MARIN HEALTH & HUMAN SERVICES
Health, Well-being & Safety

Larry Meredith, Ph.D., Director

DIVISION OF PUBLIC HEALTH
EMERGENCY MEDICAL SERVICES

Date: June 28, 2013

To: Holders of EMS Policy and Procedure Manuals

From: Bill Teufel, MD
EMS Agency Medical Director

Subject: **Update to Policy Manual, Change Notice #32**

Enclosed please find Update #32 to the EMS Policy and Procedure Manual. These new and revised policies and procedures are effective **July 1, 2013**. Please update the Record of Change page and replace the Table of Contents and Signature page.

Revised Policies and Procedures include:

- 3300 EMT-P Accreditation/Continued Accreditation
- 4613a Trauma Triage Tool
- 5010 Provider Equipment List
- 5400 Ambulance Diversion Policy
- 7001 Prehospital/Hospital Contact Policy
- ATG 2 Adult Pain Management
- ATG 7 Adult Medications
- C 7 Narrow Complex Tachycardia
- C 9 STEMI
- GPC 4 Destination Guidelines
- GPC 7 DNR / POLST
- M 5 Severe Nausea/Vomiting
- P 9 Pediatric Seizures
- P11 Pediatric Toxic Exposures
- R 5 Acute Pulmonary Edema

New Policies include:

- 5007 Fireline Medic Policy
- 7007 Interim Policy Memo
- GPC Adult Cardiac Arrest Guideline
- T 4 Management of Less-Than-Lethal Interventions

Deleted Policies include:

- T 2 Head Trauma

SPECIAL NOTIFICATION:

Dextrose 10% was added back onto Policy 5010 Provider Equipment List

If you have not received training on these changes, please contact your CQI Liaison or Training Officer. Please ensure that the changes are made in your manual.

EMS Policy & Procedures Manual

Errata Report

If any errors, (i.e.; typographical, grammatical, calculations or omissions) are noted in this manual, please inform this office immediately. To insure that the appropriate policy is changed, please make a copy of this form, fill in the required information and send it to us. Thank you.

Policy/Protocol Title	
Policy Number	
Page Number	
Correction	
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EMS Policy & Procedures Manual

Record of Change

Keep your policy manual current. After receiving and filing additional or revised policies/protocols, initial and date the block following the appropriate change.

There should not be any blank boxes between initialed blocks; this means you either failed to record the CHANGE NOTICE or have not received it. Notify the Marin County EMS Office if you did not receive a CHANGE NOTICE.

No.	Initial	Date		No.	Initial	Date		No.	Initial	Date
1		11/94		19		07/2003		37		
2		08/95		20		09/2003		38		
3		01/96		21		02/2004		39		
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8		01/98		26		01/2007		44		
9		08/98		27		05/2008		45		
10		03/99		28		06/2009		46		
11		10/99		29		07/2010		47		
12		11/99		30		07/2011		48		
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COUNTY OF MARIN

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Division of Public Health Services

Emergency Medical Services Agency

Policy and Procedure Manual

July 1, 2013

Miles Julihn, EMS Administrator, EMS Agency

William L. Teufel, MD, Medical Director, EMS Agency

EMS Program Policy & Procedure Manual

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EMT-P ACCREDITATION/CONTINUED ACCREDITATION

I. INITIAL ACCREDITATION

A. To be eligible for accreditation in Marin County an individual must:
   1. Provide evidence of possession of a valid California statewide EMT-P license which is current.
   2. Provide proof of employment with a designated EMT-P service provider within the local EMS jurisdiction.
   3. Apply to the local EMS Agency. Application includes the following:
      a. Completion of application form which includes a statement that the individual is not precluded from accreditation for reasons defined in Section 1798.200 of the Health and Safety Code.
      b. Check or money order payable to "County of Marin" in the amount as per fee schedule.
   4. Attend an EMS system orientation not to exceed eight (8) classroom hours or equivalent.
   5. Comply with the following additional requirements:
      a. Permit verification of status with other certifying or accrediting agencies.
      b. Complete a written Protocol Quiz with 80% accuracy.

B. Accreditation procedure
   1. The local EMS Agency shall accredit the individual to practice in Marin County. Accreditation to practice shall be continuous as long as State of California EMT-P licensure is maintained and local requirements are met. The EMT-P may practice in the basic scope of practice when working as a second EMT-P during the accreditation process.
   2. Accreditation is indicated by the issuance of a card bearing the date of issuance, Marin County Accreditation number and the signature of the EMS Agency Medical Director.
   3. The EMS agency shall notify individuals applying for accreditation of the decision to accredit within thirty (30) days of application. If requested by the applicant accreditation may be extended at the discretion of the EMS Program.
   4. EMS Agency shall notify the EMS Authority within ten days of the accreditation action.

II. MAINTAINING ACCREDITATION

A. Accreditation is maintained when the following requirements are met:

1. Successful completion of the EMT-P licensure process. The paramedic shall forward proof of successful licensure and completion of local requirements to LEMSA prior to expiration date.
2. Employment with a designated EMT-P service provider within the local jurisdiction. Employer shall notify LEMSA within ten (10) days of paramedic leaving employment.
3. Completion of the "Skills Update Program" as defined in policy within the licensure period.

B. Inactive Accreditation

1. Accreditation becomes inactive if one or more of the following occur:
   a. Paramedic is not currently employed by a Marin County provider OR
   b. Paramedic has not met the local requirements for continued accreditation as listed above and is less than one year into the new licensure period OR
   c. License renewal does not occur prior to the license expiration.
2. Accreditation will be continued if, prior to 180 days into the new licensure period:
   a. Paramedic presents a copy of the new/current license.
   b. Paramedic presents a copy of the “Skillls Update Program” certificate from the last accreditation period.
   c. A letter confirming employment is received by the LEMSA if applicable.

C. Lapsed accreditation

1. If accreditation becomes inactive for any reason and is not continued prior to 180 days into the new licensure period, EMT-P must provide proof of “Skills Update Program” completion in the last year.
2. If accreditation becomes inactive for greater than one year the EMT-P must complete the initial accreditation process, as listed in section I.

MARIN COUNTY TRAUMA TRIAGE TOOL

Adult Patients (age 14 and older)

Step 1 – Major Physiologic Factors

1. Glasgow Coma Scale <14
2. Systolic blood pressure (mmHg) <90 mm Hg
3. Respiratory rate <10 or >29 breaths per minute

YES → **Provide Full Trauma Notification & Transport to Time Closest Trauma Center: Marin General Hospital by ground, or Level II by air.**

NO → **Assess Anatomic Factors**

Step 2 – Major Anatomic Factors

1. Penetrating injuries to head, neck, torso, or extremities proximal to elbow or knee
2. Flail chest
3. Two or more proximal long-bone fractures
4. Crushed, degloved, mangled or amputated extremity proximal to wrist or ankle
5. Pelvic fractures
6. Open or depressed skull fracture
7. Paralysis (partial or complete)
8. Burns with anatomic factors

YES → **Provide Full Trauma Notification & Transport to Time Closest Trauma Center: Marin General Hospital by ground, or Level II by air.**

NO → **Assess Mechanism of Injury Factors**

Step 3 – Mechanism of Injury Factors

1. Falls
   - Adults >20 feet (one story is equal to 10 feet)
   - Children >10 feet or three times the height of the child
2. High-risk auto crash
   - Passenger space intrusion >18" (>12" occupant site)
   - Ejection (partial or complete) from automobile
   - Death in same passenger compartment
3. Auto vs. pedestrian or auto vs. bicyclist: thrown, run over, or with >20 mph impact
4. Motorcycle or bicycle crash: thrown and > 20 mph impact
5. Burns with MOI factors

YES → **Provide Limited Trauma Notification & transport to Marin General Hospital Trauma Center**

NO → **Assess Additional Factors**

Step 4 – Additional Factors

1. Older Adults; Risk of injury/death increases significantly after age 65
2. Anticoagulant use and/or bleeding disorders with head / torso injury (if head injury, transport to ED with functioning CT scanner)
3. End-stage renal disease requiring dialysis
4. Pregnancy >20 weeks

Does assessment of these additional factors, or other complaints or exam findings cause paramedic to be concerned about the patient?

