NORTH COAST EMERGENCY MEDICAL SERVICES
3340 Glenwood Street, Eureka, CA 95501 (707) 445-2081 (800) 282-0088 FAX (707) 445-0443

MEMORANDUM:

DATE: June 14, 2019

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
Interested Others

FROM: Nicole Mobley, Administrative Assistant

RE: E-Informational Mailing

1. For Your Information:
   a. Change Notice # 115

   Draft Policy #2202 BLS Supply
   Draft Policy #2205 Equipment
   Draft Policy #6511a 12 Lead ECG
   Draft Policy #6555 Pain Management
   Draft Policy #5307 Epinephrine
   Draft Policy #5310 Morphine Sulfate
   Draft Policy #2006 Revision
   Draft Policy #6511 Cardiac Emergencies

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CHANGE NOTICE CHANGE #115

DATE: 06/14/2019
TO: ALL PREHOSPITAL CARE POLICY MANUAL HOLDERS

INSTRUCTIONS	POLICY #	POLICY DESCRIPTION	# OF PAGES
DRAFT	2202	BLS supply	2
DRAFT	2205	Equipment	3
DRAFT	6511a	12 Lead ECG	2
DRAFT	6555	Pain Management	2
DRAFT	5307	Epinephrine	3
DRAFT	5310	Morphine Sulfate	2
DRAFT	2006	Revision Policy	4
DRAFT	6511	Cardiac Emergencies	3

Subject: Administration - Provider – ALS
Minimum Supply and Equipment List

Associated Policies: 2202, 2203

I. Authority and Reference (incorporated herein by references)
- A. Division 2.5 of Health and Safety Code
- B. California Code of Regulations, Title 22, Section 100126
- C. North Coast EMS Policies and Procedures
- D. California Emergency Medical Services Authority "Recommended Ambulance Equipment", contained in California Highway Patrol Ambulance Driver's Handbook (#CHP-894)

II. Purpose

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

A. Minimum Equipment:

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

1. One(1) VHF/UHF mobile radio compatible with local base hospitals and allied agencies and/or One (1) portable VHF radio with V-tach channels. One (1) cell phone.***
2. One (1) three-chambered pneumatic anti-shock garment.***
3. One (1) portable DC cardiac monitor/defibrillator which is capable of adult and pediatric monitoring, pacing and defibrillation through adult and pediatric-sized electrodes for primary (first out) units.
4. One (1) each, laryngoscope with handle, spare batteries, and a spare light bulb.
5. One (1) each, #4 straight and curved laryngoscope blade with light.
6. One (1) each, #1 and #2 straight laryngoscope blade with light.
7. One (1) each, adult and pediatric Magill forceps.
8. One (1) each, adult.
9. One thermometer.
10. One pulse oximeter
11. One end tidal CO2 monitor or esophageal detector device (EDD), adult and pediatric.

Subject: Administration - Provider – ALS
Minimum Supply and Equipment List

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

1. One (1) each, Esophageal/Tracheal Airway Device (Combitube).***
2. Electrodes and conductive medium for paddles or Pads, adult and pediatric monitoring and defibrillation.
3. Four (4) each, 14 gauge, 16 gauge, 18 gauge, 20 gauge, 22 gauge, and 24 gauge catheter over needle intravenous catheters.
4. One (1) venous constricting band with a width of at least one inch.
5. Alcohol preps, water resistant tape, and 2" x 2" gauze pads.
6. Assorted syringes in varies sizes.
7. One (1) each, 18 gauge by 1 1/2 inch, 23 gauge by 1 inch, and 25 gauge by 5/8 inch hypodermic needles.
8. One (1) IV cap.
9. One (1) each, 5.0 mm through 9.0 mm endotracheal tubes (in 0.5 mm increments).
10. I-Gel airway device - pediatric and adult one (1) each, 1, 1.5, 2, 2.5, 3, 4 and 5 if an approved agency.
11. One (1) Endotracheal transducer device (ETTI). ***
12. Suction catheters of various sizes.

