

EMERGENCY MEDICAL SERVICES AUTHORITY

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REQUEST FOR APPROVAL
UNDEFINED SCOPE OF PRACTICE

EMS MEDICAL DIRECTOR: Hal Renollet, M.D. DATE: 01 June 98

LOCAL EMS AGENCY: Nor-Cal Emergency Medical Services, Inc.

NAME OF PROPOSED PROCEDURE OR MEDICATION: Sierra County

Alternative ALS

1. DESCRIPTION OF THE PROCEDURE OR MEDICATION REQUESTED:

See Attached

2. DESCRIPTION OF THE MEDICAL CONDITIONS FOR WHICH THEY WILL BE UTILIZED:

See Attached

3. ALTERNATIVES (Please describe any alternate therapies considered for the same conditions and any advantages and disadvantages):

None Known

4. PATIENT POPULATION THAT WOULD BENEFIT, INCLUDING AN ESTIMATE OF FREQUENCY OF UTILIZATION:

See Attached

5. OTHER FACTORS OR EXCEPTIONAL CIRCUMSTANCES:

See Attached

PLEASE ATTACH:

6. ANY SUPPORTING DATA INCLUDING RELEVANT STUDIES AND MEDICAL LITERATURE.
7. RECOMMENDED POLICIES/PROCEDURES TO BE INSTITUTED REGARDING USE, MEDICAL CONTROL, TREATMENT PROTOCOLS, AND QUALITY ASSURANCE OF THE PROCEDURE OR MEDICATION.
8. DESCRIPTION OF THE TRAINING AND COMPETENCY TESTING REQUIRED TO IMPLEMENT THE PROCEDURE OR MEDICATION.

ATTACHMENT FOR FORM EMSA – 0391

1. Determination of blood glucose levels, IV access with normal saline, intravenous glucose, aspirin, albuterol, activated charcoal, glucagon IM, naloxone IM & IV, nitroglycerin SL, epinephrine SQ
2. Allergic reaction/anaphylaxis, altered neurologic function (non-traumatic), cardiopulmonary arrest, chest pain (suspected cardiac origin), near drowning, poisoning, respiratory distress, smoke, gas and toxic substance inhalation, trauma.
3. None known.
4. Sierra County residents and recreational transient population. Estimated total call frequency: 200 – 300 calls per year.
5. Sierra County is one of only four counties in the state not presently served by Advance Life Support Services. Sierra County's EMS providers are all volunteer staffed and are unable to provide the time or financial resources to obtain ALS training. Limited call volume does not justify a need for a full complement of ALS skills nor the ability to maintain those skills.

29 May 98

PROPOSAL FOR TRIAL PROGRAM FOR ALTERNATIVE ALS EMTS SIERRA COUNTY

INTRODUCTION

Sierra County is a rural, mostly mountainous county in northern California with a resident population of approximately 3600 people. Medical care is provided at a small community hospital in the eastern part of the county and at a clinic in the western portion. There are no Advanced Life Support prehospital services in the county. Basic Life Support services are provided by volunteers associated with fire departments or the one hospital's ambulance service.

Since October 1995, certain EMTs in Sierra County have been participating in an Alternative ALS trial study. In addition to the basic EMT scope of practice, these individuals have been utilizing:

- Subcutaneous epinephrine (Epi-Pen)
- Intravenous therapy (normal saline infusion)
- Intravenous glucose

As optional scope of practice, these individuals have also been utilizing automated defibrillation and endotracheal intubation.

The call volume in Sierra county is low and instances of ALTERNATIVE ALS intervention have been few. Even so, a number of people have been helped through use of the procedures; particularly with IV glucose and subcutaneous epinephrine. After reviewing the project reports, the EMS Commission declined to continue the study as written and suggested a revision to incorporate elements of the *Rural EMT-1 Expanded Scope of Practice* trial study conducted in Imperial County. Accordingly, this proposal includes most of the procedures/medications in that study. Use of the Combitube has not been adopted here as endotracheal intubation is already being utilized as optional scope of practice.

