MEMORANDUM

DATE: **April 4, 2003**

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: **Charlotte Aros, Secretary**
RE: **INFORMATIONAL MAILING**

Enclosed for your information and review are the following items:

1. **POLICY CHANGE NOTICE #63** - Please incorporate the Cardiac Pacing Policies into your Policy, Procedures and Protocols Manual as directed in this notice.

   Please note that all policies associated with Cardiac Pacing are enclosed. However, use of Cardiac Pacing cannot occurred within the North Coast EMS Region until all of the following steps have been taken: A. Verification of training and receipt of special accreditation from North Coast EMS for each Medic. B. Execution by each ALS Provider interested in using Cardiac Pacing of the associated contract with North Coast EMS, which verifies proper training, equipment, documentation, etc. C. Written notification from each base hospital PCMD that all MICNs and ED MDs are oriented to prehospital use of Pacing. E. Formal written notice of activation form North Coast EMS on a hospital by hospital basis.

2. **NORTH COAST EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES (DRAFTS):**

   Refer any questions/comments to Larry Karsteadt or Pam Haynes for the following:
   1. **Policy #2309 – Patient Care Bypass Destination Determination**

   This draft policy was previously sent out for public comment but substantive input and are resending it. The primary change involves the clarification of the different management of unstable and stable patients relative to destination.

   Please review these draft policies and send your comments to North Coast EMS by May 19, 2003.

CHANGE NOTICE CHANGE #63

April 4, 2003

TO: ALL PREHOSPITAL CARE POLICY MANUAL HOLDERS

Note: Record change notice on Record of Change Form. Insert this change notice behind the record of change sheet.

INSTRUCTIONS	POLICY #	POLICY DESCRIPTION	# OF PAGES
Replace	#2204	Administration – Provider **LALS Supply and Equipment List**	3
Replace/Add	#6546	Scope of Practice/Procedure – Paramedic **External Cardiac Pacing**	2
Add	#2213	Administration – ALS Provider **Scope of Practice/Transcutaneous Cardiac Pacing**	2
Add	#3409	Training **Transcutaneous Cardiac Pacing Training Structure and Instructor Qualifications**	2
Add	#4803	Certification **Paramedic Scope of Practice Transcutaneous Cardiac Pacing**	2

Subject: Administration - Provider
LALS Supply and Equipment List

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
   D. State Emergency Medical Services Authority "Recommended Ambulance Equipment", contained in California Highway Patrol Ambulance Driver's Handbook (#CHP-894)

II. Purpose
To establish the regional minimum supply and equipment standard for any ambulance or emergency vehicle which responds as, or is held out as, an ALS or LALS unit. ALS or LALS units may exceed the equipment and supply quantities listed herein for procedures and medications which are within the certificate holder's scope of practice described in North Coast EMS Policy and Procedures. This policy is also intended to develop a mechanism for base hospitals to establish supply and equipment requirements which exceed the minimum standard for LALS provider within the Base Hospital's zone.

III. Minimum Equipment and Supplies
   A. Minimum Equipment:
   Equipment referred to in Section I. C. of this policy. All equipment referred to in this reference, including but not limited to "suggested" equipment, is mandatory.
      1. One (1) mobile or portable FCC approved radio which is capable of two-way communication on Med-Net frequencies 1 through 7.
      2. One (1) three-chambered pneumatic anti-shock garment.
      3. One (1) portable DC cardiac monitor/defibrillator which is capable of adult and pediatric monitoring and defibrillation through adult and pediatric-sized electrodes.
      4. One (1) each, laryngoscope with handle, spare batteries, and a spare light bulb.
      5. One (1) each, #4 straight and curved laryngoscope blade with light.
      6. One (1) each, #1 and #2 straight laryngoscope blade with light.
      7. One (1) each, adult and pediatric Magill forceps.
      8. One (1) each, adult and pediatric malleable stylet.
      9. One thermometer.
      10. One pulse oximeter (required only on "first-out" ambulances).
      11. One end tidal CO2 monior or esophageal detector device (EDD).
   B. Minimum Supplies:

Subject: Administration - Provider
LALS Supply and Equipment List

All supplies referred to in Section I.C. of this policy. All supplies referred to in this reference, including but not limited to "suggested" supplies, are mandatory.