C. Medications using prepackaged products when available.

1. One (1) activated charcoal 25 gm without Sorbitol.
2. 18mg Adenosine.
3. 100mg Diphenhydramine HCl
4. 400mg Dopamine HCl .
5. One (1) Glucagon 1 mg in 1 unit vial.
6. 4 GM Magnesium Sulfate 10%, or equivalent.
7. Two (2) each, Oxytocin 10 USP units if an approved agency. ***.
8. 5mg Epinephrine 1:1,000
9. 4mg Epinephrine 1:10,000.
10. 12mg Albuterol Sulfate solution for inhalation
11. 6mg Ipratropium Bromide for inhalation.
12. 324 mg, chewable Aspirin.
13. 20 mg Ativan***
14. 4mg Atropine.
15. One (1) multi-dose vial Atropine 0.04 mg/ml containing at least 20 ml's.***

Subject: Administration - Provider – ALS
Minimum Supply and Equipment List

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16. 1GM Calcium Chloride 10%.
17. Dextrose 50%, or Dextrose 10% 250cc IV solution or equivalent.
18. 20mg Diazepam***
19. 300 mcg Fentanyl***
20. 80mg Furosemide if an approved agency.
21. 300mg Lidocaine HCl***
22. 2GM Lidocaine***
23. 450mg Amiodarone***
24. 20mg Midazolam***
25. 16mg Oral Ondansetron (Zofran)***
26. 16mg IV/IM Ondansetron (Zofran)***
27. 20mg Morphine***
28. 1.6mg Nitroglycerine tablets or meter-dosed spray.
29. One (1) Sodium Bicarbonate 44.6 mEq.
30. 4mg Naloxone

D. Minimum Number of IV Solutions:
1. 1(one) 50cc parcial fill NS/D5W bag or Volutrol.
2. 4,000ml Isotonic IV Solution.
3. Two (2) each, 60 gtt/ml, and 10 gtt/ml intravenous infusion sets or equivalent.

E. Other Equipment:
1. One (1) small volume nebulizer.
2. Fifteen (15) triage tags.
3. One (1) each, nasogastric tube, 12, 14, 16, and 18 French or equivalent.
4. One (1) infant feeding tube, 8 French or equivalent.
5. One (1) 60 ml irrigation (catheter tip) syringe.
6. One (1) infusion pump, drip or volumetric***.
7. One (1) transtracheal over the needle catheter (13 gauge) or equivalent or Nu-Trach device for adults.
8. Two (2) 12 - 14 gauge angiocatheters minimum 3 inch in length,or equivalent or prepackaged needle decompression kit.
9. Two (2) intraosseous needles, one each adult and pediatric or IO device with pediatric and adult needles.
10. Two (2) Intranasal (MADD) devices.

III. Additional Base Hospital Requirement

A Base Hospital may require an ALS provider within the base hospital's zone to maintain supplies and equipment which exceed these minimum requirements. If a

base hospital seeks to require any additional inventory requirements, the base hospital shall:

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

III. *** Indicates optional with the signed approval of the provider's base hospital Prehospital Care Medical Director. ***May be either added or omitted per provider's base hospital Prehospital Care Medical Director.

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Subject: Treatment Guidelines - ALS
Pain Management Policy (Adult and Pediatric)

Associated Policies:

I. Authority and Reference
- A. Division 2.5 of Health and Safety Code
- B. California code of Regulation, Title 22
- C. North Coast EMS Policies and Procedures

II. Purpose

To provide guidelines for the management of pain, both traumatic and medical in nature, to adult and pediatric prehospital patients.

III. Indications:

- A. Moderate to severe pain in the presence of adequate vital signs (blood pressure >90). Consider IV Acetaminophen for patients with blood pressures <90.
- B. When extrication, movement or transportation is required which will cause considerable pain to the patient AND there are no known contraindications to administering any analgesia.

IV. Contraindications:
- A. Absolute:
  - 1. Any known or suspected drug allergies to narcotics.
- B. Relative:
  - 2. Active Labor ~~– Requires BASE CONTACT~~

V. Procedure:
- A. Determine origin of the pain (examples: isolated extremity trauma, chronic medical condition, burns, abdominal pain, multi-system trauma).
- B. Identify those patients with the complaint of pain or have obvious signs of discomfort.
- C. Determine initial pain score on a scale of 1 to 10 and document this finding in the Prehospital care report.
- D. May use Morphine Sulfate, Fentanyl, Benzodiazepines and/or IV Acetaminophen per agency and NCEMS policies and in the absence of contraindications., Determine baseline blood pressure, pulse rate and Pulse Oximetry.
- E. Monitor vital signs closely (i.e. respiratory rate/effort, LOC, O_2 saturation).
- F. Leave Pulse Oximetry in place for serial saturations.
- G. Determine need for oxygen.
- H. Establish IV or IO access per policy.
- I. Determine need for IV fluids. Do not administer fluid boluses without indications.

