, 2020		
Date Last Reviewed:	January 16, 2020		
Review Date:	January 31, 2020		

- I. Purpose: To define the indications and use of supraglottic airway devices.
- II. Authority: California Health and Safety Code, §1798, §1798.2; §1798.160 and §1798.170, and California Code of Regulations, Title 22, §100145 and §100146.
- III. Policy: Paramedics may utilize the VCEMSA approved supraglottic airway device (SAD) for adult and pediatric patients according to this policy and Policies 705 and 710. The VCEMSA approved SAD may be used as the primary advanced airway device by paramedics who opt to use it during the care of patients for whom they believe it would be the most appropriate airway management device. Alternately, the VCEMSA approved SAD shall be used if BVM ventilation is inadequate and attempts at endotracheal intubation have failed.
- IV. Procedure:
  - A. Indications:
    1. Cardiac arrest.
    2. Respiratory arrest or severe respiratory compromise AND absent gag reflex.
  - B. Contraindications:
    1. Intact gag reflex.
    2. Caustic ingestion
    3. Unresolved complete airway obstruction
    4. Trismus or limited ability to open the mouth such that the device cannot be Inserted
    5. Oral trauma
    6. Distorted anatomy that prohibits proper placement (e.g. oropharyngeal mass or abscess)

- C. Preparation:
  - 1. Sizing:
    - A. Choose correct size based on patient's weight and manufacturer's recommendations.
  - 2. There will be no more than 2 attempts, each no longer than 40 seconds.
  - 3. For patients in cardiac arrest, chest compressions will not be interrupted.
  - 5. Generously lubricate the cuff with a water-based lubricant.
- D. Placement:
  - 1. Remove dentures if present
  - 2. Tilt the patient's head back - unless there is a suspected cervical spine injury.
  - 3. Open the patient's mouth and insert the SAD per the manufacturer's recommendations. A laryngoscope may be used if laryngoscopy is performed to inspect for foreign body.
  - 4. Gently advance the SAD into position in the pharynx by applying forward pressure on the tip of the tube while lifting up on the jaw
  - 5. Return head to neutral position.
  - 6. Attach capnography airway adapter and bag-valve device and verify placement by capnography waveform.
  - 9. If 2 attempts at SAD placement are unsuccessful, attempt again to ventilate the patient with BVM.
  - 10. Secure the SAD with appropriate strap.
  - 11. If patient vomits, do not remove SAD. May turn patient on side, suction both SAD and oropharynx.
- E. Documentation:
  - 1. Documentation per Policy 1000.

COUNTY OF VENTURA HEALTH CARE AGENCY		EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES	
Policy Title: Leave at Home Naloxone Program		Policy Number 736	
APPROVED: Administration:	 Steve L. Carroll, Paramedic	Date: July 1, 2020	
APPROVED: Medical Director:	 Daniel Shepherd, M.D.	Date: July 1, 2020	
Origination Date:	March 12, 2020		
Date Revised:		Effective Date: July 1, 2020	
Date Last Reviewed:			
Review Date:	March 31, 2022		

- I. **PURPOSE:** To authorize ALS prehospital personnel to distribute naloxone kits to patients with suspected opioid misuse, or family/friends of these patients, and to delineate the process for distribution of naloxone to Ventura County ALS provider agencies.
- II. **AUTHORITY:** California Health and Safety Code, Sections 1797.220 and 1798; California Code of Regulations, Title 22, Sections 100146, 100169, 100170
- III. **POLICY:** The opioid crisis has had a profound impact on communities across the United States. This policy is part of a broader harm reduction strategy that attempts to mitigate the impact of the crisis by increasing the availability of Naloxone. ALS prehospital personnel may distribute naloxone kits to patients with suspected opiate misuse, or the friends/family of these patients. The appropriate training must be offered to the recipient at the time of distribution.
  - A. Indications
    1. Suspected opioid use misuse or self-reported dependence
    2. Patient is not transported
  - B. Contraindications
    1. Patient is transported
- IV. **PROCEDURE:**
  - A. Treat Patient in accordance with VCEMS policies and procedures
  - B. Once it has been determined that patient will refuse transport, AMA shall be processed and documented in accordance with VCEMS Policy 603 – Refusal of EMS Services.



- C. Once AMA process has been completed, the patient, or the patient's family/friends (must be present on scene) will be offered a leave-at-home naloxone kit, with clearly identified kit number and medication expiration date, and the relevant training
- D. Friends/family can be offered a kit if the patient is determined to be dead. Kits and training should be offered if the individuals at the scene appear to be at risk for opioid misuse. For example, they were using drugs with the patient or there is paraphernalia on scene. Document as outlined below.
- E. Recipient Training and Education
  - 1. If the naloxone kit is accepted, the patient and/or family and friends will be trained on the recognition of opioid overdose and on the administration of nasal naloxone.
  - 2. At a minimum, the training will consist of the following:
    - a) Signs and symptoms of an opioid overdose
    - b) Administration of nasal naloxone
    - c) Activating the 911 system
    - d) Basic CPR. Instruct the recipient how to perform chest compressions: "place your hands between the nipples and push hard and fast."
  - 3. Printed training materials and resources related to ongoing drug treatment services, including the Behavioral Health Department's 24/7 Access line will be left with patient or patient's family/friends at the scene.
- F. Documentation
  - 1. Information will be completed for both the patient contact, as well as the refusal of EMS services, in accordance with VCEMS Policy 1000 – Documentation of Patient Care.
  - 2. In addition to the standard ePCR documentation, additional fields related to the leave at home naloxone kit will also be documented via supplemental ePCR fields. At a minimum, these fields will include:
    - a) Name of Naloxone Kit Recipient
    - b) Recipient relationship to patient
    - c) Recipient phone number
    - d) Kit number on Naloxone kit provided

- e) Confirmation that training was provided to recipient and family/friends on scene
- f) Confirmation that addiction resources were left with recipient

G. Inventory

1. Distribution of leave at home naloxone will be tracked through the ePCR system, which means documentation is very important.
2. Nasal naloxone should not be distributed through standard inventory that is part of the day-to-day equipment (i.e. jump bags, supply cabinets, etc). These kits will be specially marked and tracked outside of the standard inventory process.
3. As nasal naloxone inventory is depleted through the leave at home program, replacement kits will be supplied by VCEMS to agencies on a one-for-one basis.