1. One (1) each, esophageal obturator airway with mask, or esophageal gastric tube airway with mask and stomach tube or Esophageal/Tracheal Airway Device.
2. Electrodes and conductive medium for adult and pediatric monitoring and defibrillation.
3. Four (4) each, 14 gauge, 16 gauge, 18 gauge, 20 gauge, 22 gauge, and 24 gauge catheter over needle intravenous catheters.
4. One (1) venous constricting band with a width of at least one inch.
5. Alcohol preps, water resistant tape, and 2" x 2" gauze pads.
6. One (1) 20 ml syringe.
7. One (1) 10 ml syringe.
8. One (1) 3 ml syringe.
9. One (1) each, red, blue, green, and purple top Vacutainer tubes, or equivalent.
10. One (1) each, 18 gauge by 1 1/2 inch, 23 gauge by 1 inch, and 25 gauge by 5/8 inch hypodermic needles.
11. One (1) IV cap.
12. One (1) each, 2.5 mm through 9.0 mm endotracheal tubes (in 0.5 mm increments).
13. One (1) sterile suction catheter and glove pack for endotracheal suctioning.
14. Two (2) Epinephrine 1 mg in 1 ml (1:1000) ampules.
15. Four (4) Epinephrine 1 mg in 1 ml (1:10,000) preloads.
16. Two (2) each, 0.083% Albuterol Sulfate solution for inhalation in 3 ml unit dose bottles or equivalent.
17. Four (4) each, children's Aspirin (81 mg).
18. Four (4) Atropine 0.5 mg in 5 ml preloads or two (2) 1.0 mg in 10 ml preloads.
19. One (1) multi-dose vial Atropine 0.04 mg/ml containing at least 20 ml's.
20. One (1) Calcium Chloride 1 gm in 10 ml preload.
21. Two (2) Dextrose 50% in 50 ml preload.
22. Two (2) Dextrose 25% in 10 ml preload.
23. Two (2) each, Diazepam 10 mg in 2 ml or equivalent.
24. Two (2) Furosemide 20 mg in 2 ml ampules or equivalent.
25. One (1) 30 ml bottle Syrup of Ipecac.
26. Three (3) Lidocaine HCl 100 mg in 5 ml or 10 ml preload.

Subject: Administration - Provider
LALS Supply and Equipment List

27. One (1) Lidocaine HCl 2 gm in 10 ml preload or pre-mixed Lidocaine drip 4 mg/ml.
28. Two (2) Morphine Sulfate 10 mg in 1 ml vial, or 10 mg in 10 ml preloads.
29. One (1) bottle Nitroglycerine 0.4 mg (1/150 grain) sublingual tablets, or one (1) canister aerosol spray delivering 0.4 mg per meter-dosed spray.
30. Two (2) Sodium Bicarbonate 44.6 mEq in 50 ml preload.
31. Four (4) Naloxone 1 mg in/ml ampules, or one (1) multi-dose vial.
32. Two (2) normal Saline, 250 or 500 ml in a plastic container. (The Base Hospital Medical Director may at his/her option substitute 5% Dextrose in water 250 or 500 ml in a plastic container. If this option is exercised, the Medical Director of North Coast EMS shall be notified in writing.)
33. Four (4) normal Saline, 1000 ml in plastic containers.
34. Two (2) D5 ½ NS 500 ml or one (1) D5 ½ NS 1000 ml in plastic containers.
35. Two (2) each, 60 gtt/ml, 15 gtt/ml, and 10 gtt/ml intravenous infusion sets or equivalent.
36. One (1) small volume nebulizer, Puritan Bennett #0001140 or equivalent.
37. Fifteen (15) triage tags, Met Tag or equivalent.

