



3340 Glenwood Street, Eureka, CA 95501 (707) 445-2081 (800) 282-0088 FAX (707) 445-0443

MEMORANDUM:

DATE: May 1, 2008

TO: Joint Powers Governing Board Members
County Health Officers
Lake County Administrative Officer
Prehospital Care Medical Directors
Prehospital Care Nurse Coordinators
Fire Chiefs' Associations/EMS Liaisons
EMCC Chairpersons

FROM: Linn Tyhurst, Administrative Assistant

RE: E-Informational Mailing

1. POLICY CHANGE # 79



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CHANGE NOTICE

CHANGE #79

May 2008

TO: ALL PREHOSPITAL CARE POLICY MANUAL HOLDERS

INSTRUCTIONS	POLICY #	POLICY DESCRIPTION	# OF PAGES
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Subject: Medical Control
Automatic Defibrillation Scope of Practice and Protocol

I. Authority and Reference (incorporated herein by reference)

- A. Division 2.5 of the Health and Safety Code
- B. Title 22, Code of Regulations, Chapter 1.5 and 2 of Division 9.
- C. North Coast Emergency Medical Services Policies and Procedures.

II. Purpose

To define the regional scope of practice for pre-hospital use of automatic defibrillation by certified or accredited rescuers, and to establish protocol for the delivery of automated defibrillation. The protocol is a guideline that is not intended to incorporate every detail of basic life support and equipment operation. The term “automatic defibrillation” means fully automatic or semi-automatic defibrillation for the purpose of this Policy.

III. Automatic Defibrillation Scope of Practice

A. A rescuer with current and valid accreditation in the use of automatic defibrillation may apply and operate an automatic defibrillator and deliver countershock(s) according to the approved training and protocol.

1. INDICATION (when to apply an automatic defibrillator)

- a. unconscious
- b. pulseless and non-breathing patients)or patients with agonal respirations)
- c. One year old or older (if available, use an automatic defibrillator with pediatric settings and defibrillator pads).

****NOTE****

BLS USE IS LIMITED TO UNCONSCIOUS PATIENTS ONLY.

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ALS Rescuers (EMT-II, EMT-P, Physician) may place Leads II electrodes (if the automatic defibrillator is so equipped) on any patient when a cardiac monitor is indicated.

2. WARNING:

- a. Do not allow any person to touch the patient or any conduit to the patient, during shock delivery.
- b. Do not use in the presence of flammable gas.

IV. Automatic Defibrillation Protocol

- A. Assess the patient for unconsciousness and apnea. If unconscious and apneic, ventilate twice. If the airway is obstructed, relieve the obstruction and ventilate twice before proceeding to other treatment.
- B. Assess the patient for pulselessness. If pulseless, then application of the automatic defibrillator for rhythm assessment and shock delivery (if required) takes precedence over BLS when a single rescuer is delivering care.
- C. Turn the device on and operate it as trained to properly perform rhythm analysis.
- D. If additional rescuers are available to begin basic life support, the certified or accredited rescuer that is operating the automatic defibrillator should direct the other rescuers to perform CPR while the device is properly attached to the patient. The maintenance of sustained and effective CPR has been shown to be essential to dramatically increase chance of survival for victims of cardiac arrest. **Limit interruptions to CPR.**
- E. If no shock is indicated or automatically delivered, then administer CPR.
- F. If shock is indicated, administer one shock followed by CPR, beginning with chest compressions.
- G. If shock is indicated, it should be administered at a power setting in accordance with the device manufacturer's recommendations.
- H. After shock administration, begin five (5) cycles of CPR (approximately 2 minutes) and reanalyze the rhythm.
- I. If the device is Pediatric compatible, Pediatric defibrillation should be delivered at 2 Joules/Kg monophasic or appropriate WS for biphasic.
- J. Assure that no person is in contact with the patient or conduit to the patient during shock delivery.
- K. If a carotid pulse is present after defibrillation, then assure an open airway and ventilate (preferably with 100% oxygen).
- L. Establish a tape record or report of the resuscitation with the following information at a minimum:
 - a. Time the device was turned on.
 - b. Name of rescuer operating defibrillator