PROCEDURES/MEDICATIONS

The optional skills of automated defibrillation and endotracheal intubation will be retained. Procedures/medications to be utilized as part of the trial study will include:

1. Determination of blood glucose levels
2. Intravenous saline
3. Medications:

Albuterol, metered dose inhaler or nebulized
Activated charcoal
Aspirin
Epinephrine SQ
Glucagon IM
Glucose IV
Naloxone IV & IM
Nitroglycerin SL

The procedures and medications listed will be used to treat conditions according to the following protocols:

Allergic reaction/anaphylaxis
Altered neurologic function (non-traumatic)
Cardiopulmonary arrest
Chest pain (suspected cardiac origin)
Near drowning
Poisoning
Respiratory distress
Smoke, gas and toxic substance inhalation
Trauma

RELEVANT STUDIES

As indicated in the Imperial County study proposal, there is increasing acknowledgment of the ability of properly trained EMT-1's to perform skills historically reserved for ALS providers. The latest DOT EMT-1 curriculum provides optional instruction for EMT-1's in endotracheal intubation and assisting patients with their own medications, i.e. bronchodilators, epinephrine injections, nitroglycerin and glucose solutions. Also cited in the Imperial County study was a paper regarding the successful use of epinephrine by EMT's for anaphylaxis (Fortenberry, et al: Use of Epinephrine for Anaphylaxis by Emergency Medical Technicians in a Wilderness Setting. Annals of Emergency Medicine, June 1995).

Intravenous access is included here primarily for two purposes. First, regional protocols call for the establishment of intravenous access for trauma patients to support blood pressure. The trauma surgeons in our region feel strongly that establishment of IV access is especially important in our rural/remote region because of the often excessive transport times (see Dr. Schepps' letter – attachment A). There is concern, as well, that IV access is needed for the administration of glucose to diabetic patients. This is because there are indications that intramuscular administration of Glucagon may not be effective for all

patients (Physician's Desk Reference, 1998), (Mosby's Paramedic Textbook, 1994) and is probably not the first drug of choice for hypoglycemia.

STUDY DESIGN

This study will provide a means for objective assessment of the ability of specially trained EMT-1's to determine the need for and successfully employ certain treatment modalities historically practiced exclusively by ALS providers. EMTs involved in this study will include those who participated in our previous ALT ALS study as well as those whose interest has since been stimulated or who have recently certified. All participants will be affiliated with an established provider agency participating in this study.

Our approach to this project will be modeled after the Imperial County study and will parallel, as much as is practical, the training and curriculum utilized in that study. Didactic education will total 28 hours, followed by two 8 hour clinical sessions in a hospital emergency department and two 8 hour field sessions with an ALS ambulance crew. The EMT's must successfully complete five ALS contacts in each setting and receive a favorable evaluation from an ALS preceptor.

A level II trauma center within this EMS region will be assigned as the Base Hospital for the EMT's in this project. Continuing education and immediate oversight will be provided by the Base Hospital. Besides the usual patient care report (PCR), an additional study-specific evaluation form will be completed for each ALT ALS contact (attachment B). This will be evaluated by the Prehospital Liaison Nurse (PLN) at the Base Hospital, the regional Medical Director and by members of the Medical Advisory Committee.

MEDICAL CONTROL

Medical control will be accomplished through use of specific treatment guidelines, Base Hospital contact when possible and retrospective review by the PLN and the Medical Advisory Committee.

TRAINING/TESTING

Training will follow the pattern established for the Imperial County study (protocols and learning objectives attached) with lesson plans adapted from the DOT Paramedic curriculum. Training will be conducted by a Registered Nurse(s) with prehospital field care experience. Competency testing, both written and skills examinations, will be included in the training program. Hospital clinical experience and field experience with a preceptor will also be required.

EMT's participating in this study who were not trained in the previous project will receive an additional 34 hours training as follows:

Automated defibrillation	4 hours
Magill forceps/endotracheal intubation	14 hours
IV fluid/IV glucose	16 hours

FUNDING

Training the EMT's and conducting this study will be contingent upon identification of a funding source. It's estimated the training will cost approximately \$2500 -\$3000.

