

MEMORANDUM

DATE: July 11, 2002

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: Helena Neary, Secretary

RE: INFORMATIONAL MAILING

Enclosed for your information and review are the following items:

1. **POLICY CHANGE NOTICE #59** - Please incorporate this into your Policy, Procedures and Protocols Manual as directed in this notice.
2. **NORTH COAST EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES (DRAFTS):**

Refer any questions/comments to Wendy Chapman for the following:

1. Policy #3004 – Training LALS/ALS Field Internship Procedure

Refer any questions/comments to Larry Karsteadt for the following:

2. Policy #2211 – Administration – Provider Response Guidelines for BLS/Early Defibrillation/ALS Providers

Refer any questions/comments to Louis Bruhnke for the following:

1. Policy # TBA –Scope of Practice/Procedure- Paramedic External Cardiac Pacing
2. Request for Approval Undefined Scope of Practice Form # EMSA-0391
3. External Cardiac Pacing Training Outline

Please review these draft policies and send your comments to North Coast EMS,
by **August 11, 2002**.

3. FOR YOUR INFORMATION:

- A. California Hospital Bioterrorism Response Planning Guide.
- B. Comments on Pre-Public Comment EMT-II Regulations.
- C. General Fund Grant #1035, FY 2001-2002 Third Quarter Progress Report.

4. INFORMATION REQUEST:

In order to cut costs for photocopying and mailing documents and/or correspondence, North Coast EMS is requesting that all providers and associates who have e-mail addresses please provide your e-mail address to Helena Neary, emssec@northcoast.com.

CHANGE NOTICE

CHANGE #59

July 11, 2002

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	# 6544	Scope of Practice/Procedure Monitoring Intravenous Heparin Infusions	2
Replace	#6545	Scope of Practice/Procedure – Paramedic Monitoring Intravenous Nitroglycerin Infusions	2
Replace	#4002	Fee Schedule	4

Subject: Scope of Practice/Procedure - Paramedic
Monitoring Intravenous Heparin Infusions

Associated Policies: signed 6-21-02

- I. Actions
 - A. Anticoagulant.
 - B. Metabolized in the liver; excreted in urine; half-life of 30-180 minutes.
 - C. IV onset of action immediate; peak 5 minutes; duration 4-6 hours.

- II. Indications
 - A. Prevention and/or treatment of all types of thromboses and emboli, including deep vein thrombosis (DVT), pulmonary emboli (PE), and embolization associated with atrial fibrillation.
 - B. Adjunct in treatment of coronary occlusion with acute myocardial infarction (MI).
 - C. Prevention of rethrombosis or reocclusion during MI after thrombolytic therapy.
 - D. Prevention of clotting in surgery of the heart or blood vessels, during blood transfusion, and hemodialysis.
 - E. Treatment of disseminated intravascular coagulation (DIC).
 - F. Maintain patency of peripheral and central IV lines, catheters, and ports.

- III. Contraindications
 - A. Absolute
 - 1. Sensitivity to heparin.
 - 2. Blood dyscrasias or bleeding disorders, e.g., hemophilia, severe thrombocytopenia.
 - 3. Uncontrolled bleeding except DIC.
 - B. Relative
 - 1. Any disease state where risk of hemorrhage may be increased
 - 2. Aneurysm.
 - 3. Severe hypertension.
 - 4. Diverticulitis or ulcerative colitis.
 - 5. Severe hepatic disease or renal disease.
 - 6. Subacute bacterial endocarditis
 - 7. Following major surgery or spinal tap.

- IV. Adverse effects
 - A. Hemorrhage at any site, but may be manifested as easy bruising, petechiae, epistaxis, bleeding gums, hemoptysis, hematuria, melena, vaginal bleeding.
 - B. Fever, chills (due to sensitivity).
 - C. Abdominal cramps, nausea/vomiting, diarrhea (due to sensitivity).
 - D. Rash, urticaria, anaphylaxis (due to sensitivity).

Subject: Scope of Practice/Procedure - Paramedic
Monitoring Intravenous Heparin Infusions

Associated Policies:

V. Administration

- A. Infusions containing heparin may only be monitored by specifically trained EMT-Ps. Patients with IV heparin infusions monitored by EMT-Ps may only be transported by ALS providers approved by North Coast EMS.
- B. Heparin may not be started or added to an IV solution. Patient has a pre-existing heparin infusion in a peripheral or central IV line. (Infusion was initiated by physician or medical staff.)
- C. **EXCEPTION:** If heparin administration is interrupted (IV infiltration, accidental disconnection, etc.), the paramedic may restart the IV line and resume infusion as per transfer orders.
- D. Heparin infusion has been running for at least thirty (30) minutes prior to transport and patient is hemodynamically stable at time of transport.
- E. Patient may not have received thrombolytic therapy (e.g., TPA) within six hours, unless accompanied by an RN for transport.
- F. Patient does not have more than two (2) medicated infusions running, **exclusive** of potassium chloride (KCl).
- G. Maximum concentration of heparin that can be monitored is 100 units/cc of IV fluid. (Normally pre-mixed at 25,000 units/500cc D5W.)
- H. Infusion rate not to exceed 2000 units/hour.
- I. Must use infusion pump for accuracy.
- J. Heparin infusion rate will remain constant during transport. **No regulation of the rate will be performed except to turn off the infusion completely.**
- K. Notify base hospital immediately if patients shows evidence of any of the following conditions:
 - 1. Hemorrhage at any site.
 - 2. Possible cerebral hemorrhage, including:
 - a) Altered level of consciousness.
 - b) Severe headache
 - c) Symptoms of increasing intracranial pressure (ICP).

VI. Precautions

- A. Use with caution in the following patients:
 - 1. Pregnant
 - 2. Alcoholic (due to decreased hepatic function)
 - 3. Elderly (due to decreased hepatic and renal function and increased injury capability)
- B. Avoid IM injections or other procedures that might cause bleeding.
- C. Move patient gently to avoid bruising or bleeding.

Approved: _____
Approved as to Form: _____

Date: _____
Date: _____

Subject: Scope of Practice/Procedure - Paramedic
Monitoring Intravenous Nitroglycerin Infusions

Associated Policies:

signed 6-21-02

- I. Actions
 - A. Class: Nitrate.
 - B. Vasodilator and vascular smooth muscle relaxant.
 - C. Reduces myocardial oxygen consumption, preload, and afterload.
 - D. Metabolized by the liver; excreted in urine; half-life of 1-4 minutes.
 - E. IV onset of action immediate; duration variable.

- II. Indications
 - A. Unstable angina pectoris.
 - B. Relief of persistent chest pain that does not respond to first-line medications.
 - C. Congestive heart failure.
 - D. Hypertensive emergencies.

- III. Contraindications
 - A. Sensitivity to nitrates.
 - B. Increased intracranial pressure (ICP), e.g., from head trauma, hemorrhagic CVA or other cerebral hemorrhage.
 - C. Hypotension.
 - D. Uncorrected hypovolemia.
 - E. Use of sildenafil citrate (Viagra) within 24 hours.