IV. Additional Base Hospital Requirement

A Base Hospital may require an LALS provider within the base hospital's zone to maintain supplies and equipment which exceed these minimum requirements. If a base hospital seeks to require any additional inventory requirements, the base hospital shall:

A. Propose the additional requirements in writing with reasons and justification to the North Coast EMS Medical Director; and,
B. Copy the proposal to the affected LALS provider(s).
C. The North Coast EMS Medical Director will return a decision within forty-five (45) days unless additional time is required to receive comments regarding the base hospital proposal. All decisions will be made within ninety days (90) of receipt of proposal.

Approved: ______________________ Date: __________

Approved as to Form: ______________________ Date: __________

Subject: Scope of Practice/Procedure - Paramedic
External Cardiac Pacing

Associated Policies:

I. Actions

A. Substitute for the heart's auto-depolarizing function

II. Indications

A. Symptomatic bradycardia unresponsive to Atropine.
B. Symptomatic bradycardia where Atropine is not indicated (including Beta-Blocker overdose).
C. Third degree heart block (may be used prior to Atropine).
D. Patients in asystole or PEA on base hospital orders.

III. Contraindications

A. Should not be use on patients less than 12 years of age or less than 100 pounds.

IV. Adverse effects

A. Discomfort.

V. Procedure

A. External Cardiac Pacing may only be initiated or monitored by specifically trained EMT-Ps. Patients being externally paced may only be transported by ALS providers approved by North Coast EMS. External Cardiac Pacing approved providers must certify in writing to North Coast EMS that their External Cardiac Pacing approved EMT-Ps employing the procedure have been fully oriented to the provider's External Cardiac Pacing device.

B. Alert and oriented patients should have the procedure explained to them prior to initiation of External Cardiac Pacing in the field. Patients should be told that they may experience some discomfort and/or muscle twitching during pacing.

C. Sedation should be considered for conscious patients prior to field initiation of External Cardiac Pacing provided there are no contraindications. Sedative administration should not exceed minimal requirement to decrease patient discomfort and should never exceed corresponding North Coast EMS protocol maximum dosages unless on direct order of the base hospital physician.

Subject: Scope of Practice/Procedure - Paramedic
External Cardiac Pacing

Associated Policies:

D. External Cardiac Pacing electrode placement should be “anterior-posterior” according to manufacturer recommendations. Select for mode according to manufacture’s recommendations, adjust rate from between 60 and 90 PPM, and adjust current beginning at zero milliamperes (mA) and increasing until proper sensing and electrical and mechanical capture has been identified. Capture indicators include ECG changes (usually widening of the QRS and a tall, broad T-wave), corresponding pulse (should be palpated at the right carotid) and signs of improved perfusion.

E. Document patient vitals and any signs or symptoms of Symptomatic Bradycardia when initiating External Cardiac Pacing in the field. Record a rhythm strip prior to initiating External Cardiac Pacing in the field.

F. Document response to external pacing, including minimum energy level required for capture, rate applied (between 60 and 90 PPM), blood pressure, and other vital signs every ten (10) minutes.

VI. Precautions

A. Carefully monitor patient to ensure that mechanical capture is maintained.
B. Terminate External Cardiac Pacing only after consultation with the base hospital.

Subject: Administration- ALS Provider
Scope of Practice/Transcutaneous Cardiac Pacing

Associated Policies:

I. Authority and reference (incorporated herein by reference)
   A. Division 2.5 of the Health and Safety Code
   B. California Code of Regulations, Title 22
   C. North Coast Emergency Medical Services (NCEMS) Policies and Procedures

II. Purpose

To establish the procedure and requirements to authorize any North Coast EMS ALS service as a Paramedic Transfer Provider offering transcutaneous cardiac pacing. An authorization by NCEMS is required for any provider permitting this expanded scope of practice during Specialty Care Transfers or ALS responses in the field.