Following the suggestion of the Commission, Nor-Cal EMS attempted to obtain funding through a grant request to the EMS Authority and also advised the Sierra county EMCC to identify funding sources within the county. As our grant request was unsuccessful, financing for this project has yet to be determined.

Northern California

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 Mark O. Nichols, MD, FACS
 W. Kenneth Stone, MD, FACS

Surgical Group

A Medical Corporation

L. Robert Ghelfi, MD, FACS
 Jon C. E. Oberg, MD, FACS
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March 11, 1998

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Gentlemen:

At a Regional Trauma Audit Committee that we had in December, Dr. Renollett presented information regarding controversy as to whether trauma patients should undergo IV fluid resuscitation in the field. At that meeting, he discussed the fact that a certain faction in EMS state planning suggested taking IV's off life support units, which we all found to be incredible. Apparently, this is in response to Dr. Maddox's study regarding better survival in a subset of trauma patients who underwent "scoop and run" and no IV resuscitation in the field. It should be noted that Dr. Maddox's study dealt with adult penetrating injuries in the Houston, Texas, area, where transport times are quite short. This is in contrast to our patient population where we see 98% of bluntly injured

patients who are often injured in remote areas with transport time in excess of 30 minutes.

I feel that to extrapolate Dr. Maddox's study and presume that IV fluids are not needed on EMS transport vehicles is preposterous. The American College of Surgeons, through its ATLS courses, has been trying to educate both trauma surgeons and rural physicians outside of trauma centers as to appropriate resuscitation of patients with major traumatic injuries. To spread even the suggestion to small outside communities that trauma patients should receive little to no fluid resuscitation is, in my opinion, contrary to the philosophy of the American College of Surgeons, ATLS courses, and common sense. Patients cared for by air or ground crews should have IV access established and hypotensive patients treated with appropriate fluid resuscitation. Appropriate does not mean overresuscitation, underresuscitation, but rather proper resuscitation as the American College of Surgeons through the ATLS courses has been proposing for over 20 years. We have noted great strides in educating physicians on appropriate fluid resuscitation, and I feel that sending a message out to the contrary to emergency medical crews as well as physicians is taking a giant step backward in emergency medical services, especially for nonurban communities such as ours.

Therefore, I would appreciate your input to the state EMS Committee in this regard. Rather than making a blunt policy to avoid fluid resuscitation in the field, perhaps further efforts need to be directed toward educating physicians and field providers in proper fluid resuscitation based on ACS, ATLS, and common sense guidelines.

Sincerely,



Donald E. Schepps, M.D., F.A.C.S.
Chief of Trauma
Mercy Medical Center
Redding, CA

DES:11

SIERRA COUNTY ALT ALS SPECIAL PROCEDURES

Run report# _____

Age _____

Sex M F

Date _____

Agency _____ EMT _____

Receiving Hospital _____

Time Arrived at Scene _____ Time Left Scene _____ Arrived at Hospital _____

Patient situation (check all that apply)

- | | |
|------------------------------|---------------------------|
| a. altered or diminished LOC | h. respiratory distress |
| b. CPR | i. chest pain |
| c. trauma | j. suspected hypoglycemia |
| d. seizures | k. anaphylaxis |
| e. overdose/poisoning | l. other _____ |
| f. burns | |
| g. near drowning | |

Comments: _____

Special Procedures/Medications utilized:

- | | | |
|------------------------------------|----------------------------|-------|
| 1. Determination of blood glucose | Value: _____ | |
| 2. Glucose/Glucagon | Amount: _____ Route: _____ | |
| Improved No Change Worse | | |
| Changes: _____
_____ | | |
| 3. Intravenous Saline | Amount infused: _____ | |
| Improved No Change Worse | | |
| Changes: _____
_____ | | |
| Vital signs | before | after |
| BP | _____ | |
| P | _____ | |
| R | _____ | |
| 4. Albuterol | Amount: _____ | |
| Improved No Change Worse | | |
| Changes: _____
_____ | | |