- IV. Adverse effects
 - A. Hypotension, especially postural hypotension (from vasodilation).
 - B. Dizziness, syncope (from hypotension).
 - C. Pallor, sweating (from hypotension).
 - D. Temporary pulsating headache (from vasodilation).
 - E. Nausea/vomiting.
 - F. Tachycardia (in response to hypotension).
 - G. In rare instances may cause paradoxical bradycardia.
 - H. Rash or anaphylaxis, if hypersensitive to drug.

- V. Administration
 - A. Infusions containing nitroglycerin may only be monitored by specifically trained EMT-Ps. Patients with nitroglycerin infusion monitored by EMT-Ps may only be transported by ALS providers approved by North Coast EMS.
 - B. Nitroglycerin may not be started or added to an IV solution. Patient must have pre-existing nitroglycerin infusion in a peripheral or central IV line. (Infusion was initiated by physician or medical staff.)
 - C. **EXCEPTION:** If nitroglycerin administration is interrupted (IV infiltration, accidental disconnection, etc.), the paramedic may restart the IV line and resume infusion as per transfer orders.

Subject: Scope of Practice/Procedure - Paramedic
Monitoring Intravenous Nitroglycerin Infusions

Associated Policies:

- D. Nitroglycerin infusion has been running for at least thirty (30) minutes prior to transport and patient is hemodynamically stable at time of transport.
 - E. Patient does not have more than two (2) medicated infusions running, **exclusive** of potassium chloride (KCl).
 - F. Rate of administration is titrated to patient pain relief response, typically starting at 10 mcg/minute and increasing in 5 mcg increments every 3-5 minutes until response is noted. ***Be alert for developing hypotension.***
 - G. Once pain relief response is noted or blood pressure response observed, any change in infusion rate should be made at 5-10 minute intervals.
 - H. Document pain level, blood pressure, and other vital signs both before and after any change in infusion rate.
 - I. **In no case will changes in infusion rate during transport be greater than 10 mcg/minute increments every 5-10 minutes.**
 - J. Must use infusion pump for accuracy.
 - K. Discuss with physician concomitant use of analgesics during transport, e.g. IV morphine sulfate.
 - L. Maximum infusion of nitroglycerin not to exceed 100mcg/min.
- VI. Precautions
- A. Use with caution in patients with the following conditions:
 - 1. Pregnant or lactating.
 - 2. Hepatic or renal disease.
 - 3. Pericarditis.
 - 4. Postural hypotension.
 - B. Glass infusion bottles and non-polyvinyl tubing must be used as plastics will absorb nitroglycerin.
 - C. Do not use in-line filters.
 - D. Do not mix with any other medication.

Approved: _____

Date: _____

Approved as to Form: _____

Date: _____

Subject: Certification
Fee Schedule

Associated Policies:

- I. Authority and Reference (incorporated herein by references)
 - A. Division 2.5 of Health and Safety Code
 - B. North Coast EMS Policies and Procedures

- II. Purpose
To establish a fee schedule and policy for all certification levels.

- III. The following schedule of fees are established to offset costs; all fees are payable in advance:

EMT-I (Re)certification	\$ 20.00
EMT-I Skills Test & Retest	100.00
EMT-I written test for recertification or retest	20.00
EMT-II (Re)certification	50.00
EMT-II Test & Retest	50.00
EMT-P Accreditation (including cases when there has been a lapse of accreditation)	50.00
EMT-P Reaccreditation, when there has been a lapse of accreditation, but EMT-P is still within the same two (2) year licensure cycle.	25.00
Extension of Accreditation Time Limit Without Cause	25.00
Special Care Transfer Paramedic Accreditation (Hep/Nitro)	20.00
MICN (Re)authorization	50.00
MICN Skills Test & Retest	35.00
Written Retest	20.00
Reactivation from LOA	15.00
Card Replacement	10.00
Suspension Reinstatement	25.00
Special Test	50.00
“Rush” of Certification, Accreditation or Authorization Card	15.00
Returned Check	25.00
First Responder Program Approval (Fee charged for private organizations with a recognized role in first aid or prehospital care training only.)	25.00

North Coast EMS will deduct a 20% administrative fee from all certification fees that are returned because applicant decides not to certify/authorize after the background investigation has been initiated.

Subject: Certification
Fee Schedule

- IV. Policy (for initial, recertification/authorization, and all retests)
- A. Test registration must be received by North Coast EMS at least fourteen (14) days prior to the scheduled test date. If registration is not received fourteen (14) days prior to the requested test session, registrant will be given the choice of attending the next regularly scheduled EMS testing session.
 - B. Test registration must be submitted with the necessary certification/testing fee, plus a separate check of \$25.00 (or cash), made out to North Coast EMS. The \$25.00 will be returned to registrant when (s)he arrives at the scheduled test session. If unable to attend test session, the \$25.00 will be returned only if registrant cancels by calling North Coast EMS at least twenty-four (24) hours prior to the test session (s)he has scheduled. If registrant does not arrive for the scheduled test session without a twenty-four (24) hour prior notification, the \$25.00 will be forfeited. An additional \$25.00 must be submitted with every test session registration.
 - C. If there is a group of four (4) or more individuals who are in need of a recertification test and would like to be tested as a group on a day other than a regularly scheduled testing session applicants shall write a letter to North Coast EMS at least fourteen (14) days in advance of desired testing date.
 - 1. The letter of request must contain:
 - a. The names of all interested individuals.
 - b. The level of test needed for each applicant listed.
 - c. The test registration fee and appropriate certification/authorization fee from each applicant listed.
 - d. The date that the group would like to be tested.
 - e. The location at which the group would like to be tested.
 - 2. This test session shall be for recertification and involve the written test only.
 - 3. The test date will be set subject to North Coast EMS staff availability.
 - E. Certification fees are waived for active North Coast EMS regional firefighters applying for EMT-I. Documentation will be met by including the Fire Chief's signature on the application. (CDF seasonal and Forest Service firefighters are not eligible for this waiver.)
 - F. "Volunteers" may request a waiver of certification fees by sending a letter of waiver request to North Coast EMS with the certification application.

Subject: Certification
Fee Schedule

The letter must state the applicant's name, address, phone number, provider agency affiliation, and that at no time do they receive money for performing patient care in the field. The waiver request will be evaluated by the North Coast EMS Executive and/or Medical Director(s). The decision will be final unless an appeal is presented to the Joint Powers Governing Board.