YES → **Provide Limited Trauma Notification & Transport to Marin General Hospital Trauma Center**

NO → **Transport to closest emergency dept. or emergency dept. of patient's choice**

Trauma Center consultation is recommended for questions about destinations for injured patients.

MARIN COUNTY TRAUMA TRIAGE TOOL

Pediatric Patients (age <14 yrs)

Step 1 – Major Physiologic Factors

1. Glasgow Coma Scale <14
2. Systolic BP <80 mm Hg – age 7-14
3. Systolic BP <70 mm Hg – age < 7

YES → **Transport to Oakland Children's Hospital if ETA 30 min. or less, otherwise transport to Marin General Hospital and provide Full Trauma Notification**

NO → **Assess Anatomic Factors**

Step 2 – Major Anatomic Factors

1. Penetrating injuries to head, neck, torso, or extremities proximal to elbow or knee
2. Flail chest
3. Two or more proximal long-bone fractures
4. Crushed, degloved, mangled or amputated extremity proximal to wrist or ankle
5. Pelvic fractures
6. Open or depressed skull fracture
7. Paralysis (partial or complete)
8. Burns with anatomic factors

YES → **Transport to Oakland Children's Hospital if ETA 30 min. or less, otherwise transport to Marin General Hospital and provide Full Trauma Notification**

NO → **Follow Steps 3 & 4 on page 1 for Adult Trauma Patients**

SPECIAL CONSIDERATIONS

1. The clinical findings, including past medical history, are critical to identifying the trauma patient, especially when assessing Mechanism of Injury (MOI) and Additional factors (AF).
2. A thorough clinical assessment is especially important in:
   - Patients with persistent & unexplained respiratory difficulty, tachycardia, or peripheral vaso-constriction;
   - Any patient <5 yrs of age who has suffered major trauma but for whom it is not possible to fully determine physiologic status;
   - Inability to communicate (e.g., language barrier, substance or psychiatric impairment)
3. There are mechanisms of injury not identified in the Trauma Triage Tool that may be associated with trauma. Any fall or impact with significant velocity is likely to produce a candidate for trauma activation.

"PROVIDE EARLY TRAUMA NOTIFICATION" means field personnel will advise the trauma center as soon as possible of their impending arrival by providing a Trauma Notification. This information will be used to activate the trauma team. This information is best provided directly from the field by the EMT, paramedic or Incident Commander. Direct communication with the hospital via MERA is preferred. The notification must include at a minimum the following information:

1. Age / Gender
2. Incident type (e.g., MVA, fall, stab wound, gunshot wound)
3. Injury and/or complaints
4. Category:
   - "Full Trauma" (Anatomic or Physiologic factors) or
   - "Limited Trauma" (Mechanism or Additional factors)
5. ETA

As soon as practical after the Trauma Notification has been given, a more thorough report should be provided to the trauma center, including vital signs.

Trauma Center consultation is recommended for questions about destinations for injured patients.

NEW

FIRELINE MEDIC (FEMP) POLICY

PURPOSE

To establish policy for paramedics to function as fireline paramedics when requested through the statewide Fire and Rescue Mutual Aid System to respond to and provide Advanced Life Support (ALS) care on the fireline at wildland fires.

DEFINITION

Fireline Emergency Medical Technician - Paramedic (FEMP): A paramedic who meets all pre-requisites established by FIRESCOPE and is authorized by their department to provide ALS treatment on the fireline.

POLICY

A. Under the authority of State regulations, a paramedic may render ALS care during mutual aid operations as long as the following conditions are met:

1. They are in possession of a valid California Paramedic License
2. They are accredited by a local EMS agency
3. They are affiliated with an ALS provider that is approved by the local EMS agency with whom they are accredited
4. They may utilize the scope of practice for which s/he is trained and accredited according to the policies and procedures established by his/her accrediting local EMS agency, which shall include an “Out-Of-County Response” Policy.

B. When requested for an out of county assignment, a paramedic may utilize the scope of practice for which they are trained and accredited according to the policies and procedures established by the Marin EMS Agency.

C. This policy is not intended to replace existing EMS or circumvent the established response of EMS within any jurisdiction.

OPERATIONS

A. Marin County FEMPs are authorized to provide pre-hospital ALS within the scope of practice allowed by the State of California and the Marin EMS Agency.

B. Marin County FEMPs will be equipped with the items on the FEMP inventory list.

C. It is recognized that the FEMP cannot carry the same amount of equipment and supplies as would normally be stocked on an ALS vehicle. The FEMP ALS inventory is based on the anticipated needs of the FEMP while considering the size and weight of the equipment and supplies.

D. Marin County FEMPs shall comply with all Marin County EMS Agency policies, procedures when functioning as a fireline paramedic.

E. The FEMP shall present their credentials (paramedic license, accreditation card and department identification) to the Medical Unit Leader who will forward that information to the local EMS Agency having responsibility for the area being affected by the incident.

F. The FEMP is expected to check in and obtain a briefing from the Logistics Section Chief, or the Medical Unit Leader if established at the Incident.

G. Documentation of patient care will be in accordance with Marin County EMS Policy 7006. FEMPs should utilize the Marin "Field Transfer Form" for all patients encountered at the incident. The original copy will be retained by the FEMP employing agency, one copy will accompany the patient (if transported) and one copy will go to the Medical Unit Leader.

H. All Field Transfer Forms completed at the incident will be reviewed through the home agency CQI process.

I. Controlled substances shall be stored and handled in accordance with Marin EMS and local agency policies.

QUALIFICATIONS, CERTIFICATION AND TRAINING

Designation by an ALS Provider Agency as a FEMP must include verification that the paramedic has completed the requirements outlined in the FIRESCOPE Position Manual for FEMP.

RELATED POLICIES

Provider Equipment List 5010

	BLS Transport	ALS Fireline/ Tactical	ALS First Responder	ALS Non-transport	ALS Transport
AIRWAY EQUIPMENT					
Airways:					
· Oropharyngeal (Sizes 0 – 6)	2 each	1 each	1 each	1 each	2 each
· Nasopharyngeal, soft rubber (sizes 14Fr., 18Fr., 22Fr., 26Fr., 28Fr., 30Fr., 32Fr., 34Fr., 36Fr.)	2 each	1 each	1 each	1 each	2 each
Atomizer for intranasal medication administration (MAD device)	0	0	1	1	3
Bite Stick	2	0	1	1	2
King Airway					
· Size 3	0	0	1	1	2
· Size 4	0	1	1	1	2
· Size 5	0	0	1	1	2
Continuous Positive Airway Pressure Device	0	0	(optional)	(optional)	1
Intubation Equipment					
· Laryngoscope handle (battery powered)	0	1	1	1	1
· Additional batteries	0	0	2	2	2
· Blades (curved 1 - 4)	0	1 x #4	1 each	1 each	1 each
· Blades (straight 0 – 4)	0	1 x #4	1 each	1 each	1 each
· Bulbs (extra or disposable)	0	0	1	1	1
· Magill forceps (adult and pediatric)	0	0	1	1 each	1 each
· Endotracheal tubes					
sizes 2.5-6.0 mm: cuffed and/or uncuffed	0	Size 6 = 1	1 each	1 each	2 each
sizes 6.0-8.0 mm: cuffed	0	Size 7.5 = 1	1 each	1 each	2 each
· Disposable stylets (adult and pediatric)	0	1	1	1 each	2 each
· End-Tidal CO2 Detectors					
Adult – Colormetric	0	1	1	1	2
Pediatric – Colormetric	0	0	1	1	2
OR					
Capnograph or digital (optional)	0	0	1	1	1
· Esophageal Detector Device (optional if Capnometer is utilized)	0	1	1	1	1
· Endotracheal Tube Introducer (ETTI)	0	1	1	1	2
· ET Tube Holder (adult and pediatric)	0	0	1	1 each	2 each
· Meconium Aspirator	0	0	1	1	1
Nebulizer					
· Hand-held OR Patient activated	0	0	1	1	2
· In-line nebulizer equipment with T-piece	0	0	1	1	2