5. Activated Charcoal Amount: _____
Comments: _____

6. Aspirin Amount: _____
Comments: _____

7. Epinephrine Amount: _____
Improved No Change Worse
Changes: _____

8. Naloxone Amount: _____
Improved No Change Worse
Changes: _____

9. Nitroglycerine Amount: _____
Improved No Change Worse
Changes: _____

**NOR-CAL EMS, INC.
ALT ALS EMT-1 SCOPE OF PRACTICE

TREATMENT PROTOCOLS**

An Expanded Scope EMT-I, currently affiliated with an approved EMT-I service provider, may, in accordance with Nor-Cal EMS, Inc. Policies, Procedures and Protocols:

1. Perform any activity identified in the California Code of Regulations, Division 9, Section 100063 (Scope of Practice of an EMT-I).

2. Perform the following procedures:

- Blood glucose measurement by venous blood/finger stick
- Defibrillation using AED
- Endotracheal intubation
- Injections (subcutaneous, intramuscular, intravenous)
- Oral medication administration
- Intravenous infusion

3. Administer the following medications:

- Activated charcoal
- Aspirin
- Albuterol, nebulized (Proventil)
- Epinephrine (1:1,000)
- Glucagon hydrochloride
- Naloxone (Narcan)
- Nitroglycerin (NTG), sublingual tablets or spray
- Oxygen

ALLERGIC REACTION AND/OR ANAPHYLAXIS

- Institute and/or maintain BLS procedures.
1. ALLERGIC REACTION (Acute angioedema, threatened airway):
BH→Epinephrine (1:1,000) 0.3 mg SC, may repeat. Use caution for patients over age 40, and/or heart disease, hypertension.
 2. ANAPHYLAXIS (Urticaria/angioedema, hypotension, wheezing):
SO→Epinephrine (1:1,000) 0.3 mg SC.
BH→May repeat Ephinephrine, Albuterol as needed.

PEDIATRIC DOSAGES:

BH→Albuterol 2.5 mg/dose.

BH→Epinephrine (1:1,000): SC, 0.01 mg/kg up to 0.3 mg/dose.

ALTERED NEUROLOGIC FUNCTION (NON-TRAUMATIC)

- Institute and/or maintain BLS procedures.

SO→Analyze blood sample via Glucometer.

1. SUSPECTED HYPOGLYCEMIA:

SO→Determine blood sugar level by Glucometer reading.

SO→IV normal saline TKO

SO→Dextrose 25 Gm IV if blood sugar level < 75 mg.dl.

SO→Glucagon 1 mg IM if blood sugar level < 75 or unobtainable and IV line cannot
Be established

PEDIATRIC DOSAGES:

SO→Glucagon 0.5 ml IM < 1 year of age.
Glucagon 1.0 ml IM > 1 year of age.

Glucose 0.5 – 1.0 Gm/kg IV

CARDIOPULMONARY ARREST (NON-TRAUMATIC)

- Refer to Determination of Death in the Field policy, if appropriate.
- Institute and/or maintain BLS procedures.

SO→Apply AED and perform defibrillation if indicated.

SO→Intubate

- Consider transport after defibrillation, airway control.

If hypovolemia suspected:

- Immediate transport.

NOTE: Transport pregnant cardiac arrest patient who appears near term immediately with treatment enroute.

CHEST PAIN (SUSPECTED CARDIAC ORIGIN)

- Institute and/or maintain BLS procedures.

BH→Nitroglycerine 0.4 mg (gr 1/150) SL for pain. May repeat q 5 minutes x 2 as long as BP remains 100 mm Hg systolic or greater.

BH→Two chewed baby aspirin (160 mg).

NEAR DROWNING

- Initiate and/or maintain BLS procedures.

SO→Intubate with in-line spinal stabilization prn.

BH→Consider nebulized albuterol for wheezing.