- G. If EMT-I certification fees are paid by a personal check, certification will be held for thirty (30) days from the date of receipt of the check.
- H. Allow at least thirty (30) days upon receipt of a completed application by North Coast EMS for a certificate to be issued. An individual may request that his/her certification/accreditation/authorization card be processed sooner, or that we rush the process and call the employer immediately to confirm certification/accreditation/ authorization, by requesting "Rush" in writing, and enclosing an additional \$15.00 Rush Fee, payable by cash or money order only. In this case, we will call the employer immediately after confirming certification, accreditation or authorization, and the certification card will be processed within ten (10) working days of North Coast EMS receipt of the completed application, written "Rush" request, and fee.
- I. No EMT-I, EMT-II, EMT-P, or MICN will exercise his/her skills unless they are currently certified/authorized/accredited. The certification/accreditation/authorization requirements include the submittal of the appropriate paperwork and fee. If a check covering the fee is returned by the bank for any reason, the individual will be immediately suspended for a thirty (30) day period and will be required to pay the Returned Check Fee of \$25 and any other associated costs. (The thirty (30) day suspension begins upon written notification from North Coast EMS and, as long as returned check fee and any other associated costs are paid, ends thirty calendar days later. North Coast will also notify employer and base hospital by phone.)
- J. There is no provision for extension of expiration dates on certifications. When an individual's certification/authorization/accreditation card expires, the individual is no longer certified/authorized/accredited and is no longer allowed to function at their former level of certification/authorization/accreditation.

Subject: Certification
 Fee Schedule

- K. The fee for a returned check is \$25.00. If an individual's check is returned by the bank, North Coast EMS will not accept a check from, or extend credit to, that individual in the future.

- L. Special Care Transfer Paramedic Accreditation fee is in addition to the initial accreditation fee. This accreditation will allow individuals to transfer patients who require an established Nitro/Heparin drip. This fee must be accompanied by the appropriate application and paramedic's are not allowed to function in this capacity without North Coast EMS authorization.

Subject: Training
LALS/ALS Field Internship Procedure

Associated Policies: 4005

- 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
To provide a system for allowing Limited Advanced Life Support (LALS) and Advanced Life Support (ALS) field internship within the North Coast EMS region.

- III. Policy
 - A. ~~All EMT-II and paramedic students and challenge candidates desiring to complete an evaluated field internship within the North Coast EMS region during the process of becoming licensed, certified and/or accredited, or for remedial purposes, must receive prior written approval from North Coast EMS prior to beginning the field internship.~~
 - B. If the individual is a student, the EMT-II or paramedic training program must have a written agreement with the field service provider prior to allowing the evaluated field internship.
 - C. By law, all training programs, including those located outside the region, must notify North Coast EMS prior to their students beginning an evaluated field internship within the North Coast EMS region.
 - D. North Coast EMS, the California EMS Authority and/or the base hospital Prehospital Care Medical Director and Nurse Coordinator may require remedial training which might include an evaluated field internship with a regional LALS/ALS service provider agency.

- IV. Procedure
 - A. It is the responsibility of the training institution to assign student interns to approved field service providers, and the responsibility of the intern to make arrangements for the evaluated field internship with approved field service providers.
 - B. All applicants, must contact North Coast EMS prior to beginning the evaluated field internship by submitting North Coast EMS shall be notified, by the applicant, training institution or the ALS provider, of the following information prior to beginning the evaluated field internship:
 1. ~~Name, address, phone number, social security number, and copy(ies) of most current prehospital care certification card(s), and~~

Subject: Training
LALS/ALS Field Internship Procedure

2. An introduction letter from applicant or student's EMT-II or paramedic training institution announcing qualifications for beginning field internship, and
 3. Name of field service provider(s) where field internship will be completed.
- ~~C. North Coast EMS will review information and respond to applicant, field service provider and base hospital within that jurisdiction in writing regarding approval or denial for beginning evaluated field internship within ten (10) working days of receipt of the above listed information.~~
- ~~D. Applicant shall not begin evaluated field internship without written approval from North Coast EMS.~~
- ~~E. Field service provider agency shall not allow EMT-II and/or paramedic students or challenge candidates, nor EMT-II's and/or paramedics required to complete a remedial pathway, to begin field internship without written approval from North Coast EMS.~~
- F. Applicant must complete all evaluated field internship with a North Coast EMS approved Field Training Officer.
- G. Evaluation of applicant's field internship must be on forms provided by the approved paramedic training program or North Coast EMS.
- H. No more than one EMT-II and/or paramedic student, challenge applicant or EMT-II's and paramedics required to complete a remedial pathway, shall be assigned to a response vehicle at any one time during the field internship.

Approved: _____ Date: _____

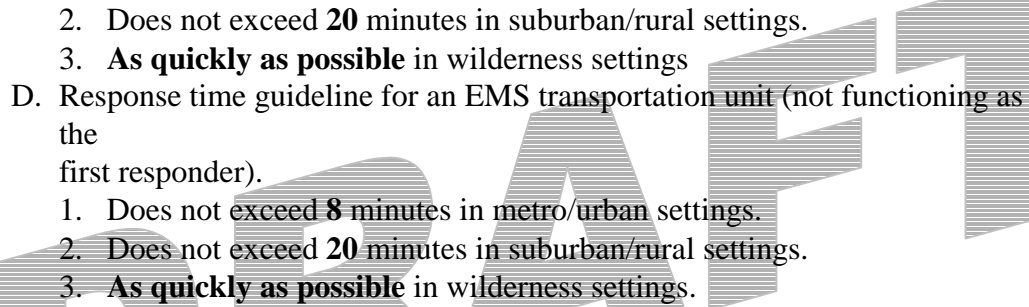
Approved as to Form: _____ Date: _____

Subject: Administration - Provider
Response Guidelines for BLS/Early Defibrillation/ALS Providers

Associated Policies: None

- I. Authority and Reference (incorporated herein by reference)
- A. California State Emergency Medical Services Authority
 - B. North Coast Emergency Medical Services Policies and Procedures
- II. Purpose
- A. To establish response time guidelines for BLS providers, BLS early defibrillation providers, ALS non- transport providers and ALS transport providers.
 - B. This policy is only a **guideline** following State EMS guidelines. If North Coast EMS uses this policy for monitoring; it will only be used at the **90%** compliance level and relative to the existing capabilities of the Prehospital Patient Care Reporting System (PCR, EPSIS).
- III. Definitions
- A. Metro: all census places with a population density of greater than **500** persons per square mile.
 - B. Urban: all census places with a population density of **101 to 500** persons per square mile.
 - C. Suburban: all census places with a population density of **51 to 100** persons per square mile.
 - D. Rural: all census places with a population density of **7 to 50** persons per square mile.
 - E. Wilderness: census areas, which have a population density of less than **7** persons per square mile.
- IV. Guideline
- A. Response time guideline for BLS and CPR capable providers.
 - 1. Does not exceed **5** minutes in metro/urban settings.
 - 2. Does not exceed **15** minutes in suburban/rural settings
 - 3. **As quickly as possible** in wilderness settings.
 - B. Response time guideline for early defibrillation capable providers.
 - 1. Does not exceed **5** minutes in metro/urban settings.
 - 2. **As quickly as possible** in suburban/rural/wilderness settings.
 - C. Response time guideline for an ALS capable provider (not functioning as the first responder).
 - 1. Does not exceed **8** minutes in metro/urban settings.

Subject: Administration - Provider
Response Guidelines for BLS/Early Defibrillation/ALS Providers

2. Does not exceed **20** minutes in suburban/rural settings.
 3. **As quickly as possible** in wilderness settings
- D. Response time guideline for an EMS transportation unit (not functioning as the first responder).
1. Does not exceed **8** minutes in metro/urban settings.
 2. Does not exceed **20** minutes in suburban/rural settings.
 3. **As quickly as possible** in wilderness settings.
- 

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.