	BLS Transport	ALS Fireline/ Tactical	ALS First Responder	ALS Non-transport	ALS Transport
Oxygen Equipment and Supplies					
· Fixed tank in vehicle with regulator; M-tank or H-tank	1	0	0	0	1
· Regulator	1	0	1	1	1
· Portable tank (minimum D tank)	1	0	1	1	2
· Adult face masks: transparent, non-rebreathing; Child/infant: simple or non-	2 each	0	1 each	1 each	4 each 2,2
· Nasal cannulas (adult, child, infant)	4 each	0	1 each	1 each	4 each 2,2
· Portable Pulse Oximetry	Optional	optional	Optional	1	1
Pleural Decompression kit: ≥14g needle, ≥2 ¼ inches long; Heimlich valve; occlusive dressing;10 ml syringe	0	1	1	1	1
Resuscitation bag-valve-mask (BVM) Adult, pediatric, infant	1 each	1 adult	1 each	1 each	2,1,1
Suction Equipment and Supplies					
· Suction apparatus – battery powered	1	1 portable self contained	1 portable self contained unit	1 portable self	1
· Suction apparatus – portable	1	0	0	0	1 x 1 fixed
· Pharyngeal tonsil tip (rigid)	2	0	0	0	2
· Suction catheters: 6 Fr, 8 Fr, 10 Fr, 14 Fr, 16 Fr, 18 Fr	2 each	0	0	0	2 each
· Suction canister (spares)	2	0	0	0	2
· Suction tubing	2	0	0	0	2
DRESSING MATERIALS					
Bandages					
· Bulk non-sterile	1 box / pkg	0	0	0	1 box
· 4 x 4” sterile gauze pads	12	6	12	12	12
· 10 x 30” universal dressings	2	0	2	2	2
· ABD Pads	6	0	0	0	6
· 40” triangular bandage with safety pins	4	2	2	4	4
· Elastic bandage 3” (Ace)	2	2	2	2	2
· Occlusive dressing	4	2	2	4	4
· Roller bandages (2”, 3”, 4”, or 6”)	6	2	3	6	6
Band-Aids (Assorted)	1 box	0	1 box	1 box	1 box
Burn Sheets (sterile) or commercial burn kit	2	2	2	2	2
Cold Packs / Hot Packs	2 each	2 each	2 each	2 each	8 cold/4 hot
Tape (1” and 2”)	2 each	1” = 2 rolls	1 each	1 each	2 each
Trauma shears	1	1	1	1	1

	BLS Transport	ALS Fireline/ Tactical	ALS First Responder	ALS Non-transport	ALS Transport
EQUIPMENT AND SUPPLIES					
Alcohol swabs	12	6	12	12	12
Bedpan OR Fracture Pan/Covered Urinal	2	0	0	0	1
Betadine swabs or solution	0	4	4	4	8
Blanket - disposable	2	2	1	1	2
Blood Pressure Cuffs (adult, large arm, thigh, pediatric, infant)	1 each	1 adult	1 x adult, thigh,	1 x adult,	1 each
Bulb Syringe	1	0	1	1	1
Drinking Water (one gallon)	1	0	0	0	1
Emesis basin/ disposable bag/ Covered waste container	2	0	1	1	2
EMS Field Manual Patient Care (8000) Series	1		1	1	1
Glucometer	0	1	1	1	1
Irrigation Equipment					
· Saline (sterile) 1000 ml	2	0	1	1	2
· Tubing for irrigation	2	0	1	1	2
Length based color-coded resuscitation tape (most current)	0	0	1	1	1
Lubricant, water soluable	4	0	4 packs	4 packs	4 packs
Monitor/defibrillator equipment					
· Cardiac monitor – (portable) must have strip recorder, defibrillator/transcutaneous pacing ability for child / adult. May be biphasic or monophasic (biphasic preferred)	0	0	12-lead optional	1	1
· ECG electrodes	0	0	0	1 box	1 box
· 12-lead ECG capability	0	0	0	1 set	1 set
· A.E.D.	1	1	1	0	0
OB Delivery					
· Separate and sterile kit includes: Towels, 4” x 4” dressing, umbilical tape or clamp, sterile scissors or other cutting utensil, bulb suction, sterile gloves, and blanket	1	0	1	1	1
· Thermal absorbent blanket and head cover, aluminum foil roll, or appropriate heat-reflective material (enough to cover newborn)	1	0	1	1	1
· Appropriate heat source for ambulance compartment	1	0	0	0	1
Pen Light	1	1	1	1	1
Sharps container	1	1	1	1	2
Sheet, pillow case, blanket, towel	4 each	0	0	0	4 each
Pillow	2	0	0	0	2 or
Stethoscope	1	1	1	1	1
Thermometer	Optional	0	0	0	1
Triage tags	20	6	20	20	20
Biohazard bags (large and small)	4 each	2 small	2 each	2 each	4 each
PPE kit (gloves, gown, booties, face shield, cap)	2 per person	0	1per person	1 per person	2 per person
Disposable gloves S/M/L	Box	6 pair	Box	Box	Box

	BLS Transport	ALS Fireline/ Tactical	ALS First Responder	ALS Non-transport	ALS Transport
Face protection mask – N95 or P100	2 pp	0	1 pp	1 pp	2 pp
Stair chair or equivalent	1	0	0	0	optional
Scoop stretcher or breakaway flat	Optional	0	0	0	Optional
Road Flares or Equivalent (30 min)	6	0	0	0	6
Flashlight	1	0	0	0	1
Marin County Map	1	0	Optional	Optional	1
Vehicle Emergency Lights	Set	0	Optional	Optional	Set
MERA Radio	1	Optional	Optional	Optional	1
Company Radio	1	Optional	Optional	Optional	0
Spare Tire	1	0	Optional	Optional	1
Fire Extinguisher	1	0	Optional	Optional	1
IMMOBILIZATION and RESTRAINT DEVICES					
Cervical collars – adjustable Sizes to fit all patients over 1 yr old (adult/pedi)	4, 2	1	2, 1	2, 1	4, 2
Head immobilization device	4	0	2	2	4
Spinal immobilization (radiolucent) backboard	2	0	1	1	2
· Strap system, adult	2	0	1	1	2
· K.E.D. or equivalent	1	0	0	0	1
Splints (vacuum/cardboard/equivalent)					
· Short, medium, long	2 each	1 moldable	1 each	1 each	2 each
Traction splint, adult / pediatric	1 each	0	0	0	1 each
Quick release synthetic soft restraints (or padded leather)	1	0	0	0	1
IV EQUIPMENT / SYRINGES / NEEDLES					
Arm board (Short)	0	0	1	1	2
Catheters – 1" long 14g, 16g, 18g, 20g, 22g, 24g	0	2 each	2 each	2 each	4 each
Intraosseous Equipment – adult and pedi					
· IO needles and/or mechanical device	0	0	optional	optional	1
· Extra batteries if needed by model	0	0	0	0	1
Intravenous Solutions - 0.9% NL Saline					
· 100 cc bag	0	1000 cc total	1	1	2
· 1000 cc bag	0	0	2	2	6
Glucose Paste, 15 gm/ tube	1	1 tube	1 tube	1 tube	2 tubes
Pressure Infusion Bags	0	0	0	0	1
Saline Lock	0	0	2	2	4
Syringes					
· 1 cc TB with removable needle	0	2	2	2	4
· 3 cc with 25 g x 5/8/" needle	0	0	0	0	4
· 10 cc without needle	0	2	1	1	2
· filter needle	0	2	2	2	2
· 30 cc without needle	0	0	0	0	2