NOTE: All patients in this category should be evaluated in the hospital.

POISONING

- Institute and/or maintain BLS procedures.

BH→For ingested agent, consider activated charcoal 50 gm. P.O. (Exceptions: Acids, alkalies, petroleum distillates, or drugs that cause rapid onset of seizures e.g., camphor, tricyclics).

1. NARCOTIC:

SO→IV normal saline TKO

SO→Naloxone 2 mg IV in patients with depressed respirations (<12/min), pinpoint pupils
And/or circumstantial evidence of drug use.

If no IV: 2 mg IM x 1. Additional naloxone administration requires BH order.

- If restraint is necessary, restrain in lateral position.

PEDIATRIC DOSAGES:

BH→Activate Charcoal 1 gm/kg.

BH→Naloxone 0.1 mg/kg IM or IV (limit 2 mg).

RESPIRATORY DISTRESS

- Institute and/or maintain BLS procedures.
1. UNCONSCIOUS PATIENT WITH APNEA/INEFFECTIVE RESPIRATIONS:
SO→intubate if unconscious.
 2. RESPIRATORY DISTRESS OF SUSPECTED CARDIAC (CHF) ETIOLOGY:
BH→Nitroglycerine 0.4 mg (1/150gr) SL, may repeat x 2, for severe distress (if BP > 100 mm Hg systolic).
 3. RESPIRATORY DISTRESS WITH BRONCHOSPASM (SUSPECTED ASTHMA/COPD):
BH→Nebulized albuterol 1 unit dose vial (2.5 mg). Continuous administration for severe distress per BH, prn.

NOTE: Base contact for smoke, toxic gas inhalation.

PEDIATRIC DOSAGE:

BH→Albuterol 2.5 mg/dose.

TRAUMA

- Institute and/or maintain BLS procedures

SO→IV TKO, adjust to maintain systolic BP 100 mm Hg.

Monitor lung sounds, decrease flow prn.

**NOR-CAL EMS, INC.
ALT ALS EMT-1 SCOPE OF PRACTICE**

COURSE CONTENT

**NOR-CAL EMS, INC.
ALT ALS EMT-1 SCOPE OF PRACTICE**

**SECTION 1
INTRODUCTION
(allow approximately 1 hour)**

Introduction to course

Roles & Responsibilities

**NOR-CAL EMS, INC.
ALT ALS EMT-1 SCOPE OF PRACTICE**

**SECTION 2
LECTURE PLAN
PROTOCOLS**

(allow approximately 2 hours)

LESSON OBJECTIVES

At the end of this session, the student will be able to:

1. State the importance of using protocols in algorithm form for patient care.
2. Identify the eight (8) protocols included in this program.
3. Given a list of patient scenarios, identify the correct protocol to be used for each scenario.
4. State the importance of continuous quality improvement in EMS to evaluate the effectiveness and compliance with these protocols.
5. Define on-line medical control, standing orders and scope of practice.
6. Describe the procedure to use in the event of communication failure when the patient's condition warrants medical intervention.

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ALT ALS EMT-1 SCOPE OF PRACTICE**

**SECTION 3
LECTURE PLAN
PATIENT ASSESSMENT
(allow approximately 2 hours)**

LESSON OBJECTIVES

At the end of this session, the student will be able to:

1. Identify the components of a field "medical team."
2. Identify the six parts of a run.
3. Identify the components of the PQRST for evaluating a chief complaint of pain.
4. Explain the modified PQRST for a chief complaint of dyspnea.
5. Identify the special questions for a chief complaint of overdose/poisoning.
6. Identify the special assessment for altered neurological function.
7. Identify the components of the physical examination.
8. Identify the criteria for establishing priorities of care.
9. Identify the modified physical exam for a chief complaint of chest pain.
10. Identify the modified physical exam for a chief complaint of dyspnea.