Approved: _____

Date: _____

Approved as to Form: _____

Date: _____

**REQUEST FOR APPROVAL
UNDEFINED SCOPE OF PRACTICE
FORM #EMSA-0391**

EMS Medical Director: John Kelsey, M.D.

Date: July 1, 2002

Local EMS Agency: North Coast Emergency Medical Services

Name of Proposed Procedure of Medication: EXTERNAL CARDIAC PACING

1. ***Description of the procedure or medication requested:***

The initiation of External Cardiac Pacing and monitoring of previously initiated External Cardiac Pacing during interfacility ambulance transport.

2. ***Description of the medical conditions for which they will be utilized:***

Patients who have the following conditions:

- Symptomatic Bradycardia unresponsive to Atropine or Symptomatic Bradycardia where Atropine is not indicated
- Previously initiated External Cardiac Pacing requiring transport to another medical facility
- Patients in asystole or PEA on base hospital orders

3. ***Alternatives:***

Currently, patients suffering from Symptomatic Bradycardia unresponsive to Atropine can only be treated with Dopamine, whose efficacy, monitoring and potential for complications make it a less desirable treatment where External Cardiac Pacing can be successfully employed.

Currently, during interfacility transfers, this procedure requires and RN to accompany the patient for transport. It is exceedingly difficult at times for the hospitals to have an RN readily available to complete the transport in a timely fashion. There is currently only one ambulance company, Kelseyville Fire District, in the North Coast EMS region who employs Critical Care Transport RNs.

A final alternative would be to utilize approved aeromedical transport (helicopter or fixed wing) providers, who staff with at least one RN. There are currently no such providers in the North Coast EMS region. Timeliness of bringing in such a provider from another region, financial cost to the patient, and the increased risk of air transport are factors that must be weighed against the benefits of such transport.

4. ***Patient population that would benefit, including an estimate of frequency of utilization:***

Adults, primarily middle-aged or elderly. Pediatric patients are not excluded by policy, but it is anticipated that very few, if any, pediatric patients would be transported under this protocol.

It is estimated that **2** patients per month would be treated region-wide under this protocol; **1** of which we would anticipate would be scene calls and **1** of which would be an interfacility transfer.

5. ***Other factors or exceptional circumstances.***

External cardiac pacing is a frequently employed hospital therapy for this patient population. It is generally considered an efficacious treatment with potentially few, if any, serious complications.

Only those Paramedics who have successfully completed a training program approved by North Coast EMS on initiating and monitoring of External Cardiac Pacing will be permitted to employ this procedure during interfacility transports.

Only those Advanced Life Support (ALS) ambulance providers approved by North Coast EMS as “Pacing Providers” will be permitted to provide the service of initiating and monitoring External Cardiac Pacing and will be permitted to employ this procedure during interfacility transports.

6. ***Any supporting data, including relevant studies and medical literature:***

EMS regions in the state of California which currently allow monitoring of IV nitroglycerin infusions by trained paramedics include Alameda, Contra Costa, Imperial, Kern, Marin, Monterey, Riverside, Sacramento, San Francisco, San Joaquin, San Mateo, Solano, and Tuolumne Counties, as well as Coastal Valley, Inland Counties and NorCal EMS. (Information obtained from the EMSA website.) We are not aware of major incidents or problems related to the use of this procedure.

7. ***Recommended policies/procedures to be instituted regarding use, medical control, treatment protocols, and quality assurance of the procedure or medication:***

See attached policy and draft policy.

8. ***Description of the training and competency testing required to implement the procedure of medication.***

See attached training outline.

**North Coast Emergency Medical Services
EXTERNAL CARDIAC PACING
TRAINING OUTLINE**

COURSE LENGTH:

Note: The following times are approximate. Times will vary based on the number of participants and the prior experience of each participant.

Lecture Time:	120 minutes
Skills Demonstration and Practice Time:	60 minutes
Written Exam:	30 minutes
Skills Exam:	30 minutes

Total Time: 4.0 hours

OBJECTIVES:

At the end of the session, the participant will be able to:

- Identify actions, indications, contraindications, adverse effects, administration guidelines, and precautions for External Cardiac Pacing.
- Demonstrate basic competency in the use of the External Cardiac Pacing function of cardiac monitors with this feature.
- Describe appropriate management of a patient receiving External Cardiac Pacing.

INSTRUCTOR:

This training program is conducted by a North Coast EMS approved instructor.

OUTLINE:

I. Background

Certain patients suffering from bradycardia may benefit from External Cardiac Pacing. Until recently this procedure was not in the paramedic scope of practice as per North Coast EMS policy. Patients who might have benefited from this intervention in the field had to await arrival at the Emergency Department before it could be initiated. Patients requiring monitoring of previously initiated External Cardiac Pacing during ambulance transports between one medical facility and another had to be accompanied by a Registered Nurse (RN). It was and continues to be exceedingly difficult at times for the hospitals or other medical facilities to have an RN readily available to complete the transport in a timely fashion.

Currently, among ambulance transporting agencies in the North Coast EMS region, only Kelseyville Fire District employs Critical Care Transport RNs and these nurses are available only on an “on call” basis.

At the request of several hospitals and other agencies in the region, North Coast EMS drafted policy and a training program to allow approved paramedics and ALS ambulance providers to initiate and monitor External Cardiac Pacing in the Field. The policy and the accompanying training program were modeled after the successful program implemented elsewhere in California, and developed with input from interested parties within the North Coast EMS region.

In July 2002, North Coast EMS submitted a request for approval to the California Emergency Medical Services Authority (EMSA) for the addition of this procedure to the paramedic scope of practice for the region. After review by EMSA, approval was granted in ____ (*pending*).

It should be noted that this procedure is an *optional* addition to the scope of practice of paramedics in the North Coast EMS region. Training in the procedure is not a requirement for paramedic licensure or accreditation. However, only those specifically trained paramedics and ALS providers approved by North Coast EMS are permitted to initiate External Cardiac Pacing during patient transports.

Currently several other EMS regions in the state of California allow paramedic initiation and monitoring External Cardiac Pacing. North Coast EMS is not aware of major incidents or problems related to this procedure.

II. Purpose

The purpose of this training program is to familiarize the paramedic with the knowledge, skills, and protocols necessary for management of a patient who requires initiation or monitoring of External Cardiac Pacing.

III. Procedure

A. Lecture

1. North Coast EMS policy requirements
 - Authorization
 - Documentation
2. Review of the Cardiac Conduction System
3. Review of Artificial Pacemakers
 - Demand versus non-demand pacing
4. Principles of External Cardiac Pacing
 - Physiologic actions including discomfort and muscle twitching
5. Applications for External Cardiac Pacing
 - Symptomatic Bradycardia
 - Age restrictions
6. Procedure

- Preparation of the patient including explanation, sedation and analgesia, chest preparation
- Anterior-Posterior Pacing Electrode Placement
- Selection Mode (when applicable), Rate and Current
- Assessing for Electrical and Mechanical Capture
- ECG Signal Distortion
- Monitoring of Mechanical Capture
- Safety precautions and operator considerations

B. Skills Demonstration and Practice

1. Monitor preparation for External Cardiac Pacing
2. Electrode placement
3. Selection of mode (when applicable), Rate and Current

C. Written Exam

See attached twenty (20) questions exam. Passing score is 80% (at least 16 correct answers).