	BLS Transport	ALS Fireline/ Tactical	ALS First Responder	ALS Non-transport	ALS Transport
Extension set (saline lock)	0	0	2	2	4
Constriction band	0	2	2	2	2
Three way stop cock	0	0	1	1	2
Tubing – with adjustable flow					
· macro drip (10gtt/cc – 15gtt/cc- adjustable)	0	2	2 each	2 each	4 each
· micro drip (60 micro gtts/cc)	0	0	1	1	2
MEDICATIONS AND SOLUTIONS					
Activated Charcoal, 25 gms	0	0	1 bottle	1 bottle	2 bottles
Adenosine, 6 mg in 2 ml NS	0	0	18 mg	18 mg	36 mg
Albuterol Unit Dose	0	1 MDI w/Spacer	3	3	9
Amiodarone, 150 mg in 3 cc NS	0	3	3	3	6
ASA (chewable), 81 mg	0	1	1 bottle	1 bottle	1 bottle
Atropine, 1 mg in 10 ml	0	2	3	3	10
Calcium Chloride 10%, 1 gm in 10 ml	0	0	1	1	2
Dextrose 10%	0	0	1	1	2
Dextrose 25%	0	0	1	1	2
Dextrose 50%, 25 gms/50 ml	0	1	1	1	2
Diphenhydramine, 50 mg/1ml	0	4	2	2	4
Dopamine (pre-mix), 400 mg/ 250 ml	0	0	1	1	1
Duo-Dote (Nerve Gas Auto-injector)	See County policy				
Epinephrine 1:1000, 1 mg/1 ml (multidose)	0	4	1	1	2
Epinephrine 1:10,000, 1 mg/10 ml	0	4	3	3	9
Glucagon, 1 mg	0	1 mg	1 mg	1 mg	2 mg
Ipratroprium (Atrovent), Unit Dose	0	0	1	1	4
Lidocaine 2% (20mg/ml)	0	0	0	0	2
Midazolam, 2 mg/2 ml	0	3	optional	3	5
Midazolam, 5 mg/1 ml	0	0	optional	optional	optional
Morphine Sulfate, 10 mg/1 ml	0	6	optional	2	4
Naloxone (Narcan), 2 mg/ 5 ml	0	2	3	3	6
Nitroglycerine, 0.4mg /tablet or spray	0	1 container	1 container	1 container	1 container
Ondansetron (Zofran) 4mg PO tablet	0	6	4	4	8
Ondansetron (Zofran) 4mg/2ml	0	0	1	1	4
Sodium Bicarbonate, 50 mEq/ 50 ml	0	0	1	1	2

AMBULANCE DIVERSION POLICY

I. PURPOSE

To define the circumstances under which ambulance traffic may be diverted from an expected or "usual" receiving facility.

II. RELATED POLICIES

A. Trauma Triage and Destination, #4613
B. Destination Guidelines, GPC 04

III. AUTHORITY

"In the absence of decisive factors to the contrary, ambulance drivers shall transport emergency patients to the most accessible medical facility equipped, staffed, and prepared to receive emergency cases and administer emergency care appropriate to the needs of the patient." California Administrative Code, Title 13, Section 1105 (c).

IV. DEFINITIONS

A. **Full diversion** means a rerouting of all ambulance traffic.
B. **Condition specific diversion** may occur when a normally available service, procedure or piece of equipment is temporarily unavailable and results in the rerouting of specific patients, dependent on the reason for diversion. Condition Specific Diversion may include the following:

1. CT Scanner Inoperable
2. Neurosurgeon Not Available
3. Trauma Center Diversion
4. Emergency Department (ED) Saturation
5. Cath Lab Diversion

V. POLICY

A. Each Receiving Hospital shall establish an internal hospital plan, approved by and on file with the EMS Office. The plan shall include, but not be limited to the following:

1. Definitions and standards for activation which are consistent with this policy/procedure.
2. Identification of the internal approval process, including persons or positions that must be involved in the decision-making process.

3. Mechanisms for notification, on-going monitoring, removal from diversion status; identification and activation of backup ED and ICU physical space according to state licensing guidelines; call-in mechanism for additional staff; identification of patients who can be safely transferred within the facility; internal review of the diversion and reporting to the EMS Office.

B. Full diversion may occur only if the receiving emergency department is incapacitated by a physical plant breakdown (i.e., fire, bomb threat, power outage, etc.) which renders patient care unsafe. In the event of a full diversion, all patients will be rerouted to other facilities as appropriate.

C. The need to institute a Condition Specific Diversion is determined according to each facility's plan, consistent with the following:

1. The following patients may not be rerouted:
   a. Obstetrical patients in active labor
   b. Patients with respiratory distress and unmanageable airway
   c. Patients with uncontrolled external hemorrhage
   d. Patients requiring ALS, but having no paramedic in attendance
   e. Patients with CPR in progress
   f. Stable patients who insist on transport to a specific hospital. Ambulance personnel will inform the patient of the diversion status and document that the patient refused transport to an alternate facility.
2. Destinations of all other patients will be determined in accordance with the type of diversion.
3. **CT Scanner Inoperable:**
   a. Full trauma activations with signs and symptoms of head, neck or spinal cord injury, transport to Level II Trauma Center; if conditions preclude air transport contact Level III Trauma Center.
   b. Limited trauma activations meeting the above criteria will be transported to the EDAT.
   c. Patients with the following get transported to closest facility with functioning CT scanner:
      1. Signs or symptoms of a new CVA
      2. Head injury patients not meeting trauma criteria with anticoagulant use and/or bleeding disorders

4. **Neurosurgeon Not Available:**
   a. Patients with signs and symptoms of head, neck or spinal cord trauma: transport to Level II Trauma Center; if conditions preclude air transport contact Level III Trauma Center (MGH).
   b. Patients with signs and symptoms of CVA and/or medical conditions that may require Neurosurgical intervention: transport to the closest appropriate facility in Marin County with a functioning

CT scanner for initial evaluation and stabilization. Transfer, if indicated, is the responsibility of the hospital, including the maintenance of formal transfer agreements with other facilities.

5. Trauma Center Diversion:

a. Trauma patients will be diverted from the trauma center when the trauma surgeon and back-up trauma surgeon are encumbered with the care of trauma patients either in the operating room or emergency department.

b. Patients who meet Physiologic and/or Anatomic Trauma Triage Criteria (Full activations) shall be transported to the time-closest Level I or Level II Trauma Center by air or ground.

c. Patients who meet "Mechanism of Injury" and/or "Additional Factors" Trauma Triage Criteria (Limited activations) shall be transported to the EDAT.

d. The following conditions DO NOT constitute acceptable grounds for Trauma Center Diversion:
   1. A lack of clinical specialty backup, inpatient bed space, monitored beds, or inpatient nursing staff.
   2. ED Saturation Diversion
   3. Inoperable CT Scanner (see section V.C.3.)

6. **ED Saturation Diversion:**

a. Ambulance traffic may be diverted due to emergency department saturation when emergency department resources are fully committed and unable to accept incoming ambulance traffic.

b. Trauma, STEMI, and suspected CVA patients will NOT be rerouted.

c. Under this policy, ***no diversion incident shall exceed two hours.*** At the end of a two hour diversion period, a hospital must again contact the Communications Center to initiate another diversion status.

d. Under no circumstance is lack of in-patient hospital beds, other than in the Emergency Department, grounds for diversion. Hospitals are expected to accept ALL ambulance patients and to provide emergency stabilization and appropriate transfer if necessary.

D. In all cases of diversion, senior management or designee must be notified and must approve activation of the diversion status.

F. In the event that more than one Trauma Center or more than two receiving hospitals within Marin County meet their internal plan criteria and wish to activate diversion status at the same time, diversion status for all will be discontinued upon direction of the EMS Office.

VII. INITIATING AND TERMINATING DIVERSION STATUS

A. Initiating diversion

1. The facility shall implement the internal plan prior to initiating diversion status. The request to initiate status must be approved by senior management.
2. The impacted facility shall contact the Communications Center, announcing their need to initiate diversion status, including the following information:
   a. Criteria for diversion
   b. Name of senior management person approving diversion status
   c. Expected duration of diversion
3. The Communications Center shall notify all other hospitals, the EMS Office, and providers as they are dispatched to calls, of the hospitals' diversion status and type of diversion.

B. Termination of diversion

1. Diversion status will be terminated as soon as possible.
2. Diversion status is terminated when the hospital notifies the Communications Center who will then notify all other hospitals, the EMS Office, and provider agencies as they are dispatched on calls.
3. The name of senior management approving the termination of the diversion status shall be reported.

C. EMS Agency staff are available to assist with solving system-related problems and can be reached by contacting the Communications Center.