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ALT ALS EMT-1 SCOPE OF PRACTICE**

**SECTION 4
LECTURE PLAN
PHARMACOLOGY
(allow approximately 4 hours)**

LESSON OBJECTIVES

At the end of this session, the student will be able to:

1. Explain the importance of developing expertise in the administration of drugs.
2. List the four reasons for giving drugs.
3. Differentiate between the generic and trade names of various drugs.
4. Understand the basic drug terminology of the following terms:
 - a. antagonism
 - b. cumulative
 - c. synergism
 - d. hypersensitivity
5. Identify the general characteristics for drugs to be administered to include:
 - a. indications
 - b. actions
 - c. dose/route

- d. contraindications
 - e. side effects
 - f. classification
6. Identify the 5 “Rights” to ensure safe administration of drugs:
- a. right drug
 - b. right patient
 - c. right dose
 - d. right route
 - e. right time
7. Identify the sympathetic and parasympathetic components of the autonomic nervous system (ANS).
8. Identify how drugs can influence or alter the ANS.
9. Identify the general characteristics for drugs (outlined in 5 above) for each of the following medications:
- a. epinephrine 1:1,000
 - b. albuterol
 - c. naloxone
 - d. nitroglycerin
 - e. glucagon
 - f. activated charcoal
 - g. aspirin
10. Identify the onset of actions and what information should be obtained in order to assess the effectiveness of administration for each of the above listed medications.

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ALT ALS EMT-1 SCOPE OF PRACTICE**

**SECTION 5
LECTURE PLAN
SKILLS OF PHARMACOLOGY
(allow approximately 6 hours)**

LESSON OBJECTIVES

At the end of this session, the student will be able to:

1. Identify the routes by which medications can be delivered and explain the possible complications and absorption rates for each.
2. Calculate drug dosages for administration via the P.O., sublingual, subcutaneous, and intramuscular routes.
3. Prepare medications for administration from the following:
 - a. vials
 - b. ampules
 - c. pre-loaded syringes
4. Explain the importance of evaluating a patient for response to medications.
5. Explain and demonstrate the proper procedure for administering medications via the following routes:
 - a. P.O.
 - b. nebulizer
 - c. sublingual

d. subcutaneous

e. intramuscular

f. intravenous

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**SECTION 6
LECTURE PLAN
CHEST PAIN
Suspected Cardiac Origin
(allow approximately 2 hours)**

LESSON OBJECTIVES

At the end of this session, the student will be able to:

1. Identify the pathophysiology of angina pectoris and acute myocardial infarction.
2. List the signs and symptoms for angina and acute MI.
3. Differentiate angina from an MI in the onset, duration, and relief of pain.
4. List the pertinent special questions (PQRST) and physical exam for a chief complaint of pain.
5. List the field treatment for a patient with chest pain.

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**SECTION 7
LECTURE PLAN
CHEST PAIN: DIFFERENTIAL DIAGNOSIS
(allow approximately 2 hours)**

LESSON OBJECTIVES

At the end of this session, the student will be able to:

1. List the signs and symptoms of the following non-cardiac causes of chest pain:
 - a. cholecystitis
 - b. costochondritis
 - c. dissecting aortic aneurysm
 - d. esophagitis
 - e. hiatal hernia
 - f. indigestion/ulcer
 - g. pancreatitis
 - h. pleurisy
 - i. pneumonia
 - j. pneumothorax (spontaneous)
 - k. pulmonary embolism

2. Identify the general field treatment for patients complaining of chest pain.
3. Identify treatment priorities for patient's suspected of having dissecting aortic aneurysm, pneumothorax, pulmonary embolism.

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**SECTION 8
LECTURE PLAN
CONGESTIVE HEART FAILURE/PULMONARY EDEMA
(allow approximately 1 hour)**

LESSON OBJECTIVES

At the end of this session, the student will be able to:

1. State the pathophysiology of congestive heart failure/pulmonary edema (CHF/PE) to include left and right heart failure.
2. List the signs and symptoms of acute CHF/PE and explain how to differentiate between other causes of respiratory distress.
3. List the pertinent special questions and physical exam to be elicited from a patient with respiratory distress..
4. State the field treatment for CHF/PE.