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- c. General description of patient
- d. Initial assessment of pulse and respiration
- e. Time and energy level of each defibrillation
- f. Time of change in pulse or respirations, and description of the change
- g. Time of ALS arrival and discontinuation of defibrillation use
- M. Remove the cassette (if so equipped) from the defibrillator after discontinuation of tape recording, and label it with the following:
 - a. Date
 - b. Patient name (if known)
 - c. Rescuer name
 - d. Public Safety name

- N. Do not transfer the tape to ambulance personnel. Mail or deliver tapes and reports directly to North Coast EMS within five (5) days of the incident.

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SUBJECT: Continuous Positive Airway Pressure (CPAP)

- I. Authority and Reference (incorporated herein by references)
 - A. Division 2.5 of Health and Safety Code
 - B. California code of Regulations, Title 22
 - C. North Coast EMS Policies and Procedures

- II. Purpose
 - A. To describe the use of Continuous Positive Airway Pressure (CPAP) devices in the prehospital setting.

- III. Policy
 - A. Only North Coast EMS approved ALS CPAP provider agencies may carry and employ CPAP devices.
 - B. Prior to receiving North Coast EMS CPAP approval, ALS provider must document that all that ALS provider agency's paramedic personnel have received adequate training in the use of the provider's CPAP device(s). Provider documentation should include information regarding the device(s) to be carried on provider's ambulances. All provider CPAP documentation must be endorsed by the Prehospital Care Medical Director of the Base Hospital (or Modified Base Hospital) to which that provider has been assigned. The North Coast EMS Medical Director **or** the (Modified) Base Hospital Prehospital Care Medical Director may rescind this approval at any time.
 - C. All paramedics must complete **at least 2 hours** of training on the use of CPAP.

- IV. Indications
 - A. Paramedics should consider CPAP for patients in severe respiratory distress. Signs of severe distress may include:
 1. Accessory muscle use/retractions;
 2. Oxygen saturation < 92% ;
 3. Respiratory rate > 24;
 4. Unable to speak in full sentences;
 5. Abdominal/paradoxical breathing; or
 6. Altered mentation.

- V. Contraindications
 - A. CPAP requires a patient who is breathing spontaneously and able to cooperate. The mask requires a good seal. CPAP may lower blood pressure, and should not be used with hypotensive patients. Contraindications include:
 1. Obvious need for endotracheal intubation;
 2. Hypotension (systolic BP < 90 mmHg), including unstable cardiac arrhythmia;
 3. Severe motion sickness (consider diphenhydramine chloride);
 4. Patients unable to cooperate;
 5. Suspected pneumothorax;

SUBJECT: Continuous Positive Airway Pressure (CPAP)

6. Facial deformity/trauma/unable to obtain seal;
7. Recent facial, neurologic or gastric surgery;
8. Actively vomiting patient;
9. Upper airway obstruction;
10. Age < 8 (or masks too large for the patient's face).

VI. Procedure

- A. Do not delay medications because of CPAP.
- B. Explain the procedure to the patient.
- C. Monitor patient oxygen saturation.
- D. Utilize other treatments for shortness of breath/pulmonary edema or COPD concomitantly, i.e. NTG, Albuterol, etc.
- E. Follow the manufacture's recommendations for mask placement and oxygen titration.
- F. Prepare for backup airway management (such as bag-valve-mask ventilation).
- G. Observe patient for signs of inability to tolerate therapy, such as decreasing oxygen saturation, and increasing anxiety and combativeness.