D. Skills Exam

See attached skills exam. Participant must successfully complete all identified criteria.

E. Conclusion

California Hospital Bioterrorism Response Planning Guide

Section 3 – Attachments

ATTACHMENT 5 – INTERNET REFERENCES

Association for Professionals in Infection Control and Epidemiology (APIC)
Bioterrorism Working Group
<http://www.apic.org/>

APIC/CDC Bioterrorism Readiness Plan: A Template for Healthcare Facilities
<http://www.cdc.gov/ncicoc/hip/Bio/13apr99APIC-CDCBioterrorism.PDF>

Saint Louis University School of Public Health, Center for the Study of Bioterrorism and Emerging Infections
<http://www.bioterrorism.slu.edu/>

Centers for Disease Control and Prevention (CDC)
<http://www.cdc.gov/>

CDC Bioterrorism Preparedness and Response Program
<http://www.bt.cdc.gov/>

Biological and Chemical Terrorism: Strategic Plan for Preparedness and Response – Recommendations of the CDC Strategic Planning Work Group
<ftp://ftp.cdc.gov/pub/Publications/mmwr/RR/RR2904.pdf>

CDC Division of Healthcare Quality Promotion (DHQP)
<http://www.cdc.gov/ncidod/hip/>

CDC Morbidity and Mortality Weekly Report
<http://www.cdc.gov/mmwr/>

John Hopkins University Center for Civilian Biodefense Studies
<http://www.hopkins-biodefense.org>

U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID) Medical Management of Biological Casualties Handbook
<http://ccc.apgea.army.mil/Documents/HandbookonBioCas/Handbook.htm>

U.S. Army Medical Research Institute for Chemical Defense – USAMRIID
<http://chemdef.apgea.army.mil>

U.S. Army's Office of the Surgeon General, Medical NBC On-Line Information Server
<http://www.nbc-med.org/>

U.S. National Archives and Records Administration
<http://www.nara.gov/>

May 20, 2002

Sean Trask
Health Program Manager-1
EMS Authority
1930 9th Street
Sacramento, Ca 95814

Re: Comments on Pre-Public Comment EMT-II Regulations

Dear Sean:

Thank you for the opportunity to comment on the EMT-II Regulations. Our specific concerns are attached.

As you are aware, we are very pleased the EMS Authority is proceeding with the revision of these regulations rather than expanding the EMT-I Regulations.

Thanks again for the opportunity to comment.

Sincerely,

Larry Karsteadt, Executive Director
North Coast EMS

Comments of the Pre-Public Proposed EMT-II Regulations North Coast EMS – 5/20/02

1. The Modular Approach in principle is a good idea. The first EMT-II programs utilized a modular approach but with the intention of allowing students to practice one or more new skills prior to completing the entire class. After completion of the entire class, however, only one EMT-II scope of practice was allowed.

The problem with the proposed modular approach is two fold:

- a. In an area where several levels of prehospital providers can co-exist, on-line base hospital medical control personnel, and LEMSA policies and protocols, will all have to keep track of who is “approved” at what level. The management of these new levels will be extremely complicated if not impossible.

If these regulations pass, a LEMSA could have eleven (11) levels of prehospital providers in the system: Public Safety, First Responder, EMT-I, EMT-I (ETAD), EMT-II Basic, EMT-II Trauma, EMT-II Cardiac, EMT-II Controlled Substances, EMT-II Current Expanded Scope of Practice (including ET), Paramedic (Basic), Paramedic (Expanded Scope)!

- b. Areas that currently utilized EMT-IIs, and therefore have contracts and ambulance ordinances that address the current EMT-II scope of practice must be protected with wording that prevents a decrease in the EMT-II scope of practice without clear justification.

Suggestion: Add wording to Article 100105 (d) that allows a system that currently utilizes EMT-IIs to not displace existing EMT-II and/or EMT-P levels without first demonstrating impact and feasibility.

2. What is the purpose of adding the CPR Card wording to 100104.1?
3. Dropping Endotracheal Intubation from the EMT-II scope of practice is not appropriate. It has been utilized within California for many years at the existing EMT-II level. The LA/Orange County study, which only involved children, did not recommend dropping ET from the EMT-II or Paramedic scope of practice!
4. (Louis/John – should Calcium Chloride, PAST, Ipecac and S Bicarb even be in the EMT-II scope of practice anymore? Are these used at all? If not, please make a comment about that.
5. 100105(a) – Quality assurance is in the wording...if so, it should also be defined.

6. Same with use of “satellite hospital” throughout the document - this instead should be “alternative base hospital.”
7. 100119 – we are pleased that these proposed hours are similar (or the same) as the current EMT-II regulations.
8. We are pleased to see all of the changes in the proposed regulations that reflect the same changes in the Paramedic regulations. One area where this has not been done, however, is in 100125 (Recertification). We suggest the monthly and quarterly skills demonstration requirement be dropped (if Paramedics in rural areas with low volumes are not required to do this, EMT-IIs should not be either.

After over 25 years of direct involvement in EMT-II programs, monthly and quarterly skills currency demonstrations are both onerous and useless. If there is a problem with quality of care, that should be addressed through CQI process.

9. 100127: An Alternative Base Hospital does not need to be JCAHO accreditation in state law, so this should be revised to recognize that.
10. 100128: This entire section should be the same in the Paramedic Regulations. Specifically, (5) – drop (A) and (B) in the EMT-IIs or require them in the EMT-P regs to be consistent.

April 20, 2002

Carol MacRae
EMS Authority
1930 Ninth Street, Suite 100
Sacramento, CA 95814

RE: General Fund Grant #1035, FY 2001-2002 Third Quarter Progress Report

Dear Carol:

The General Fund Three Quarter Report for Fiscal Year 2001-2002 is attached.

As you are aware, the regional administrators are in the process of revising some of the Workload Indicators for next years contract. I plan to consolidate the input I've received to date in a draft revision in the next few weeks.

Thank you and please call if you have any questions.

Sincerely,

Larry Karsteadt, Executive Director
North Coast Emergency Medical Services

cc: Joint Powers Governing Board
County Health Officers
EMCC Chairpersons
Ruth Lincoln, Lake County Health Services Officer
Information Mailing
Agency Personnel

North Coast Emergency Medical Services
3340 Glenwood Street
Eureka, California 95501

Progress Report – Quarter 3
January 1, 2002 – March 31, 2002

Contract Fund Title – General
Program Category – 10
Contract Number - EMS-1035

April 23, 2002

Serving the Counties of Del Norte, Humboldt,
Lake and southern Trinity

Quarterly General Fund Progress Report North Coast EMS – Quarter 3, Fiscal Year 2001-2002

#EMS-1035 – 2/23 /02

The following report on progress at North Coast EMS during the third quarter of FY 2001-02 meets the requirements of the California EMS Authority General Fund Contract #EMS-1035 and the document entitled: “Funding of Regional EMS Agencies with General Fund Monies (June, 2001).” The report specifically addresses the status, issues and solutions relative to contract objectives and as specified by the California EMS Authority (EMSA).