III. Procedures
   A. Any currently authorized NCEMS ALS Provider licensed and permitted to transport patients from within the NCEMS region may request transcutaneous cardiac pacing authorization.
   B. Authorizations to provide such service within the NCEMS region is contingent upon executing and maintaining a participation agreement with NCEMS, which includes:
      1. Abiding by all state laws, regulations and North Coast EMS policies, procedures and protocols.
      2. Ensuring that only authorized paramedics affiliated with the provider are allowed to initiate and monitor transcutaneous cardiac pacing.
      3. Ensuring that each authorized paramedic is oriented to and at all times proficient in the use of the transcutaneous cardiac pacemaker.
      4. Ensuring that each authorized paramedic utilizing this procedure completes the required documentation on the North Coast EMS computerized PCR system.
      5. Providing written verification submitted to North Coast EMS with the agreement of the participation of the assigned base hospital. Base hospital participation includes written assurance by the hospital Prehospital Care Medical Director that all emergency department physicians and MICNs are oriented to this program and prepared to provide medical direction and quality improvement review relative to the operation of a transcutaneous cardiac pacemaker.
   C. Only NCEMS authorized providers are allowed to utilize paramedics for this purpose.

Subject: Administration- ALS Provider
Scope of Practice/Transcutaneous Cardiac Pacing

Associated Policies:

D. The service provider must maintain a record, including a computer written patient care report (PCR), of each utilization of the transcutaneous cardiac pacemaker.
E. Both the base Hospital and ALS provider shall review each such utilization via its own Continuous Quality Improvement (CQI) process. North Coast EMS reserves the right to audit the service provider's records involving utilization of transcutaneous cardiac pacing for CQI purposes.

PLEASE NOTE- A PUBLIC SAFETY AGENCY OR PRIVATE SECTOR AMBULANCE SERVICE IS NOT ALLOWED TO FUNCTION AS A SERVICE PROVIDER OF TRANSCUTANEOUS CARDIAC PACING IN THE NORTH COAST EMS REGION UNLESS THAT AGENCY HAS BEEN APPROVED. FUNCTIONING WITHOU A CURRENT AND VALID PARTICIPATION AGREEMENT WITH NORTH COAST EMS IS A VIOLATION OF CLAIFORNIA LAWS.

Subject: Training
Transcutaneous Cardiac Pacing Training Structure and Instructor Qualifications

Associated Policies:

I. Authority and Reference (incorporated herein by reference)
   A. Division 2.5 of the Health and Safety code
   B. California code of Regulations, Title 22
   C. North Coast Emergency Medical Services Policies and Procedures

II. Purpose
To establish regional time and content requirements for a North Coast EMS approved training program in transcutaneous cardiac pacing, including training program and personnel qualifications.

III. Training Program Qualifications
Training programs in transcutaneous cardiac pacing may be sponsored by any of the following regional institutions:
   a. Accredited universities and colleges, school districts, regional occupational training programs, and private post-secondary schools.
   b. North Coast EMS designated base hospitals.
   c. North Coast EMS authorized ALS Providers.
   d. North Coast EMS

IV. Training Program Personnel Qualifications
Each training program in transcutaneous cardiac pacing is required to have:
   A. A Program Director who is qualified by education and experience in methods, materials, and evaluation of instruction.
   B. A Clinical Coordinator who shall be a physician, physician assistant, registered nurse, or paramedic licensed by the State of California with two (2) years experience in emergency medical care of prehospital care in the last five (5) years
   C. A Principal Instructor who shall be a current California licensed physician, physician assistant, or registered nurse. The Principal Instructor shall have at least two (2) years academic or clinical experience in the practice of emergency medical care or prehospital care in the last five (5) years.
   D. The training program may have one or more teaching assistants, who are qualified by training and experience to assist with the teaching of the course.

V. Training Program Length
   A. North Coast EMS approved training program in transcutaneous cardiac pacing will be four (4) hours in length, at a minimum.

Approved: ______________________________ Date: ______________

Approved as to Form: ______________________________ Date: ______________

Subject: Training
Transcutaneous Cardiac Pacing Training Structure and Instructor Qualifications

Associated Policies:

VI. Course Content

A. The training program in transcutaneous cardiac pacing shall include approximately two (2) hours of lecture, one (1) hour of skills demonstration and practice time wherein the ability to appropriately manage and assess patients requiring pacing will be reviewed. In order to demonstrate proficiency, the participant must successfully complete ALL identified criteria in EACH of the skills scenarios. The training program will also include approximately one half (0.5) hours for a North Coast EMS approved written examination, which must be passed (80% or above) by each student prior to accreditation in this procedure.