Subject: Treatment Guidelines - ALS
Pain Management Policy (Adult and Pediatric)

Associated Policies:

~~Administer Morphine Sulfate (Policy # 5340) IV/IO. Consider one IM injection if IV is delayed or unavailable.~~
~~Administer Fentanyl (Policy # 5439) IV/IO. Consider one IN administration if IV is delayed or unavailable.~~
~~Administer Benzodiazepines (Policy # 5332) IV/IO/IM.~~
~~Administer Acetaminophen (Policy# draft). IV ONLY.~~

~~N.~~ If significant pain persists when administering Morphine Sulfate in doses greater than 10mg IV/IO consider Midazolam 1 mg IV/IO. Subsequent dosing of Morphine Sulfate should be reduced to 2mg increments. Midazolam may be repeated every 5-10 minutes up to max dose of 5mg.

~~O.~~ If significant pain persists when administering Fentanyl 150mcg IV/IO, consider Midazolam 1 mg IV/IO. Subsequent dosing of Fentanyl. Should be reduced to half doses to maximum total dose of 300mcg.

~~P.~~ Zofran may be co-administered to alleviate nausea and/or vomiting with narcotics. Strongly consider Zofran use for patients who are immobilized.

~~Q.~~ Repeat pain scale and all vital signs following administration of all medications.

~~R.~~ Contact Base Hospital physician for additional Fentanyl administration requests when needed.

~~S.~~ Monitor patient and vital signs carefully and ensure a patent airway.

VI. Special Considerations:

A. Always have Narcan readily available to reverse any respiratory depression that may occur, or chest rigidity caused from Fentanyl.
B. Consider half (½) the dose of Fentanyl in patients ≥ 65 years with all routes.
C. Use caution in the suspected drug or alcohol intoxication.

VIII. Documentation and Patient Care Reporting

A. Document initial and post treatment pain score expressed in a measurable form.
B. All interventions used for pain management including all BLS and ALS procedures.
C. Initial and post vital signs.
D. When physician consult was required.

Subject: Administration - Provider
Basic Life Support Supply and Equipment Standard

Associated Policies: 2203, 2204, 2205

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

II. Purpose

To establish the regional standards of minimum basic life support supplies and equipment to be maintained on authorized First Responder Agencies and Advanced Life Support responders.

III. Policy

A. Basic Supplies and Equipment:
1. One (1) suitable box or carrying case.
2. Ten (10) 4" X 4" gauze sponges.
3. Two (2) abdominal pads.
4. One (1) large multi-purpose dressing.
5. Three (3) triangular bandage.
6. Two (2) 4 1/2" gauze roller bandage.
7. One (1) roll 1" adhesive tape.
8. One (1) roll 2" heavy adhesive tape.
9. Three (3) chemical cold packs.
10. Three (3) chemical hot packs.
11. Two (2) each, normal Saline and Sterile Water, 1000 ml bottles.
12. One (1) bite stick.
13. One (1) penlight.
14. One (1) heavy duty bandage sheers.
15. Two (2) large sterile burn sheets.
16. Two (2) tourniquets for bleeding controlled. ***
17. Two (2) NCEMS approved hemostatic dressings. ***
18. One (1) stethoscope.
19. One (1) each, sphygmomanometer, pediatric and adult sizes.
20. One (1) obstetrical kit that includes bulb syringe, plastic bag, sterile drapes, and two (2) umbilical clamps.
21. One (1) set personal protection kit that includes disposable latex exam gloves, protective eyeglasses or goggles, disposable gown, and a disposable surgical mask.
22. One (1) reusable pocket mask with one way valve.
23. One (1) each, infant, child and adult cervical collar.