1.0 System Organization and Management

Objective: To develop and maintain an effective management system to meet the emergency medical needs and expectations of the population served.

Workload Indicators: Population of Region = 216,200
Tourism = 3 million annually

Status: In this quarter,

1. North coast EMS personnel attended the following state EMS activities:
 - a. Emergency Medical Services Administrators Association of California (EMSAAC) Meeting
 - b. State EMS Commission Meeting
 - c. EMSA Vision Personnel and Education Committee Meeting
 - d. EMSA Vision Information and Evaluation Committee Meeting
 - e. General Fund Contract Meeting
 - f. State AB 430 Advisory Committee Conference Call
 - g. EMSAAC Disaster Medical Services Committee Conference Call
 - h. State Trauma Advisory Committee Meeting

2. North Coast EMS personnel attended the following regional meetings:
 - a. Joint Powers Governing Board
 - b. Humboldt/Del Norte Medical Advisory (MAC)
 - c. Lake and Humboldt County Emergency Medical Care Committees (EMCC)
 - d. Lake County Ambulance Ordinance Subcommittee
 - e. Humboldt Del Norte Disaster Committee
 - f. Humboldt County Fire Chiefs Association
 - g. Redwood Memorial Hospital and Lake County Field Care Audits
 - h. Humboldt County Child Death Review Team
 - i. Child Seat Safety Committee and Press Conference
 - j. Critical Incident Stress Committee
 - k. Water Safety/Drowning Prevention
 - l. Annual Humboldt Regional Occupations Paramedic Program

3. The Agency distributed draft and final policies and protocols for regional review in two Informational Mailings. The first packet included: requests for grant proposal letters of support; final policy revisions; a draft fee schedule policy; web page instructions for accessing the EMS Health and Safety Code Update, draft EMT-II regulations and CHP Ambulance Driver's Handbook; and numerous informational items: EMTALA, NursCE, Cal/ACEP, legislative and EMS Vision updates; and the AB430 trauma proposal and the North Coast EMS second quarterly report. The second Informational Mailing included draft policies and protocols associated with Heparin and Nitroglycerine Infusions.
4. Three outstanding candidates were interviewed for the Clinical Contractor position. As a result, North Coast EMS contracted with Kelly Wilson, EMT-P to assist with the EPCIS Prehospital Care Reporting (PCR) system and implementation of cardiac pacing, and with Tim Citro, EMT-P to help with the state required Automated External Defibrillation (AED) reports and policy development. The third candidate, Pam Haynes, R.N., was later selected to conduct Emergency Department Approved for Pediatric (EDAP) site-visits and assist with coordination of the Heparin and Nitroglycerine training program. The Agency also contracted with the Northern California Safety Consortium and City Ambulance Inc to assist with grant preparation, with Kayce Hurd to rewrite the EMT-I written exam, and with Jim Dowdy of Lake County to help expand the paramedic scope of practice to include Versed.
5. North Coast EMS submitted the second quarter GF report and continued a draft update of the EMS Plan. The update is currently under internal review prior to distribution to reviewers and presentation to the JPA Board for adoption at the June meeting.
6. The Agency submitted three grants to the EMSA: the AB 430 Trauma Care Systems Plan Preparation and Implementation Funding proposal, the Prehospital Multi-Casualty Incident/Disaster Preparedness special project proposal and the Rural Outreach Medical Training special project proposal. The trauma application was twice modified and will be funded in the amount of \$310,345 for 21 months; whether or not the other two grants will be funded will be determined in late May.
7. The fiscal audit for last year should be completed in April and all Governing Board members and required staff submitted Statements of Economic Interest.
8. With regard to the "Workload Indicator" Section of this Objective, the annual tourism estimate was compiled for the entire region this quarter using numerous sources.

Issues/Solutions:

1. Additional administrative and clinical staff are essential for the Agency to keep up with the increasing workload. The new contractors will be very helpful, as will the AB430 trauma grant, but the challenge will be to maintain these contractors in the future.
2. The recommended Workload Indicators changes reported in the last quarterly report were submitted to the EMSA and seven regional administrators for consideration and a revision of next years' General Fund Objectives is in progress.

3. The contract with Jerry Jeffries was discontinued and the cardiac pacing project was shifted to Kelly Wilson and policy revision process to Tim Citro. Heparin/Nitroglycerine Infusion policy development was completed and Tim Citro has taken over AED reporting. Also, Virginia Plambeck voluntarily discontinued contract services except for minimal work on the CISM program; we greatly appreciate her many years of service.

2.0 EMS System Personnel and Training

Objective: To ensure personnel functioning within the EMS system are properly trained, licensed/certified/authorized and/or accredited to safely provide medical care to the public.

Workload Indicators: Total Number of Certified/Authorized/Accredited Personnel = 1,275
 Total Number of Personnel Completing Training Courses = 92
 Total Number of Approved Training Programs = 36

Status: In this quarter,

1. The following EMS personnel possessed North Coast EMS issued documents:

a. Certified EMT-Is =	934 (113 are ETAD certified)
b. Certified EMT-IIIs =	6
c. Accredited Paramedics =	100
d. Authorized MICNs =	122
e. Field Training Officers =	49

2. Regional instructors conducted the following North Coast EMS approved training programs:

	Approved	Conducted This Quarter
a. Esophageal Tracheal Airway Device =	8	
b. Automated External Defibrillation =	7	
c. EMT-I =	14	2 basic/2 re-certification
d. Paramedic =	1	1
e. Field Training Officers =	3	
f. Mobile Intensive Care Nurse =	1	
g. AED Skills Evaluator =	1	
h. Emergency Medical Dispatch =	1	1

3. The above four EMT classes reported 92 students, of which 53 were certified or re-certified. EMD upgrade training was continued in Humboldt County.
4. Humboldt Regional Occupations Paramedic (HROP) Program didactic and clinical and the Mendocino County internship was continued.
5. The Agency reported specific plans regarding HROP paramedic training program accreditation to EMSA.
6. The Training Coordinator reviewed several EMT-I training programs.