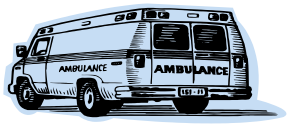
D. The EMS Agency will track the frequency and duration of diversion, making periodic reports to system participants.

E. Documentation of Diversion

1. Hospitals must complete the Ambulance Diversion Form and fax it to the EMS agency within 48 hours (415.499.3747) for ALL diversions. Refer to Appendix A.
2. An EMS Notification Form should be submitted to the EMS agency for any problem associated with patient care during a diversion.

Ambulance Diversion Form Policy 5400 Appendix A

Emergency Department Diversion Check List



Marin General **Kaiser San Rafael** **Novato**
(*please circle*)

A. ED INFORMATION

Date _____

- ☐ **ED Census / #** _____
- ☐ **ED Waiting Room Census** _____
- ☐ **ED Admitted Patients** _____ **(waiting for beds)**
- ☐ **ED ANM / CN** _____
- ☐ **ED Lead Position Doctor** _____

B. TYPE OF DIVERSION

Condition Specific Diversion ***or*** **Full** *(bomb threat, fire, etc.)*

- ☐ **ED Saturation** ☐
- ☐ **ED CT Scanner inoperable**
- ☐ **Trauma Center Diversion**
- ☐ **Neurosurgeon unavailable**
- ☐ **Cath Lab**

C. ADMINISTRATIVE ACTIONS

- ☐ **Administrative Supervisor Notified (name/time)** _____
- ☐ **Administrator on Call (name/time)**_____
- ☐ **ED Chief / Designee Notified** _____
- ☐ **ED Manager Designee Notified** _____
- ☐ **Marin County Communication Center Notified (time/name of dispatcher)**_____
- ☐ **Reddinet Completed**
- ☐ **Diversion Start Time** _____
- ☐ **Diversion Stop Time** _____
- ☐ **Fax this completed form to EMS: 415-499-3747**
- ☐ **County Communication Center notified *every* 2 hours**

(Time/your initials/CC contact name)

a) _____ **b)** _____ **c)** _____ **d)** _____

Note: state **full** or **condition specific** diversion when contacting the **CC**

PLACE COPIES IN ED MANAGERS / ED CHIEFS MAILBOX
ORIGINAL TO BE PLACED IN ED DIVERSION LOG BOOK

PREHOSPITAL/HOSPITAL CONTACT POLICY

I. PURPOSE

To provide guidelines for contact between prehospital care personnel and receiving facilties

II. RELATED POLICIES

A. Trauma Triage and Destination Guidelines, #4613
B. Communication Failure, #7002
C. EMS Communication System, #7004
D. STEMI C9
E. CVA/Stroke N4
F. Sepsis M6

III. DEFINITIONS

A. Report Only - a notification to the receiving facility that a patient is enroute
B. Early Notification – a communication meant to provide an early alert to hospital staff that a specialty care patient is enroute. Early Notifications include:
   1. Early Trauma Notification
   2. Early Stroke Notification
   3. Early STEMI Notification
   4. Early Sepsis Notification
C. Physician Consult - a consultative discussion between field personnel and an ED physician.

IV. POLICY

A. Report Only
   1. Shall occur anytime a prehospital unit transports a patient.
   2. May be performed by any prehospital personnel.
   3. Reports shall include the following:
      a. Transport unit identification
      b. Level of care being provided (ALS or BLS)
      c. Estimated time of arrival to receiving facility
      d. Level of transport (code 2 or 3)
      e. General category of patient (type of illness or injury) or treatment guideline being used for an ALS patient.
      f. Condition of patient (stable, improving or worsening)

B. Early Notification (Trauma/Stroke/STEMI/Sepsis)
1. Shall be performed at the earliest possible time, prior to leaving the scene when feasible.
2. Is required when patient meets criteria.
3. May be performed by paramedic, Incident Commander, or other delegated personnel
4. Early Notification shall include the following:
   a. Age/Gender
   b. Incident type (eg., MVA, fall, stab wound, gunshot wound, Stroke, STEMI)
   c. Injury and/or complaint (Trauma); last known normal (Stroke), presence or absence of chest pain and 12-lead findings (STEMI), suspected source of infection (Sepsis)
   d. Trauma Triage Tool Category:
      1. Anatomic or Physiologic = "Full Trauma"
      2. Mechanism or Additional Factors = "Limited Trauma"
   e. ETA
5. As soon as practical after the Early Notification has been given, a more thorough report should be provided to the intended receiving facility, including vital signs.

C. Physician Consult
1. Shall occur when specified in an ALS or BLS Treatment Guidelines.
2. Trauma Center consultation is recommended for questions about the destinations for injured patients. Consult shall be made with Marin General Hospital.
3. Physician Consult communication shall include the following:
   a. The need for physician consultation
   b. Patient assessment information as appropriate.
   c. Policy or procedure being followed which mandates physician consult or order

D. If a paramedic attempts contact for any of the reasons above and is unable to contact the intended receiving facility, personnel may contact another in-county hospital. If no facility can be contacted**,** the following should occur:
1. Treatment should be administered according to the appropriate ALS or BLS treatment guideline.
2. Medications or treatments listed as "physician consult required**"** may not be administered or performed
3. Documentation of the communications failure should be completed as detailed in policy #7002, Communication Failure.

E. In the event of a declared Level 3 or Level 4 Emergency Medical Response, paramedics may operate according to the appropriate ALS treatment guideline, omitting contact or hospital consultation.

INTERIM POLICY MEMO

I. PURPOSE

As a way of communicating information regarding the immediate release of changed or new policies or procedures, the EMS Agency will electronically distribute to all constituents an *Interim Policy Memo*.

II. POLICY

A. An Interim Policy Memo will contain the following information:

1. Subject Matter
2. Date of Implementation
3. Affected Policies
4. Discussion/Information

B. A complete list of all current Interim Policy Memos will be placed on the EMS website. Each Interim Policy Memo will be identified by year of origin and in sequential order (example: *Interim Policy Memo*: *2012-1, Destination Guidelines*).

C. Interim Policy Memos, when appropriate, will be incorporated into current policies during the following annual policy review.

ADULT PAIN MANAGEMENT

ALWAYS USE BODY SUBSTANCE ISOLATION PRECAUTIONS

INDICATION

- Patient exhibits or is determined to have measurable or anticipated pain or discomfort

☎ PHYSICIAN CONSULT

- Patients with SBP < 100
- Patients with head trauma; multi-system trauma that includes abdominal/thoracic trauma; decreased respirations; ALOC (GCS < 15); or women in labor
- > 20 mg **Morphine Sulfate** is needed for pain management
- Administration of Morphine Sulfate after Midazolam has been given

CRITICAL INFORMATION

- Origin of pain (examples: isolated extremity trauma, chronic medical condition, burns, abdominal pain, multi-system trauma)
- Mechanism of injury
- Approximate time of onset
- Complaints or obvious signs of discomfort
- Use Visual Analog Scale (0-10) or Wong/Baker Faces Pain Rating Scale if non-English speaking adult. Express results as a fraction (i.e. 2/10 or 7/10)
- Vital signs
- Presence of special infusion apparatus for narcotic or oncology agents may help to determine dosing

TREATMENT

- **Morphine Sulfate** IV/IO: 5 mg slowly; MR q 5 minutes, max. dose 20 mg.
  - If unable to establish IV/IO, administer Morphine Sulfate IM 5-10 mg; MR in 20 minutes, max. dose 20 mg
- If significant pain persists after Morphine Sulfate 10 mg IV/IO, consider **Midazolam** 1-2 mg IV/IO; Do not administer additional Morphine Sulfate without physician consultation
- If patient unable to take Morphine Sulfate, consider Midazolam
  - IV/IO: 2 mg slowly; MR in 3 minutes to maximum dose 0.1mg/kg.
  - IN: 5 mg (2.5 mg in each nostril)
  - IM: 0.1 mg/kg
- ☎Patients with SBP<100, head trauma, multi-system trauma with abdominal/thoracic trauma, decreased respirations, ALOC (GCS < 15), or women in labor