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**SECTION 9
LECTURE PLAN
RESPIRATORY DISTRESS
(allow approximately 2 hours)**

LESSON OBJECTIVES

At the end of this session, the student will be able to:

1. List the pertinent special questions to be elicited from a patient with respiratory distress.
2. Explain the physical exam to be performed on a patient with respiratory distress.
3. List the causes, pathophysiology, signs and symptoms, and field treatment of:
 - a. hyperventilation syndrome
 - b. asthma
 - c. COPD
 - emphysema
 - chronic bronchitis
 - d. smoke, gas, toxic substance inhalation

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**SECTION 10
LECTURE PLAN
ALTERED NEUROLOGIC FUNCTION**
Non-traumatic
(allow approximately 2 hours)

LESSON OBJECTIVES

At the end of this session, the student will be able to:

1. Identify causes of altered neurologic function to include coma and decreased level of consciousness.
2. Identify how to use “BRIM” as an assessment tool.
3. Identify the various levels of consciousness.
4. Identify the pertinent special questions and physical exam to be elicited from a patient with an altered level of consciousness.
5. Identify the field treatment of a patient with altered neurologic function.
6. Explain the use of glucose, glucagon and narcan as diagnostic tools for altered neurologic function.

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ALT ALS EMT-1 SCOPE OF PRACTICE**

**SECTION 11
LECTURE PLAN
ALLERGY AND ANAPHYLAXIS
(allow approximately 2 hours)**

LESSON OBJECTIVES

At the end of this session, the student will be able to:

1. Identify the pathophysiology of allergy/anaphylaxis.
2. List the signs & symptoms for an allergic reaction to include:
 - a. localized, non-acute
 - a. systemic, acute
3. List the signs & symptoms for anaphylaxis to include:
 - a. less severe
 - b. more severe
4. List the pertinent special questions and physical exam to be elicited from a patient with allergic reaction/anaphylaxis.
5. Explain the importance of prompt treatment in anaphylaxis.
6. List the field treatment for allergic reaction and anaphylaxis.

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ALT ALS EMT-1 SCOPE OF PRACTICE**

**SECTION 12
LECTURE PLAN
POISONING
(allow approximately 1 hour)**

LESSON OBJECTIVES

At the end of this session, the student will be able to:

1. List the characteristic signs and symptoms of a toxic ingestion from the following:
 - a. aspirin
 - b. acids/alkalis
 - c. petroleum products
 - d. various plants
 - e. cyanide
 - f. organophosphate poisoning
2. List the field treatment for suspected poisoning.

**NOR-CAL EMS, INC.
ALT ALS EMT-1 SCOPE OF PRACTICE**

**SECTION 13
LECTURE PLAN
NEAR DROWNING
(allow approximately 1 hour)**

LESSON OBJECTIVES

At the end of this session, the student will be able to:

1. Identify the pathophysiology of near drowning.
2. Identify post-immersion syndrome (parking lot drowning).
3. List the signs and symptoms of near drowning.
4. Identify the special questions and pertinent physical exam to be elicited from a patient who has an episode of near drowning.
5. List the field treatment for near drowning.

**NOR-CAL EMS, INC.
ALT ALS EMT-1 SCOPE OF PRACTICE**

**SECTION 14
LECTURE PLAN
RADIO COMMUNICATIONS**
(allow approximately 3 hours)

LESSON OBJECTIVES

At the end of this session, the student will be able to:

1. Identify the role of the radio person.
2. Identify the role of the MICN.
3. Identify the indications for radio contact with the base hospital.
4. List the pertinent information that should be communicated initially in a:
 - a. critical call
 - b. non-critical call
5. Identify the proper method of initiating & terminating a radio call.
6. List all pertinent information that constitutes a complete radio report.
7. Identify the more commonly used radio codes, proper radio terminology, and the need for plain text.
8. Identify appropriate handling of disagreements over the radio.
9. List the special considerations to be taken when communicating using a simplex radio.
10. Describe the procedures to follow under the "Communication Failure" protocol.