B. Medications:
1. One (1) tube instant glucose

Subject: Administration - Provider
First Responder/BLS Supply and Equipment Standard

2. 648mg Chewable Aspirin.***
3. Narcan© Intranasal Narcan if working for an approved agency.
4. EpiPen if working for an approved agency.

C. Oxygen:
1. Cylinder sheath with pouches, or other suitable carrying case.
2. D size (or larger) oxygen tank with pre-connected liter flow and demand valve fittings.
3. One (1) each, oropharyngeal airways #0 through #6.
4. One (1) each, adult and pediatric bag-valve-mask with clear resuscitation masks infant, pediatric, and adult.
5. One (1) each, pediatric and adult nasal cannula, pediatric and adult simple face masks and/or non-rebreather masks.
6. One (1) Continuous Positive Airway Pressure Mask Device (CPAP)***
7. Pulse Oximetry device***

C. Suction:
1. Hand operated manual or battery operated mechanical suction device with variable settings.
2. One (1) pre-connected suction tubing and Yankauer catheter.
3. One (1) each, suction catheters, infant, child and adult (5/6, 10 and 14 French).

D. Splints:
1. One (1) suitable carrying case.
2. One (1) full-length upper extremity splint constructed of cardboard or other shapeable radiolucent material.
3. One (1) half-length upper extremity splint constructed of cardboard or other shapeable radiolucent material.
4. One (1) full-length lower extremity splint with foot constructed cardboard or other shapeable radiolucent material.
5. Two (2) half-length lower extremity splint constructed of cardboard or other shapeable radiolucent material
6. One (1) half-length backboard or similar extrication device.
7. One (1) full-length backboard or similar extrication device.
8. Five (5) 12' nylon straps with D-ring or buckle closure or equivalent devices.
9. One (1) large blanket or sleeping bag.

***Indicates optional with the signed approval of the provider's base hospital Prehospital Care Medical Director.

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Subject: Treatment Guidelines – ALS
Cardiac Emergencies – Suspected Acute MI / Acute Coronary Syndrome

Associated Policies:

I. Priorities
- A. ABC's
- B. Identify dysrhythmia and degree of distress.
- C. Initiate treatment before transport.
- D. Re-assess rhythm and vital signs frequently.
- E. Transport Code 2. If unstable, Code 3.

II. Indications:
- A. Chest Pain Suspicious of Cardiac Origin (Typical or Atypical)
- B. Syncopal episode.
- C. History of previous AMI
- D. History of heart disease.
- E. Angina

III. Treatment:
1. Reduce anxiety, allow patient to assume position of comfort.
2. Oxygen as clinically indicated.
3. Obtain rhythm strip for documentation.
4. IV access early. If signs of inadequate tissue perfusion and clear lung sounds, give 300ml NS bolus, may repeat. (Blood draw for labs, if possible.)
5. Aspirin ~~324 mg non-enteric coated (4 chewable 81 mg tablets or 1 adult 325 mg tablet)~~ chewed and swallowed.
6. Nitroglycerine ~~0.4 mg~~ sublingual or metered - dose spray. May repeat every 3-5min, if BP>100 systolic.
7. Morphine Sulfate or Fentanyl IVP titrated to relieve chest pain, if BP > 90-systolic.
8. Obtain 12 Lead ECG as early as possible.
9. If signs of inadequate tissue perfusion or if inferior wall infarct is suspected, consider obtaining a right-chest 12 Lead. (V4R)
10. If right ventricular infarct is suspected with signs of inadequate tissue perfusion, consider 300ml NS bolus, may repeat. Early consultation with Base Station. (Nitrates should be avoided in the presence of suspected Right Ventricular Infarct or hypotension.)
11. Leave 12 Lead monitoring in place. Repeat 12 Lead at regular intervals if monitor is not equipped with trending.
12. If computerized interpretation of accurately performed 12 Lead indicates either ***ACUTE MI*** or ***STEMI MI***, the

Subject: Treatment Guidelines – ALS ~~Personnel~~
Cardiac Emergencies – Suspected Acute MI / Acute Coronary Syndrome

Associated Policies:

patient should be evaluated for transport directly to the PCI center.