7. Approval for 40 continuing education programs was continued by North Coast EMS and numerous CE programs were offered within the region.
8. Contractor Willie Sapeta administered one written EMT certification exam in Lake County for 31 students.
9. All EMT-I instructors are now using the National Registry skills exam and the written exam revision is almost completed..
10. One Informational Mailing included final training-related policies associated with Field Training Officer Authorization, MICN Authorization, MICN Field Observation and Leave of Absence and the second included all draft policies and protocols associated with the addition of Heparin and Nitroglycerine Infusions to the paramedic scope of practice.
11. Agency staff continued the process to comply with Department of Justice requirements with regard to conducting background checks.
12. As a member of the Vision Education and Personnel Committee, the EMS Coordinator continued efforts to better define rural EMS training needs at the state level.
13. North Coast EMS is encouraging key hospital and training personnel to carefully access and comment on the potential impact of the forthcoming EMT-II regulations on the region.
14. The Agency agreed to continue coordination of the North Coast CISM team, although our involvement will be limited.
15. A memo regarding medical treatment following use of the Taser by police officers was distributed.
16. Potential problems with an approved EMT-I program were reviewed and resolved.
17. With the help of City Ambulance Inc of Eureka and CDF, we submitted a Rural Outreach Medical Training special project proposal to EMSA.

Issues/Solutions:

1. The computerized PCR97 certification program is no longer functional and verification letters continue to be issued instead of certificates. The Training Coordinator, however, met with Cary Parkins and we are in the process of installing a significantly improved EMS Data Pro certification program used by numerous LEMSAs and other organizations.
2. The Agency's request for training, communications and distance learning/video conferencing equipment in the AB 430 trauma grant had to be dropped.
3. North Coast EMS no longer will keep track of the AED training programs or issue certificates due to changes in state regulations.

3.0 Communications

Objective: To develop and maintain an effective communications system that meets the needs of the EMS system.

Workload Indicators: Total Number of PSAPs = 9
 Total Number of Calls = over 5,000 PCR's were received since 12/01
 Total Requests for EMS Response = Estimated 13,000 to 17,000 annually
 Total Number of Ambulances Dispatched = Estimate 13,000 to 17,000 annually

Status: In this quarter,

1. North Coast EMS maintained contracts requiring field to hospital communications and recording equipment with six (6) base hospitals, one alternative base hospital and 19 LALS/ALS providers.
2. Eleven (11) Public Safety Answering Points (PSAPs) were utilized by regional EMS providers as follows (several PSAPs directly dispatch ambulances):

PSAP	Location	EMD Utilized
a. Del Norte Co. Sheriffs Department	Del Norte County	No
b. Humboldt Co. Sheriffs Department	Humboldt County	No
c. Humboldt State University	“	No
d. Arcata Police Department	“	No
e. Eureka Police Department	“	Yes
f. California Highway Patrol - Arcata	Del Norte & Humboldt	No
g. Fortuna Police Department	Humboldt County	Yes (backup only)
h. California Division of Forestry - Fortuna	“	Yes (secondary PSAP)
i. Trinity Co. Sheriffs Department	Trinity County	No
j. Lake Co. Sheriffs Department	Lake County	Yes
k. California Highway Patrol – Ukiah	Mendocino County	No

3. Six (6) non-PSAP ambulance dispatch centers were utilized within the region for dispatching ambulances:

a. K'ima:w Tribal Police	Humboldt County	No
b. City Ambulance of Eureka	“	No
c. Southern Trinity Rescue Dispatch	“	No
d. Redwood Empire Life Support	Sonoma County	No
e. CDF – Howard Forest	Mendocino County	No
f. CDF – Napa	Napa County	No

4. The North Coast EMS region continued to utilize a Med-Net Communications System installed in 1977-78 that includes six (6) county owned and one (1) fire district owned Mt. Top Repeater, eight (8) hospital owned base station radios and numerous provider owned mobile units (estimate 40). All but two Mt. Top Repeaters have been replaced within the last three years.
5. The Humboldt/Del Norte Prehospital Care Nurse Coordinators accepted a proposal from Judith Baird, PCNC, Redwood Memorial for each facility to be responsible for conducting one hospital-to-hospital Med-Net radio check per quarter, but for different shifts.
6. The North Coast EMS Emergency Medical Dispatch contractor continued upgrade training for the EMD approved dispatch centers.
7. In addition to the “call-of –the-month” best practices program, the EMS Coordinator is developing a web-based program whereby pre-hospital and ED personnel will be able to listen to past multiple casualty incidents and evaluate them using a protocol based evaluation tool in return for continuing education credit. The Agency hopes to improve EMS responders ability to communicate effectively with hospital and other agencies at the time of a MCI or disaster.

Issues/Solutions:

1. EMD upgrade training for Lake County has not been completed but arrangements are underway. Also, North Coast EMS purchased and distributed the EMD upgrades to all approved EMD providers.
2. The hospital-to-hospital Med Net check from Arcata to Eureka requires pre-notification by telephone to switch to the Pierce repeater; an alternative solution needs to be implemented if the test is for unusual events involving telephone outages.
3. The revised AB 430 trauma budget will include replacement of the Pierce Mt- Top Repeater in Humboldt County. The repeater at Rodgers will not be replaced because it is rarely used for field to hospital communications according to Doug Boileau of Arcata-Mad River Ambulance.
4. The Regional Med-Net Replacement Trust Fund has not been established, although we expect that the JPA Governing Board will activate the Trust Fund at North Coast EMS at the next meeting.

4.0 Transportation

Objective: To develop and maintain an effective EMS response and ambulance transportation system that meets the needs of the population served.

Workload Indicators: Total Ambulance Response Vehicles = Estimate 47
 Total First Responder Agencies = 40 approved
 Total Patients Transported = Estimate 13,000 to 17,000 annually
 Total Patients Treated and Released = NA
 Total Dry Runs = NA

Status: In this quarter,

1. North Coast EMS continued Advanced Life Support Agreements with 19 providers, First Responder Agreements with 40 fire districts, AED Agreements with 40 service providers, and ETAD Agreements with 15 providers.
2. JPA member counties continued permits or contracts with 7 ambulance services; another 8 fire districts provide transport in Lake County. The latter are in the process of forming a local Joint Powers transport arrangement that has been executed by all but one fire district.
3. North Coast EMS continues to participate in the process in Lake County to revise the ambulance ordinance.
4. North Coast EMS finalized the zoning information with regional input and implemented the new Pre-hospital Care Reporting System (EPCIS)
5. North Coast EMS submitted the “chute time” report to Humboldt County.
6. North Coast EMS finalized the First Responder/BLS Equipment and Supplies, IV Therapy and Esophageal Airway policies.
7. The Agency submitted requested response time data to Humboldt Fire District #1.
8. North Coast EMS conducted an ALS Provider site-visit at South Lake County Fire.
9. The Agency requested that the proposed helicopter response map into Lake County be discussed at an EMCC meeting.

Issues/Solutions:

1. At the JPA Governing Board meeting, the reasons the North Coast EMS data system cannot be used by the County to directly monitor the Humboldt County Ambulance Ordinance standards were discussed; the Agency suggested that the County Health Department adopt a formal process for investigating future ambulance-related problems.

5.0 Assessment of Hospitals and Critical Care Centers

Objective: To establish and/or identify appropriate facilities to provide for the standards and care required by a dynamic EMS patient care delivery system.