DOCUMENTATION- ESSENTIAL ELEMENTS

- Initial and post treatment pain score, expressed in a measurable form (i.e. 7/10)
- Interventions used for pain management (i.e. ice pack, splint, Morphine Sulfate, Midazolam)
- Reassessment after interventions
- Initial and post treatment vital signs: BP, HR, RR, O2 Saturation, ETCO2 (and GCS in patients with ALOC)
- Physician consult if required

ADULT MEDICATIONS
AUTHORIZED/ STANDARD DOSE

DRUG	CONCENTRATION	STANDARD DOSE
Activated Charcoal	**25 gm/ bottle or 50 gm/ bottle**	**1 gm/ kg PO (not to exceed 50 gm)**
Adenosine (Adenocard)	**6 mg/ 2 ml**	**6 mg 1st dose, 12 mg 2nd dose (rapid IV/IO push) followed by 20 ml saline flush after each dose**
Albuterol	**2.5 mg/ 3ml NS**	**5 mg/ 6 ml NS; (MDI: Fireline only)**
Amiodarone	**150 mg/ 3ml**	***VFib or Pulseless VTach:* 300 mg IV/ IO push followed by one 150MG push in 3-5 min.** ***Perfusing/Recurrent VTach*–150 mg IV/ IO over 10 min. (15 mg/ min); MR q 10 min. as needed**
Aspirin (chewable)	**Variable**	**162-325 mg PO**
Atropine	**1 mg/ 10 ml**	***Bradycardia:* 0.5 mg IV/ IO, MR q 3-5 min. to max of 3 mg.** ***Organophosphate Poisoning:* 2.0 mg slowly IV/ IO; MR 2-5 min. until drying of secretions**
Calcium chloride 10%	**1 GM/ 10 ml**	***Crush syndrome:* 1gm IV/ IO slowly over 5 min. for suspected hyperkalemia (flush line with NS before & after administration)**
Dextrose 50%	**25 GM/ 50 ml**	**25 GM IV/ IO**
Diphenhydramine (Benadryl)	**50 mg/ 1ml**	***Allergic reaction:* 50 mg IV/ IO/ IM; max 50 mg** ***Phenothiazine reaction*: 1 mg/ kg slowly IV/ IO; max 50 mg.** ***Motion sickness*: 1 mg/kg IM/IV to maximum dose of 50 mg; maximum IV rate is 25 mg/minute**
Dopamine	**400 mg/ 250 ml Pre-mix**	**See specific policy dosing chart**
Epinephrine 1:1000	**1 mg/ 1ml** **EpiPen® (0.3mg) auto-injector**	***Allergic Reaction/ Anaphylaxis:* 0.01 mg/ kg IM to max 0.5 mg or EpiPen®; MR x 1 in 5 minutes)** ***Bronchospasm/ Asthma/ COPD:* 0.01 mg/kg IM; max. dose 0.5 mg. MR once in 5 minutes or EpiPen®**

Epinephrine 1: 10,000	**1 mg/ 10 ml**	***Anaphylaxis:*** **If unresponsive, no palpable BP, no palpable pulse - give 0.01 mg/kg to max of 0.5 mg/ 0.5 ml IV/ IO** ***Cardiac Arrest:*** **1mg (10 ml) IV/ IO followed by 20 ml NS flush q 3-5 min. during resuscitation**
Glucose Paste	**15 GM / tube**	**30 GM PO**
Glucagon		**1 mg IM**
Ipratropium (Atrovent)	**500 mcg per unit dose (2.5 ml)**	**500 mcg**
Lidocaine 2% (preservative free)	**20 mg / 1 ml**	**IO insertion: infuse 20-40 mg IO over 30-60 seconds**
Nerve gas Auto-Injector Kit contains: Atropine Pralidoxime Chloride (2 PAM)	**2 mg (0.7 ml) 600 mg (2 ml)**	***Small Exposure to vapors/ liquids:*** **1 dose of both medications (Atropine & 2-PAM), MR X1 in 10 minutes.** ***Larger exposure to liquids/ vapors:*** **3 doses initially (both medications)**
Midazolam (Versed)	**2 mg/2 ml (IV/IO/IM) 5 mg/1 ml (IN)**	***Cardioversion/ Pacing:*** **1 mg slow IV/ IO; MR 1-2 mg q 3 min. to max dose 0.1 mg/kg** ***Seizure:*** **2 mg IV slowly; MR in 3 min. to maximum dose 0.1mg/kg. For IN: 5 mg (2.5 mg in each nostril). For IM: 0.1 mg/kg** ***Sedation:*** **see specific policy**
Morphine Sulfate	**10 mg/ 1ml**	***Chest Pain:*** **2-5 mg slow IV/IO; MR q 2-3 min. to max of 10 mg** ***Pain Management/ Trauma Patient:*** **5 mg slow IV/ IO, MR q 5 min if SBP >100; max dose 20 mg** ***Pulmonary Edema:*** **2-5 mg slow IV/ IO. Physician Consult required**
Naloxone (Narcan)	**2 mg/ 5 ml**	**0.4- 2.0mg IV/IO/IM/SL/IN; MR in 5 min**
Nitroglycerine	**0.4 mg/ tablet or spray**	**1 SL; MR q 5 min. if SBP > 100**
Ondansetron (Zofran)	**4 mg**	**4 mg ODT/IM or slow IV over 30 sec; MR x 1 in 10 minutes**
Sodium Bicarbonate	**50 mEq/ 50 ml**	**1 mEq/ kg IV/ IO**

NOTE: If the above concentrations become unavailable, providers may use alternate available concentrations or packaging.

NARROW COMPLEX TACHYCARDIA

ALWAYS USE BODY SUBSTANCE ISOLATION PRECAUTIONS

INDICATION

- QRS < 0.12 sec. documented rhythm in two leads (if >0.12 sec., go to Wide Complex Policy)
- Includes Atrial Fibrillation, Atrial Flutter, and SVT (SVT is regular HR > 150)

TREATMENT

- ALS RMC
- Proximal vein is preferred IV site
- **Stable SVT Patients** (normal mental status and/or signs of normal or mildly decreased perfusion)**:**
  - Obtain 12-lead ECG
  - Consider valsalva maneuver
  - If no response to valsalva:
    - **Adenosine** 6 mg RAPID IVP followed by 20 ml saline flush
  - If no response after 1 - 2 min:
    - **Adenosine** 12 mg RAPID IVP followed by 20 ml saline flush
  - Elevate the extremity after each rapid bolus
- **Stable Atrial Fibrillation and Atrial Flutter:**
  - Obtain 12-lead ECG
- **Unstable SVT/ Atrial Fibrillation/ Atrial Flutter** (signs of poor perfusion: decreased LOC, BP< 100, CHF, or chest pain)**:**
  - If patient is conscious, consider sedation with **Midazolam** 1 mg SLOW IV/IO (use with caution if patient is hypotensive)
  - Synchronized cardioversion @ 100J, 200J, 300J, 360J (or biphasic equivalent)
  - If any delay in synchronized cardioversion and the patient is critical, defibrillate the patient.

SPECIAL CONSIDERATION

- Consider treating possible contributing factors:

▪ Hypovolemia ▪ Hypoxemia ▪ Hydrogen ion (acidosis) ▪ Hypo/Hyperkalemia ▪ Hypoglycemia ▪ Hypothermia	▪ Toxins (overdoses) ▪ Tamponade, cardiac ▪ Tension pneumothorax ▪ Thrombosis (coronary / pulmonary) ▪ Trauma

DOCUMENTATION- ESSENTIAL ELEMENTS

- 12-lead ECG findings

RELATED POLICIES/ PROCEDURES

- Wide Complex Tachycardia C 6
- Adult Sedation ATG 3

ST ELEVATION MYOCARDIAL INFARCTION (STEMI)

ALWAYS USE BODY SUBSTANCE ISOLATION PRECAUTIONS

INDICATION

- Patients with acute ST Elevation Myocardial Infarction (STEMI) as identified by machine read.

☎ PHYSICIAN CONSULT

- If patient is symptomatic for STEMI, but computer interpretation is not in agreement, transmit ECG and consult the STEMI Receiving Center (SRC) receiving physician.
- If above findings occur, but transmission is not available, activate SRC with Early STEMI Notification.