13. With consent, a patient with an identified STEMI or ACUTE MI should be transported to the designated STEMI Receiving Center.
14. Patients without these findings should be transported to the nearest receiving facility if possible.
15. Patients developing cardiac arrest or unmanageable airway enroute should be transported to the nearest appropriate Receiving hospital.
16. For patients with nausea and vomiting, consider Zofran ~~4mg slow IV/IM/IO, or 4mg PO oral dissolving tabs~~ as tolerated.
17. Reevaluate frequently for any changes.

~~18. Screen for Fibrinolytic Therapy (see Checklist) as time permits on all Suspected Acute MI patients.~~

~~19. Lidocaine is indicated only for significant ventricular ectopy or unstable ventricular rhythms. Routine prophylactic lidocaine therapy is contraindicated for patients with uncomplicated AMI.~~

~~i. Lidocaine 1-1.5 mg/kg IVP every 5-10 minutes to loading dose of 3 mg/kg, if heart rate 60-150/minute.~~

~~ii. Lidocaine drip 2-4 mg/minute (2 gm in 500 ml IV solution).~~

~~iii. In the presence of CHF, liver failure, shock, or age > 70, consider half the maximum dose of Lidocaine.~~

~~20.~~18. Consider shock protocols below for clinical signs of hypoperfusion.

IV. Clinical Signs of Hypoperfusion:

1. Oxygen as indicated by clinically presentation.
2. Obtain early IV access. (Blood draw for labs, if possible.)
3. Consider the cause:
   a. Volume problem:
      1) Fluid challenge ~~250~~300-500ml normal saline, repeat as needed to obtain adequate volume replacement.

~~2) ** If systolic BP < 70 consider Dopamine infusion 5-20ug/kg/minute.~~

~~b.~~ Rate problem:
      1) Use tachycardia or bradycardia treatment protocols.
   c. Pump problem:
      1. Fluid challenge – 300ml-500ml NS, repeat as

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Subject: Treatment Guidelines – ALS ~~Personnel~~
Cardiac Emergencies – Suspected Acute MI / Acute Coronary Syndrome

Associated Policies:

needed to obtain adequate volume replacement.

2. ** If systolic BP < 70, consider Dopamine infusion or Push Dose Epinephrine ~~5-20ug/kg/minute~~ after adequate fluid replacement.

V. Special Considerations:

~~1~~. Approximate time to acquire a 12 lead should not be longer than three (3) minutes.

~~2~~. Emergency Medical Technicians (Basics) can assist with application and acquisition of the 12 lead EKG under the direct supervision of the paramedic.

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Subject: Treatment Guidelines – ALS
12 Lead Electrocardiography

Associated Policies:

I. Purpose:
To identify guidelines for the acquisition and interpretation of a 12 lead ECG in the pre-hospital setting to facilitate early identification of STEMI and ACUTE MI patients and prompt transportation to a STEMI Receiving Center.

II. Policy:
~~2. ALS providers desiring to utilize and employ 12 Lead must do so according to North Coast EMS Draft policy "New ALS Interventions"~~
~~3. It is recognized that not all ALS units will be equipped with this optional scope procedure and not all paramedics will have the required training.~~
-4. It is the responsibility of the ALS Provider to ensure that their Paramedics are trained to utilize their respective cardiac monitor. ~~without the required training will not employ the 12 Lead ECG prior to have been adequately trained in its use.~~

III. Indications:
1. ~~Any and~~ All patients whose medical history and/or a description of the signs and symptoms indicating that the patient is/was suffering from a suspected Acute Coronary Syndrome (ASC) including but not limited to:
   a) Chest or upper abdominal discomfort suggestive of acute coronary syndrome.
   b) Discomfort or tightness radiating to the jaw, left shoulder or arm and may have one of the following:
      Nausea
      Diaphoresis
      Dyspnea
      Unexplained syncope/dizziness (elderly)
   c) -Known treatment for ACS
   d) May be considered in patients with stable tachycardias for diagnostic purposes.
2. Significant vital signs and physical findings.