B. The minimum course content includes:

1. Lecture
   a. Program overview: purpose, accreditation procedure, base hospital and provider role, etc.
   b. Review of the heart's conduction system.
   c. General indications for initiation of cardiac pacing.
   d. Documentation requirements of transcutaneous cardiac pacing using the PCR form.

2. Skills demonstration and practice
   a. Proper electrode placement
   b. Ability to adjust rate and mA to achieve capture.
   c. Assessment skills of both mechanical and electrical capture.
3. Skills proficiency review
4. Written examination

VII. Eligibility to Enter the Training Program

a. Any individual entering a North Coast EMS approved training program in transcutaneous cardiac pacing shall, at a minimum:
   1. Be currently accredited in the North Coast EMS region as an EMT-P.
   2. Be affiliated with a transporting North Coast EMS authorized ALS Provider.

B. Documentation of the above requirements must be submitted when requesting North Coast EMS accreditation in this procedure.

Approved: ______________________________ Date: ______________

Approved as to Form: ______________________________ Date: ______________

Subject: Certification - Paramedic Expanded Scope of Practice
Transcutaneous Cardiac Pacing

Associated Policies:

I. Authority and Reference (incorporated herein by reference)
   A. Division 2.5 of the Health and Safety Code
   B. California Code of Regulations, Title 22
   C. North Coast Emergency Medical Services Policies and Procedures

II. Purpose
To allow North Coast EMS "Expanded Scope of Practice" Paramedics to utilize transcutaneous cardiac pacing within the North Coast EMS region, consistent with California State laws, regulations and North Coast EMS policy and protocol. Transcutaneous cardiac pacing may be initiated in the field or monitored during an Interfacility Specialty Care Transfer originating within the North Coast EMS region.

III. Accreditation Procedure
   A. General eligibility criteria:
      1. Applicant must document current North Coast EMS issued EMT-P accreditation.
      2. Applicant must document current affiliation with a North Coast EMS approved ALS provider.
      3. Applicant must document successful completion of a North Coast EMS approved training program in transcutaneous cardiac pacing, including a score of 80% or above on the written examination and successful demonstration of skills proficiency, or document successful completion of an equivalent approved training program conducted elsewhere in California or another state, within two (2) years prior to applying for accreditation.
      4. Applicant must submit to North Coast EMS above documentation including the signature of all North Coast EMS approved ALS providers were applicant will use such accreditation.

   B. The effective date of accreditation for transcutaneous cardiac pacing shall be the date the applicant satisfactorily completes all of the accreditation requirements and has applied for accreditation. The accreditation expiration date will be the same expiration date as the current EMT-P accreditation card.
   C. Accreditation shall be valid as long as the following criteria are met:
      1. Current North Coast EMS EMT-P accreditation is maintained; **AND**
      2. Current affiliation with a North Coast EMS Approved ALS Provider is maintained.

Approved: ______________________________ Date: ______________

Approved as to Form: ______________________________ Date: ______________

Subject: Certification - Paramedic Expanded Scope of Practice
Transcutaneous Cardiac Pacing

Associated Policies:

IV. Reinstatement Procedure

Accreditation for transcutaneous cardiac pacing may be reactivated by fulfilling the following requirements:

A. Inactive status due to failure to maintain current EMT-P licensure or North Coast EMS accreditation shall be resolved by submitting proof of current EMT-P licensure or accreditation to North Coast EMS.
B. Inactive status due to failure to maintain employment or active volunteer status with a North Coast EMS approved ALS provider shall be resolved by submitting documentation to NCEMS the signatures of all North Coast EMS approved service providers of such skill where applicant will use such accreditation.