Workload Indicators: Total Base Hospital Contacts = Estimate 13,000 annually
Total Trauma Cases = Estimate 3,000 annually (337 major trauma patients were documented in 1996)
Total Pediatric Cases = Estimate 650 annually
Total Patients Received = Estimate 13,000 to 17,000 annually

Status: In this quarter,

1. North Coast EMS patients continued to be transported to seven (7) hospitals located within the region. Six are licensed as basic emergency departments (one in Del Norte County, three in Humboldt County and two in Lake County) and one is a stand-by ED (Jerold Phelps in southern Humboldt). Patient transfer involves at least 20 facilities located outside of the region.
2. North Coast EMS continued formal designation of six (6) base hospitals and one (1) alternative base hospital. All but one facility is also a North Coast EMS designated Emergency Department Approved for Pediatrics (EDAP).
3. The Agency continued to work with base hospital Prehospital Care Medical Director and Prehospital Care Nurse Coordinator, as needed, to address disclosure protected quality improvement issues and other EMS system enhancements.
4. By-pass/diversion issues were discussed at the Humboldt-Del Norte County Medical Advisory Committee meeting; Debbie McMahon, PCNC, St. Joseph Hospital will coordinate a revision of the North Coast EMS diversion policy.
5. Pat Farmer, R.N., Nurse Contractor, conducted a site-visit to Adventist-Redbud Hospital and scheduled another at Sutter-Lakeside in Lake County. Follow-up correspondence with Jerold Phelps in Garberville also was exchanged.
6. Debra Africa, St. Joseph Hospital, presented the impact evaluation report specific to the closure of the emergency department at the General Hospital campus in Eureka at the JPA Governing Board.
7. North Coast EMS submitted and revised the AB430 trauma system grant application to the EMSA a will receive \$310,345 over a 21-month period to develop and implement a regional trauma plan.
8. The Executive Director participated in a conference call as a member of the State's AB430 Trauma Committee and attended a Trauma Advisory Committee meeting.
9. The Agency completed and submitted a survey on diversions to the EMSA.
10. Pam Haynes, R.N., was contracted with to conduct EDAP site-visits and assist with coordination of Heparin and Nitroglycerine Infusion training for paramedics.
11. The Heparin and Nitroglycerine Infusion program will allow specially trained and accredited paramedics to utilize these procedures during inter-facility transfers.

Issues/Solutions:

1. Sutter-Lakeside Hospital verified that they have fulltime MICN coverage and are conducting field care audit site-visits as required by contract.

2. EDAP site visits are being scheduled thanks to the addition of contractor Pam Haynes, R. N.

6.0 Data Collection and Evaluation

Objective: To provide for appropriate system evaluation through the use of quality data collection and other methods to improve system performance and evaluation.

Workload Indicators: Total Patient Care Reports Generated = estimate 13,000 to 17,000 annually.

Status: In this quarter,

1. The EPCIS computerized Prehospital Care Reporting program is working reliably throughout the region. Minor problems with the program are being addressed. The Agency, with the help of the region's base hospitals and providers, solicited comments and suggestions for improvement to the program. Received comments have regularly been discussed with the EPCIS contractor and many adjustments have and will continue to be made. There is general satisfaction with the system, which has, since the December 19, 2001 start-up date, been used to record over 5,300 calls.
2. The Agency requested development of a computer generated compilation sheet by the EPCIS programmer to routinely summarize EMS activity in the region.
3. Agency staff, several Prehospital Care Nurse Coordinators (PCNCs) and ALS Providers conducted quality improvement investigations.
4. The Executive Director continued to participate in the process to develop statewide "EMS evaluation standards or guidelines" as member of the Information and Evaluation Vision Committee and EMSAAC.
5. The Regional Medical Director, Executive Director and EMS Coordinator submitted comments on the state proposed CEMSIS data system (data definitions), and reviewed proposed quality indicators for statewide use. The EPCIS system was previously used as a model.
6. The Executive Director gave a power point presentation developed by the EMSA to EMSAAC on the new CEMSIS data system and quality indicators.
7. North Coast EMS submitted the requested "chute time" report to the Humboldt County Health Department and a response time data report to Humboldt Fire District #1.

Issues/Solutions:

1. The required state AED reports for the last two years were submitted to the EMSA thanks to Tim Citro; two cardiac arrest survivors were documented.

- As reported previously, several data related “workload indicator” reports are not possible at this time, although we plan to provide as many of these queries as we can with EPCIS.

10.0 Public Information and Education (PI&E)

Objective: To ensure that the population within the jurisdiction of the regional EMS agency has access to information and public information courses as it relates to emergency medical services.

Workload Indicators: Total Public Information and Education Courses in Region = 238

Status: In this quarter,

- The number of PIE courses reported to North Coast EMS was:

Provider	Basic CPR	Health Professional CPR	1 st Aid	Total Classes
a. Sutter Coast Hospital		3		3
b. St. Joseph Hospital	3	21		24
c. Mad River Hospital		3		3
d. Shelter Cove Fire		1		1
e. Del Norte Red Cross	9		4	13
f. Humboldt County Red Cross	112		82	194

- North Coast EMS continued to sponsor several Public Safety Injury Prevention Announcements aired in Humboldt and Del Norte Counties.
- The Training Coordinator attended Water Safety/Drowning Prevention, Child Safety Seat Awareness, Child Death Review meetings within Humboldt County.
- One layperson AED program continued in Humboldt County.

Issues/Solutions:

- Staff size is inadequate to provide more than a very limited involvement in PIE.
- The total number of PIE courses increased this quarter by over 1.5 times as a result of increased reporting by providers. Most importantly, Humboldt County Red Cross submitted last years’ data; they taught 610 CPR/First Aid courses or almost two classes per day! We will use their quarterly average in this and future reports. We greatly appreciate the dedicated effort of so many instructors and organizations throughout the region!

8.0 Disaster Medical Response

Objective: To ensure the preparedness and response of the regions EMS system in the event of a disaster or catastrophic event within the region or in a neighboring jurisdiction.

Workload Indicators: Total Number of Disaster/MCI responses (responses with 5 or more victims) = unknown
Total Disaster Drills = 11

Status: In this quarter,

1. Agency staff attended Humboldt-Del Norte Disaster and the Lake EMCC Committee meetings.
2. The Agency sent a survey to all EMS system participants requesting quarterly information on the number of disaster drills or exercises that their organization conducted or participated in. Eight organizations responded with a total of 9 drills: 6 conducted and 3 participated.
3. North Coast EMS, with the assistance of the Northern California Safety Consortium, submitted a special project “Prehospital MCI/Disaster Preparedness” proposal to the EMSA.
4. The Executive Director participated in an EMSAAC coordinated conference call involving proposed medical disaster legislation.
5. The Executive Director reviewed and commented on the Humboldt County OES Disaster Plan revision as a member of the Humboldt County Disaster Council.
6. Cascadia maps were passed out to JPA Board members at the last meeting.

Issues/Solutions:

1. In addition to the “call-of –the-month”, best practices program, the EMS Coordinator is developing a web-based program whereby pre-hospital and ED personnel will be able to listen to past multiple casualty incidents and evaluate them using a protocol based evaluation tool in return for continuing education credit.
2. We have requested that the EPCIS program be set up to query MCIs involving five or more patients.