IV. Contraindications: None
~~1. Trauma~~
~~2. Uncooperative patient~~
~~3. Cardiac Arrest~~

Subject: Treatment Guidelines – ALS
12 Lead Electrocardiography

Associated Policies:

V. Procedure:
1. Complete initial assessment and stabilizing treatment.
2. Obtain the EKG as soon as possible and prior to departing the scene.
3. Place precordial leads and acquire tracing as per manufacturer's directions.
4. Notify the Base Station of the EKG's interpretation as soon as possible of ***ACUTE MI*** or ***STEMI MI*** for bypass determination.
5. Make Base Contract early in situations where the medic suspects a positive STEMI that is not supported by the EKG interpretation.
6. If defibrillation or synchronized cardioversion is necessary, remove the precordial leads.

VI. Documentation:
1. Interpretation of the 12- lead ECG (leads, amount of ST elevation in millimeters, "confidence" in the 12- lead assessment).
2. Attach a copy of the ECG to the base (modified) Base hospital copy and the provider copy of the PCR.
3. If air transport is requested,
   a) the time of the request,
   b) the ETA provided by the air transport,
   c) the arrival time of the air transport,
   d) the "lift off" time of the air transport.

Subject: Scope of Practice/Procedure - ALS
Epinephrine (Adrenalin)

Associated Policies:

I. Class
   A. Naturally occurring catecholamine with alpha and beta adrenergic effects.

II. Indications
   A. Anaphylactic shock.
   B. Acute asthma.
   C. Cardiac arrest.
   D. Bradycardia refractory to atropine.
   E. Treatment of shock with profound hypotension from any cause unresponsive to fluid resuscitation.
   F. Severe croup.
   G. ~~Life-threatening epiglottitis.~~

III. Therapeutic Effects
   A. Bronchodilator.
   B. Maintains blood pressure.
   C. Stimulates spontaneous contractions of myocardium.
   D. Increases myocardial tone.

IV. Contraindications
   A. Absolute:
      1. None.
   B. Relative:
      1. Use with cautions in persons over 40 years of age or known ischemic heart disease.

V. Adverse Effects
   A. Tachycardia.
   B. Palpitations.
   C. Tremors.

VI. Administration and Dosage
   A. Anaphylactic shock:
      1. Adult:
         a. Epinephrine 1:1,000 0.3 mg-0.5 mg IM to lateral thigh, may repeat every 15 minutes as necessary.
         b. Epinephrine 1:10,000 slow IV (15-60 seconds) in 0.1 mg increments to maximum of 0.5 mg titrated to relieve signs of shock

Subject: Scope of Practice/Procedure - ALS
Epinephrine (Adrenalin)

Associated Policies:

2. Pediatric:
   a. Epinephrine 1:1,000 0.01 mg/kg (maximum dose 0.5 mg) IM to lateral thigh.
   b. Epinephrine 1:10,000 slow IV (15-60 seconds) in 0.05 mg (0.5cc) increments to maximum of 0.01 mg/kg.

B. Asthma:
   1. Adult:
      a. Epinephrine 1:1,000 0.01 mg/kg IM to lateral thigh (maximum single dose 0.5 mg). May repeat in 20 minutes.
   2. Pediatric:
      a. Epinephrine 1:1,000 0.01 mg/kg IM to lateral thigh (maximum single dose 0.5 mg). May repeat in 20 minutes.

C. Cardiac Arrest:
   1. Adults:
      a. Epinephrine 1:10,000 1 mg IV IO or 2-2.5 mg ET every 3 to 5 minutes. If no response consider:
   2. Pediatric:
      a. Epinephrine 1:10,000 0.01 mg/kg, IV or IO.

D. Severe Bradycardia and/or Hypotensive Shock State refractory to fluid resuscitation (May consider push dose epinephrine or an Epinephrine drip):
   1. Adult: (Drip)
      a. Dilute 1 mg Epinephrine 1:1,000 in 1000 ml of NS to mix a concentration of 1mcg/ml.
      b. Initial infusion rate = 2 mcg/minute, titrated to the desired effect (average infusion dose range= 2-10 mcg/min).