TREATMENT/ PROCEDURE

- ALS RMC
- Treat patient under appropriate protocol
- Determine if patient is stable or unstable, and transport to appropriate facility
- Provide Early STEMI Notification
  - If elevation in leads II, III, and AVF, suspect RVI and perform right-sided ECG.
  - To determine if patient is stable or unstable:

Stable	Unstable
▪ Stable VS and no indication of shock	▪ SBP< 90 (prior to **NTG** and **Morphine Sulfate** administration) ▪ Signs of acute pulmonary edema ▪ Ventricular tachyarrhythmia requiring defibrillation or antiarrhythmic therapy ▪ Patient's condition, based on paramedic judgment, requires immediate hospital intervention

  - Stable patient:
    - May go to preferred SRC if the estimated transport time is not more than 15 minutes further than the nearest SRC
    - Preferred SRC defined:
      - Patient preference
      - SRC used by treating cardiologist.
  - Unstable patient:
    - Transport to the closest SRC
    - Transport to the closest SRC if patient has no preference / cardiologist

SPECIAL CONSIDERATION

- Early notification report to include: age, gender, symptoms (including presence or absence of chest pain), 12-lead findings.
- Transmit all STEMI ECGs to SRC if possible

DOCUMENTATION- ESSENTIAL ELEMENTS

- 12-lead findings
- How preferred SRC is determined

RELATED POLICIES/ PROCEDURES

- Destination Guidelines GPC 4
- 12-lead ECG Procedure ALS PR 12
- Chest Pain / ACS C8

ADULT CARDIAC ARREST GUIDELINE

ALWAYS USE BODY SUBSTANCE ISOLATION PRECAUTIONS

INDICATION

- To provide effective, quality cardiopulmonary resuscitation in a sequential and organized manner

CRITICAL INFORMATION

- Witnessed vs. unwitnessed
- Bystander CPR vs. No Bystander CPR
    - For documentation purposes, inappropriately given CPR = NO CPR

TREATMENT

- If unwitnessed arrest, complete 5 cycles (2 minutes) of CPR before rhythm analysis. If witnessed arrest with effective bystander CPR, immediately attach monitor/defibrillator.
- Compressions
    - Begin compressions at a rate of at least 100 per minute or apply mechanical CPR device
    - Compress the chest at least 2 inches and allow for full recoil of chest
    - Change compressors every 2 minutes
    - Minimize interruptions in compressions. If necessary to interrupt, limit to 10 seconds or less
    - Do not stop compressions while defibrillator is charging
    - Resume compressions immediately after any shock
- Monitor/Defibrillator
    - Priority of second rescuer is to apply pads while compressions are in progress
    - Determine rhythm and shock if indicated
    - Follow specific treatment guideline based on rhythm
- Basic Airway Management
    - During the first 5 minutes of resuscitation BLS airway management is preferred
    - Open airway and provide 2 ventilations after every 30 compressions
    - Ventilation should be about one second each- enough to cause visible chest rise. Avoid excessive ventilation.
    - Use two-person BLS Airway management (one holding mask and one squeezing bag) whenever possible
- Establish IV/IO Access
- Advanced Airway Management
    - **Placement of advanced airway is not a priority during the first 5 minutes of resuscitation unless no ventilation is occurring with basic maneuvers**
    - King Airway is the preferred device if an advanced airway is required.
    - Laryngoscopy for endotrachael tube placement must occur with CPR in progress. Compressions should not be interrupted for more than 10 seconds for advancement of tube through the cords
    - AVOID EXCESSIVE VENTILATION – provide no more than 8-10 ventilations per minute
    - Maintain O2 saturation level of >94% and <100%.
    - Continuous monitoring of End-Tidal CO2 to monitor effectiveness of CPR and advanced airway placement.
- Treatment on Scene
    - Movement of patient during CPR may be detrimental to patient outcome

- Provide resuscitation on scene until ROSC, patient meets Determination of Death criteria, or transport is indicated. Paramedic discretion to transport patients receiving CPR may be warranted in certain situations (refractory VF, unsafe scene conditions, hypothermic, etc.).
- If ROSC, transport to a STEMI Receiving Center.

RELATED POLICIES/ PROCEDURES

- Determination of Death ATG6
- Determination of Death BLS5
- King Airway Procedure ALS14
- Ventricular Fibrillation / Pulseless Ventricular Tachycardia C1
- PEA C2
- Asystole C3
- Return of Spontaneous Circulation C10

DESTINATION GUIDELINES

ALWAYS USE BODY SUBSTANCE ISOLATION PRECAUTIONS

INDICATION

- To identify destination choices and appropriate facilities for patients in Marin County

☎ PHYSICIAN CONSULT

- Patient requests transport to a facility not capable of providing specific care for their needs

CRITICAL INFORMATION

- Destination choices:
  - The destination for patients shall be based upon several factors including, but not limited to the clinical capabilities of the receiving hospital, the patient's condition, and paramedic discretion.
  - When the patient's condition is unstable or life threatening, the patient should be transported to the time closest receiving facility:
    - Patients with unmanageable airway
    - Uncontrolled external hemorrhage
    - CPR in progress
    - Patients requiring ALS but having no paramedic in attendance
  - The following factors will be considered in determining patient destination:
    - Patient condition
    - Clinical capabilities of the receiving hospital
    - Paramedic discretion
    - Patient/family request
    - Patient's physician request or preference
  - Patients with return of spontaneous circulation post cardiac arrest will be transported to the nearest STEMI Receiving Center.
  - Burn patients, without other trauma mechanism, shall be transported by ground ambulance to the time closest emergency department.
  - Marin County receiving facilities:
    - **Marin General Hospital**- Level III Trauma Center- Greenbrae
      - Neurological Emergencies- sudden, witnessed onset of coma or rapidly deteriorating GCS with high likelihood of intracranial bleed
      - Pregnant patients - 20 weeks or > with a complaint related to pregnancy
      - STEMI Receiving Center (SRC)
      - Primary Stroke Center
    - **Kaiser Permanente San Rafael** – Emergency Department Approved for Trauma (EDAT) – Terra Linda
      - STEMI Receiving Center (SRC)
      - Primary Stroke Center
    - **Novato Community Hospital-** Basic level receiving facility – Novato
      - Primary Stroke Center

RELATED POLICIES/ PROCEDURES

- Trauma Triage & Destination Guidelines Policy 4613
- STEMI Policy C 9
- Ambulance Diversion Policy 5400
- Pediatric Sexual Assault P16
- Sexual Assault GPC 10
- Cerebrovascular Accident (Stroke) N 4
- Burns E4 and P12

DO NOT RESUSCITATE (DNR) PHYSICIANS ORDER FOR LIFE-SUSTAINING TREATMENT (POLST)

ALWAYS USE BODY SUBSTANCE ISOLATION PRECAUTIONS

INDICATION

- Patients in respiratory or cardiopulmonary arrest with valid DNR documentation at scene

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- If there is any problem of any sort at the scene or if any therapy was instituted and the therapy is now in question

CONTRAINDICATION

- DNR order is not valid in suspected homicide or suicide situations

CRITICAL INFORMATION

- If the patient or Designated Decision Maker (DDM) requests treatment, including resuscitation, the request should be honored.
- The patient should receive treatment for pain, dyspnea, major hemorrhage, relief of choking or other medical conditions.
- Do Not resuscitate (DNR) means **NO:**
  - Assisted ventilation
  - Chest compressions
  - Defibrillation
  - Intubation
  - Cardiotonic drugs
- Approved pre-hospital DNR directives include:
  - A DNR directive signed by both the patient and physician; a copy or original is valid
  - A DNR order signed by a physician in the patient's chart at a licensed health facility
  - A Physician's Order for Life-Sustaining Treatment (POLST) form indicating DNR
  - An Emergency Medical Services Authority/ California Medical Association (EMSA/CMA) "Pre-hospital Do Not Resuscitate" form
  - An approved medallion (e.g. Medic-Alert) inscribed with the words: "Do Not Resuscitate-EMS"
  - A DNR order issued by the patient's physician who is on scene, or who issues a DNR order verbally over the phone to field personnel
- If any doubt exists begin CPR immediately. Once initiated, CPR should be continued unless it is determined the patient meets determination of death criteria or a valid DNR order / form is presented. If conflicting documents exist, follow the most recently dated document.