VII. Considerations

- A. Complications may include inducement of a pneumothorax.
- B. CPAP can only be used on conscious patients with COPD may have significant gas trapping and will be unable to maintain a sufficient inspiratory/expiratory ratio. Continued use of CPAP in these patients will result in pneumothorax. Consult the base hospital as needed.
- C. The effectiveness of CPAP should be apparent within five minutes. If CPAP is not effective, consider alternative interventions (i.e. bag-valve-mask ventilation, intubation).
- D. If suctioning is necessary, maintain the CPAP mask and use oropharyngeal suctioning.

VIII. Documentation

- A. Documentation on the Patient Care Record shall include the following:
 1. Reason for application of CPAP.
 2. Serial oxygen saturation monitoring.
 3. Impression of effectiveness of CPAP.

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SUBJECT: Combative Patient

- I. Authority and Reference (incorporated herein by references)
 - A. Division 2.5 of Health and Safety Code
 - B. California code of Regulations, Title 22
 - C. North Coast EMS Policies and Procedures

- II. Purpose
 - A. To ensure the safety of both the patient and the patient attendants when dealing with combative patients.

- III. Policy
 - A. The responsibility for patient health care management rests with the highest medical authority on scene. Medical intervention and patient destination shall be determined by EMS prehospital personnel in consultation with their assigned base hospital, alternative base hospital, or modified base hospital.
 - B. Prehospital personnel must consider that aggressive or violent behavior may be a symptom of medical conditions such as:
 - 1. head trauma,
 - 2. alcohol,
 - 3. drug related problems,
 - 4. metabolic disorders,
 - 5. stress and
 - 6. psychiatric disorders.
 - C. The following verbal de-escalation guidelines should be employed:
 - 1. Remain calm and friendly. Be aware of your emotions.
 - 2. Position yourself between the patient and your exit.
 - 3. Keep you hands in front of your body (Non-threatening Manner).
 - 4. Only one provider should communicate with the patient.
 - 5. Maintain a soothing tone of voice.
 - 6. Listen to the patient's concerns.
 - 7. Empathize. Use positive feedback.
 - 8. Be reassuring. Outline the patient's choices.
 - 9. Be willing to slow down and disengage if appropriate.
 - 10. Calmly set boundaries of acceptable behavior.
 - D. If physical restraints are required to ensure patient and/or attendant safety, North Coast EMS Patient Restraint Policy 6036 should be followed.
 - E. Once attendant and patient physical safety has been provided for, appropriate BLS and ALS treatment guidelines shall be followed for those conditions that require intervention.

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SUBJECT: **Destination for ST-Segment Elevation Myocardial Infarction Patients**

- I. Authority and Reference (incorporated herein by references)
 - A. Division 2.5 of Health and Safety Code
 - B. California code of Regulations, Title 22
 - C. North Coast EMS Policies and Procedures

- II. Purpose
 - A. To define the circumstances where under patients may be directly transported to a hospital especially equipped to treat ST-segment elevation myocardial infarction (STEMI) without prior base hospital authorization.

- III. Policy
 - A. Only North Coast EMS approved ALS provider agencies may initiate the direct transport of STEMI patients to a STEMI receiving facility without prior base hospital authorization.
 - B. Only patients determined by both symptoms (including but not limited to chest pain, shortness of breath, diaphoresis, etc. See VII. 2. below) and via 12-lead EKG to be candidates for STEMI intervention may be transported directly to a STEMI receiving facility without prior base hospital authorization.
 - C. Patients may only be transported directly to a STEMI receiving facility when transport to that facility will not increase the patient's total ground and/or air transport to hospital time by more than **60 minutes**.
 - D. When patient transport to a STEMI receiving center relies on patient transfer to a air medical transport agency, **uncertainty** as to the availability or estimated time of arrival ETA of air transport, particularly in regards to marginal or poor weather, **should preclude that air transport**. When transport time uncertainty exists, regardless of 12-lead EKG reading, all patients should be transported to the closest appropriate facility.