PLEASE NOTE- AN INDIVIDUAL IS NOT ALLOWED TO FUNCTION AS AN ACCREDITED PROVIDER OF TRANSCUTANEOUS CARDIAC PACING WITHIN THE NORTH COAST EMS REGION UNLESS (S)HE HOLDS A CURRENT AND VALID NORTH COAST EMS-ISSUED ACCREDITATION IN SUCH PROCEDURE. AN EXPIRED ACCREDITATION IS NEITHER CURRENT NOR VALID. FUNCTIONING WITHOUT A CURRENT AND VALID ACCREDITATION IS GROUNDS FOR DISCIPLINARY ACTION AND IS A VIOLATION OF 1797.177 OF THE CALIFORNIA HEALTH AND SAFETY CODE.

Approved: ____ Date: ______________

Approved as to Form: ____________________________________ Date: ______________

Subject: Patient Care
Bypass and Destination Determination

Philosophy:
It is understood that the care of emergency patients has the highest priority. Therefore, in the event a patient's care can be enhanced, a patient may bypass a facility with the intention to improve their outcome. This may be due to trauma triage, a medical condition, a multiple-casualty incident, a private physician's location, a patient's preference, or in the event of a catastrophic internal hospital disaster. An overwhelmed Emergency Department or lack of inpatient beds will not be a sufficient reason to bypass a medical facility.

Authority and Reference (incorporated herein by reference)

A. Division 2.5 of the Health and Safety Code
B. California Code of Regulations, Title 22
C. North Coast Emergency Medical Services Policies and Procedures
D. American College of Emergency Physicians established guidelines

II. Purpose:
To provide guidelines for temporary bypass of emergency departments and define guidelines for determining patient destination.

III. Policy:

A. Unstable medical patients will be transported to the closest appropriate facility. The prehospital emergency medical care personnel under the direction of the base hospital or alternate base hospital physician will determine this. In the event of an MCI, exceptions may be made in an effort to appropriately distribute patients and optimize care.
B. Injured patients who meet the conditions established in the Prehospital Trauma Triage Criteria, will be transported according to the guidelines established in policy #XXXXX, Trauma Transport Destination Guidelines Policy.
~~C.~~ Medically stable patients will most often be transported to the closest facility due to the geographic location of hospitals in the North Coast EMS region. However, a base hospital MD may determine that a patient will be better served at another facility and authorize bypass for the following reasons:
    1. Availability of specialty care. (i.e. neurosurgical services, orthopedics, dialysis)
    2. A patient's private physician is waiting at another facility.
    3. A patient's preference.

D. Patients may bypass a facility in an effort to provide wide patient distribution during an MCI or disaster.

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Subject: Patient Care
Bypass and Destination Determination

E. The declaration of activating a complete Emergency Department bypass will be limited to catastrophic internal disaster.

IV. Considerations:

A. Temporarily overwhelmed Emergency Departments, and lack of inpatient or ICU beds at a receiving facility are not sufficient reasons to implement Emergency Department bypass.
B. Patients who are in extremis will be accepted by the closest facility regardless of their bypass status.
C. Only the base hospital physician is authorized to initiate a bypass.
   1. The base hospital shall retain ultimate authority in determining ambulance destination if they feel the patient could deteriorate as a result of bypassing another facility.
D. Ambulances should not be unduly removed from their service areas.
E. Bypassed Hospital Responsibilities:
   1. Establish prior contact with receiving hospital to ensure notification and acceptance of patient, preferably base hospital physician to base hospital physician.
   2. If a catastrophic internal disaster has occurred:
      a. At all times be accountable for all facility functions, such as inpatient bed capabilities/capacity, discharges, transfers, staffing, equipment, physical plant operations, vital services, etc. through activation of internal disaster policy.
      b. Notify the Office of Emergency Services
   3. A record of bypassed patient's should be maintained by the hospital after each episode. This must include a record of appropriate approval, reason for bypass, and date/time. The bypass log should undergo periodic physician review.
F. Issues of non-compliance with this policy should be reported to North Coast EMS where they will be handled on an individual basis.

V. Documentation:

A. Any patient requesting transport to a facility other than that recommended by the base hospital physician should be asked to sign an Against Medical Advice (AMA) release. Efforts to persuade the patient to follow the base hospital physician's recommendation should be documented in the PCR narrative by the responding prehospital personnel.

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