      Adult (Push Dose)
      a. Dilute 1 mg (ml) of Epinephrine 1mg/10ml with 9ml of normal saline. Mix well.
      b. Administer 10 mcg (1ml) "pushes" IV/IO every 5 minutes to a target blood pressure of 90 mmHg.
   2. Pediatric:
      a. ~~Epinephrine 1:10,000 – 0.01mg/kg IV/IO every 3-5 minutes. Note: If using length-based Pediatric Emergency Reference tape, use dosing for cardiac arrest.~~

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Subject: Scope of Practice/Procedure - ALS
Epinephrine (Adrenalin)

Associated Policies:

b. Hypotension refractory to fluid therapy and intermittent Epinephrine doses with extended transport time, administer Epinephrine drip or Push Dose Epinephrine.

c. Epinephrine Drip Dose – Mix Epinephrine infusion and initiate at 0.03mcg/kg/minute.
Titrate to desire effect (relief of hypotension).
Typical dose range is 0.03-1mcg/kg/minute.

d. Push Dose Epinephrine Dose: Dilute 1ml of epinephrine 1mg/10ml with 9ml of normal saline.
Administer 1mcg/kg (0.1ml/kg). Maximum single dose of 5mcg (.5ml), repeat every 3-5 minutes.

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E. Severe Croup ~~or Epiglottitis~~:
1. Adult and pediatric:
a. Nebulize 5cc Epinephrine 1:1,000 via SVN without dilution. Do not repeat within 60 minutes

VII. Special Information
A. Incompatible with bicarbonate and furosemide solutions. Flush IV lines between injections.
B. Endotracheal administration is no longer the preferred route of administration and should be avoided.

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3/2018

Subject: Scope of Practice/Procedure - ALS
Morphine Sulfate

Associated Policies: 5402, 5311, 5438, 6555

I. Class
A. Opiate (narcotic). Natural opium alkaloid.

II. Indications
A. Ischemic chest pain without improvement from nitrites.
B. Burns.
C. Trauma patients with adequate vital signs.
D. Abdominal pain in the absence of hypotension.

III. Therapeutic Effects

A. Promotes analgesia, decreases pain perception and anxiety.
B. Increase venous capacitance and reduces systemic vascular resistance.
C. Decreases myocardial oxygen demand.

IV. Contraindications
A. Absolute:
1. Hypersensitivity.
2. Hypotension by evidence of systolic blood pressure of less than 90. Stabilize blood pressure prior to administration.

B. Relative:
1. Compromised respirations.
2. Women in labor ~~REQUIRES BASE CONTACT~~
3. Use caution in the presence of Acute Pulmonary Edema from all causes.

V. Adverse Effects
A. Respiratory depression.
B. Decreased level of consciousness.
C. Transient hypotension.
D. Bradycardia or tachycardia.
E. Nausea and vomiting.

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Approved as to Form: _____

~~3/2018~~5/2019

Subject: Scope of Practice/Procedure - ALS
Morphine Sulfate

Associated Policies: 5402, 5311, 5438, 6555

VI. -Administration and Dosage

A. Adult:
2 to 5 mg (max single dose should not exceed 0.1mg/kg) slow IV/IO repeat every 3 to 5 minutes. Additional dosing should be considered based on vital signs and pain levels. Monitor respiratory effort and blood pressure closely.
Intramuscular (IM) 5 to 15 mg single dose, if IV access is not available or delayed. MAY NOT BE REPEATED.
Suspected Acute MI/Acute Cardiac Syndrome not improving with NTG therapy: 1mg IV or IO every 3 minutes.

For Adult Patients ONLY. - If significant pain persists after 10mg of Morphine Sulfate administration IV/IO, consider midazolam 1mg IV/IO. Following midazolam administration, additional dosing of Morphine should be reduced to 2 mg increments IV/IO. May repeat midazolam 1mg IV/IO, ~~once in~~every 5-10 minutes to a maximum dose of 5 mg, if needed.

B. Pediatric:
0.05 to 0.1 mg/kg slow IV (Maximum 2 mg single dose) over 3 to 5 minutes. May repeat every 5-10 minutes at 1/2 dose until desired effect is achieved.
IM - 0.1 mg/kg single dose. MAY NOT BE REPEATED.

C. Infant – Less than 6 months (est. 8 kg):
0.05 mg/kg slow IV over 3 to 5 minutes.
May repeat every 5 to 10 minutes at 1/2 dose once prior to base contact.
Contact base hospital for IM dosing of Infants less than 6 months of age.