- IV. North Coast EMS approval of STEMI centers.
 - A. North Coast EMS approved STEMI centers are those facilities that have received the approval either of the North Coast EMS Medical Director **or** the Medical Director of the Local EMS Agency for the county or region in which that STEMI center is located.
 - B. Hospitals seeking North Coast EMS agency approval as a STEMI center should provide documentation demonstrating that that facility meets or exceeds a widely recognized State or National standard for STEMI centers. The North Coast EMS Medical Director will determine, after consultation with North Coast EMS regional participants and appropriate other medical specialists, whether that hospital meets the above noted standard. If the North Coast EMS Medical director determines that the hospital has not met the standard, the North Coast EMS Medical Director will, within 60 days of the hospital's

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submission of the above noted documentation, describe additional measures the hospital must undertake to attain approval.

- C. The North Coast EMS medical director, may probate, suspend or revoke North Coast EMS STEMI center approval from any hospital failing to maintain a widely recognized State or National standard for STEMI centers. (These standards may evolve over time.)
 - D. North Coast EMS will charge a STEMI center destination fee and ongoing maintenance fee as determined by the Governing Board.
- V. North Coast EMS approval of ALS provider agencies for direct STEMI transport.
- A. Only ALS provider agencies employing 12-lead EKGs may be approved as North Coast EMS STEMI approved ALS provider agencies.
 - B. Prior to receiving North Coast EMS STEMI transport approval, ALS provider must document that all that ALS provider agency's paramedic personnel have received adequate training in the use and interpretation of the provider agency's 12-lead EKG monitors. Documentation must be endorsed by the Prehospital Care Medical Director of the Base Hospital (or Modified Base Hospital) to which that provider has been assigned.
 - C. All paramedics must complete at least 8 hours of training on the use and interpretation of 12-lead EKG monitors.
 - D. The North Coast EMS Medical Director, may probate, suspend or revoke North Coast EMS STEMI transport approval of any ALS provider agency.
- VI. Procedure
- A. Patients suffering from chest pain or suspected Acute Coronary Syndrome (ASC) (See VII. 2. below) should receive prompt 12-lead analysis.
 - B. When 12-lead interpretation confirms the presence of a STEMI, transport to the nearest STEMI center should be arranged or initiated, provided that total transport time to that STEMI center will not exceed transport time to the nearest appropriate (though non-STEMI center) hospital by more than **60 minutes.**
 - C. Should possible delays arise during transport preparations or transfer of care to the air transport provider, or should the projected total additional transport time necessary to reach a STEMI center exceed **60 minutes,** the patient should immediately be transported to the nearest appropriate (though non-STEMI center) hospital.
- VII. Documenting the ALS provider initiated direct transport of patients to STEMI centers.
- A. The Patient Care Report (PCR) should include the following:
 - 1. Use of the "STEMI" option in the "EKG" or "ECG" pick list.

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2. A description of the signs and symptoms indicating that the patient was suffering from a suspected Acute Coronary Syndrome (ASC), including but not limited to:
 - a) Substernal chest pain
 - b) Discomfort or tightness radiating to the jaw, left shoulder or arm
 - c) Nausea
 - d) Diaphoresis
 - e) Dyspnea
 - f) Anxiety
 - g) Syncope/dizziness
 - h) Known treatment for ACS
3. Significant vital signs and physical findings.
4. Interpretation of the 12-lead EKG (leads, amount of ST elevation in millimeters, “confidence” in the 12-lead assessment).
5. Attach a copy of the EKG to the base (modified) Base hospital copy and the provider copy of the PCR.
6. If air transport is requested, a) the time of the request, b) the ETA provided by the air transport, c) the arrival time of the air transport, d) the “lift off” time of the air transport.

VIII. North Coast EMS retrospective evaluation of STEMI transports

- A. **STEMI approved ALS provider agencies must alert North Coast EMS via a faxed copy of the PCR and the accompanying 12-lead rhythm strip each time a transport to a STEMI center has been initiated without prior (modified) Base Hospital approval.**
- B. In conjunction with associated LEMSAs, hospitals and ground and air transport providers, North Coast EMS will review each STEMI transport for appropriateness and timeliness.

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