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**GRADING CRITERIA, CLINICAL/FIELD
REQUIREMENTS, REFERENCES**

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EQUIPMENT/MATERIALS LIST – whiteboard or chalkboard with writing instrument; overhead projector and screen; handouts.

TESTING & CRITERIA CRITERIA – There will be daily quizzes at the start of each session on all material learned in previous session; and a comprehensive written and practical final exam (which shall also be the certifying exam) at the end of the program. Students will be required to pass all quizzes and the written and practical final exam with no less than 80%.

CLINICAL AND FIELD REQUIREMENT – There will be a clinical requirement of sixteen (16) hours (two – eight (8) hour shifts) with a minimum five (5) ALS patient contacts conducted under the supervision of the clinical coordinator and emergency department nurses and physicians at the Base Hospital emergency department. In addition to the patient contacts, students will be expected to gain familiarity with the Base Hospital's role in prehospital care and the MICN's role in on-line medical control. There will also be a field requirement of sixteen (16) hours (two – eight (8) hour shifts) with a minimum of five (5) ALS patient contacts which will be conducted under the supervision of select paramedic preceptors. Students will be evaluated during the clinical and field component and they must pass these evaluations with a minimum rating of 80%.

REFERENCES

1. Caroline, Nancy L. M.D., Emergency Care in the Streets, 4th ed., Little, Brown & Co.
2. Walraven/Jones/Ochs/Nemey, Advanced Prehospital Care, 2nd ed., Brady
3. Northern California EMS, Inc., Policies/Procedures/Protocols
4. California Code of Regulations, Title 22, Division 9
5. DOT Paramedic Curriculum

**NOR-CAL EMS, INC.
ALT ALS EMT-1 SCOPE OF PRACTICE
CERTIFICATION/RECERTIFICATION
AND
CONTINUING MEDICAL EDUCATION**

ALT ALS EMT-1 CERTIFICATION REQUIREMENTS

I. In order to be eligible for certification, an individual shall:

- A. Have a valid Advanced EMT-I course completion record and apply for certification within 30 days of course completion.
- B. Pass, by pre-established standards developed and/or approved by the EMT-I certifying authority, a competency-based written and skills certifying examination.
- C. Complete a statement that the individual is not precluded from certification for reasons defined in Section 1798.200 of the Health and Safety Code.
- D. Pay the established fee.
- E. Furnish a current photograph for identification purposes.
- F. Comply with other reasonable requirements, as may be established by the EMT-I certifying authority.

II. Certification as an Advanced EMT-I shall be for a maximum of two (2) years from the date the individual satisfactorily completes all certification requirements and has applied for certification. The certification expiration date will be the final day of the final month of the two (2) year period.

III. In order to maintain certification, an Advanced EMT-I shall participate in continuing education courses, which shall include:

- A. An organized field care audit of recorded or written patient care records no less than six (6) times a year.
- B. Monthly training sessions or structured clinical experience or a combination thereof in EMT-I (basic) and Advanced EMT-I knowledge and skills, including CPR and required field care audits, totaling no less than forty-eight (48) hours every two years.
- C. A monthly demonstration of selected skills proficiency documented by the Base Hospital. The following skills shall be demonstrated on a regular bases:
 - Patient assessment, communications, and reporting techniques;
 - Endotracheal intubation
 - Preparation and administration of the drugs in the Advanced EMT-I formulary;
 - Review of selected basic life support procedures;
 - Use of semi-automatic defibrillator.
 - Intravenous infusion
- D. Monthly demonstration of skills may be reduced to quarterly demonstration of skills after six (6) months based on program evaluation.

- IV. In order to be eligible for recertification, an individual shall:
- A. Possess a current Advanced EMT-I certificate;
 - B. Obtain continuing education hours as specified in section III above;
 - C. Pass a competency-based written and skills certification examination every two (2) years.
- V. The effective date of recertification shall be the expiration date of the current certificate.