VII. Special Information

A. Place all patients receiving Morphine on cardiac monitor and pulse oximetry.
B. Patients receiving Morphine may require supplemental oxygen.
C. Administer Oxygen per Oxygen Administration Policy #6030.
D. Excessive narcosis can be reversed with naloxone.
E. Use caution and consider smaller increments of dosing in the Acute Inferior MI patient. Monitor closely for hypotension and be prepared for fluid resuscitation.
F. Consider co-administration of Zofran to prevent nausea or vomiting, if no contraindications exist.

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~~3/2018~~5/2019

Subject: Administration - Miscellaneous
Public Comment Solicitation

Associated Policies:

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 establish a process for updating existing policies, ~~soliciting public comments on North Coast EMS~~ to establish a process for drafting new policies, procedures and protocols.

III. Policy
- A. The North Coast EMS Policy Review Committee reviews, updates and develops new policies or procedures for the region.
- B. The Policy Review Committee's members consist of anyone who has in writing requested inclusion on the committee.
- C. The Policy Review Committee meets quarterly.
- D. For minor policy revisions or correction, ~~the signature of~~ the Executive and Medical Director ~~is sufficient~~ may finalize ~~any~~ the policy by applying their signatures.
- E. For policy revisions entailing a significant change operational or clinical the following review process ~~will~~ shall occur.
  1. Policy drafts will be sent to the members of the Policy Review Committee for review and comment no fewer than ~~two~~ 14 days prior to the quarterly Policy Review Committee meeting.
  2. Comments will be discussed at the meeting and changes will be made according to the groups'~~'~~s consensus.
  3. ~~When possible~~ If the attendees of the policy review committee reach consensus, policies changes or updates will be ~~finalized~~prepared for Executive Director and Medical Director signatures ~~during the committee meeting~~.
  4. Whenever the Policy Review Committee does not reach consensus, the draft policy will be annotated to reflect the differing recommendations and forwarded to the Executive Director and Medical Director for their review.
  5. ~~If substantive comments are received, the policy will be revised and returned in draft form to the members of the Policy Review Committee for an additional comment period.~~ The

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Subject: Administration - Miscellaneous
Public Comment Solicitation

Associated Policies:

Executive Director and Medical Director may adopt or reject recommendations or make changes to the draft at their discretion.

6. At their discretion, the Executive Director and Medical Director may either finalize the policy, either with or without further changes, and apply their signatures, or they may return the draft policy, along with their recommendations to the attendees of the policy review committee, or to the public, for a comment period of no less than 14 days.

F. At the expiration of the comment period and/or subsequent review by the Policy Review Committee, the Executive Director and Medical Director will consider any and all comments, make any changes to the policy as they deem appropriate, and finalize the policy by applying their signatures.

~~A. Whenever public comment is solicited on a North Coast EMS policy or protocol, a 15 day minimum response period will be given. Exceptions to this policy must be approved by the Executive Director for cause.~~

~~B. Policy drafts will be sent initially to the following for 20 days, at minimum:~~

~~All Informational Mailing recipients, including~~

~~1. Joint Powers Governing Board Members~~

~~5. County Health Officers~~

~~6. Lake County Administrative Officer~~

~~7. Prehospital Care Nurse Coordinators~~

~~8. Prehospital Care Medical Directors~~

~~9. Fire Chiefs' Associations~~

~~10. EMS Liaisons~~

~~11. Emergency Medical Care Committee Chairpersons~~

~~C. Specialized policies will also go to appropriate individuals (e.g., CI policies to CI providers, BLS policies to Fire Chiefs, special protocols to physician specialties, etc.)~~

~~D. If substantive comments are received, the policy will be revised within 10 days and returned in draft form to the individuals listed in III.B. for a 15 day comment period.~~

~~E. At the end of the comment period, and review process, policies will be implemented by the EMS Executive Director and EMS Medical Director and protocols will be implemented by the EMS Medical Director and EMS Executive Director (as to form).~~

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Subject: Administration - Miscellaneous
Public Comment Solicitation

Associated Policies:

~~3.~~ New policies and protocols will be distributed to all stakeholders and included in the online policy and procedure manual. ~~Informational Mailing recipients (listed in III.B.) for inclusion in the policy and procedures manual.~~

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