TREATMENT

- Follow standard procedures on arrival and assess the patient
- If information of a DNR exists, responders must see the signed order, form or medallion and should not accept a verbal order unless from the intended receiving ED physician or from the patient's own physician, who is in attendance or is available by phone.
- If a patient with a DNR order collapses in public, responders will notify the appropriate public safety agency and remain on the scene until their arrival.

DOCUMENTATION- ESSENTIAL ELEMENTS

- Bring the DNR form or order to the hospital if patient is transported.
- Attach a copy of the DNR to the PCR. If a copy is unavailable document the following:
  - Type of DNR
  - Date order was issued
  - Name of physician
- If the physician issued the DNR order verbally, document the physician's name and phone number.

SEVERE NAUSEA/VOMITING

ALWAYS USE BODY SUBSTANCE ISOLATION PRECAUTIONS

INDICATION

- Severe nausea
- Intractable vomiting
- Patients ≥ 4 years of age
- Motion sickness

CRITICAL INFORMATION

- Contraindicated in patients with known sensitivity to Ondansetron or other 5-HT3 antagonists:
  - Granisetron (Kytril)
  - Dolasetron (Anzemet)
  - Palonosetron (Aloxi)

TREATMENT

- ALS RMC
- **Ondansetron** (Zofran ®) 4 mg ODT/IM or slow IV over 30 seconds; MR x 1 in 10 min
- **If nausea due to motion sickness, Benadryl** 1mg/kg IM/IV to maximum dose of 50 mg; maximum IV rate is 25 mg/minute

DOCUMENTATION- ESSENTIAL ELEMENTS

- Need for antiemetic therapy

PEDIATRIC SEIZURES

ALWAYS USE BODY SUBSTANCE ISOLATION PRECAUTIONS

INDICATION

- Recurring or continuous generalized seizures with ALOC

CRITICAL INFORMATION

- Treat according to length based color-coded resuscitation tape. Apply corresponding wrist band.
- Neonate = birth to four weeks; infant = four weeks to 1 year; child = 1-14 years**;** adolescent = >14 years
- Evaluate for and treat hypoglycemia, hypoxia, narcotic overdose, trauma, fever, etc. prior to administering anti-seizure medications

TREATMENT

- ALS RMC
- Vascular access for prolonged seizures
- Check blood glucose and treat if <60 mg/dl (<40 mg/dl neonate):
  - Neonate = **D10W** 2 ml/kg IV/IO
  - < 2 years = **D25W** 2 ml/kg IV/IO
  - ≥ 2 years = **D50W** 1 ml/kg IV/IO
  - If unable to establish vascular access; **Glucagon** .03 mg/kg (max = 1 mg) IM; MR x 2 q 15 minute intervals
- **Midazolam (Versed)**
  - IV / IO: 0.1 mg/kg. to a maximum of 2mg per dose. May repeat every 5 minutes until seizure stops and/or maximum dose of 5 mg is reached.
  - IN / IM: 0.2 mg/kg (split dose in half for each nostril; maximum dose of 2 cc per nostril). May repeat every 5 minutes until seizure stops and/or maximum dose of 5 mg is reached.

DOCUMENTATION- ESSENTIAL ELEMENTS

- Number, description, and duration of seizures

RELATED POLICIES/ PROCEDURES

- Intranasal Medications Midazolam(Versed) & Narcan ALS PR 7

PEDIATRIC TOXIC EXPOSURES

ALWAYS USE BODY SUBSTANCE ISOLATION PRECAUTIONS

INDICATION

- Probable ingestion and/or exposure to one or more toxic substances, including alcohol and medications

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- **Calcium Channel Blocker, Beta-Blockers, and Tricyclic overdoses**

CRITICAL INFORMATION

- Treat according to length based color-coded resuscitation tape. Apply corresponding wrist band.
- Neonate = birth to four weeks; infant = four weeks to 1 year; child = 1-14 years**;** adolescent = >14 years
- Bring identifying substance containers to hospital when possible / appropriate

TREATMENT

- ALS RMC
- Fluid bolus **NS** 20 ml/kg IV/IO as indicated
- If suspected opiate overdose in patient > four weeks, administer **Narcan** 0.1 mg/kg IV/IO/IM/IN prior to advanced airway
  - **Hydrocarbons or Petroleum Distillates**
    - Do not induce vomiting
    - Transport immediately
  - **Calcium Channel Blockers / Tricyclics / Beta-Blockers**
    - Transport immediately
    - If within one hour of ingestion Administer **Activated Charcoal** 1 gm/kg PO, max. of 50 gms, if airway is protected
    - ☎ Physician consultation for additional treatments (i.e., Calcium Chloride, Sodium Bicarb)
  - **Caustics/Corrosives**
    - Do not induce vomiting
    - Consider dilution with no more than 1-2 glasses of water or milk if NO respiratory compromise or change in mental status
  - **Insecticides** (organophosphates, carbonates; cause cholinergic crisis characterized by bradycardia, increased salivation, lacramation, sweating, muscle fasciculation, abdominal cramping, pinpoint pupils, incoherence or coma):
    - Decontaminate patient
    - **Atropine** 0.05 mg/kg IV/IO slowly every 5-10 min. to max. of 4 mg or relief of symptoms
    - If seizures, **Midazolam (Versed):**
      - IV / IO: 0.1 mg/kg. to a maximum of 2mg per dose. May repeat every 5 minutes until seizure stops and/or maximum dose of 5 mg is reached.
      - IN / IM: 0.2 mg/kg (split dose in half for each nostril; maximum dose of 2 cc per nostril). May repeat every 5 minutes until seizure stops and/or maximum dose of 5 mg is reached.
  - **Phenothiazine Reactions**
    - **Benadryl** 1 mg/kg IM/IV/IO to max. of 50 mg
    - **Other Non-Caustic Drugs,** awake and alert
    - If within one hour of ingestion**: Activated Charcoal** 1 gm/kg PO, max. of 50 gms

SPECIAL CONSIDERATION

- Early contact with Poison Control Center

DOCUMENTATION- ESSENTIAL ELEMENTS

- Toxic substance identification
- Approximate time of exposure / ingestion

RELATED POLICIES/ PROCEDURES

- Intranasal Medications Midazolam(Versed) and Narcan ALS PR 7
- Pediatric Seizures P 9

ACUTE PULMONARY EDEMA

ALWAYS USE BODY SUBSTANCE ISOLATION PRECAUTIONS

INDICATION

- Acute onset of respiratory difficulty; associated with the following signs or symptoms:
  - Rales
  - Hypertension
  - Tachypnea
  - Diaphoresis
  - Chest discomfort
  - History of cardiac disease
  - Occasional wheezes
  - Near drowning

☎ **PHYSICIAN CONSULT**

- **Morphine Sulfate**

TREATMENT

- ALS RMC
- If tolerated, position patient in a sitting position, with legs dependent.
- 12-lead ECG if available
- If SBP > 100:
  - Apply CPAP
  - **Nitroglycerin** 0.4 mg SL; MR q 5 if SBP > 100
  - ☎ If no response, consider physician consult for **Morphine Sulfate** 2-5 mg IV
- If SBP < 100:
  - Consider **NS** 250-500 ml IV fluid challenge
  - Consider **Dopamine** 400 mg/250 NS (premix), begin infusion at 5 mcg/kg/min and increase to 10 mcg/kg/min, if BP <100. Monitor BP q 3-5 min

DOPAMINE			
400 mg in 250 ml D5W (pre-mixed) 60 drops/min = 60 ml/hr			
Weight (kg)	**gtts/min to = 10 ug/kg/min**	**Weight (kg)**	**gtts/min to = 10 ug/kg/min**
35-44	15 gtts/min	85-94	35 gtts/min
45-59	20 gtts/min	95-109	40 gtts/min
60-74	25 gtts/min	110 & up	45 gtts/min
75-84	30 gtts/min		

SPECIAL CONSIDERATION

- Do not give **NTG** if patient has taken erectile dysfunction medication (ED) within the previous 24 hours or Levitra/Viagra or 36 hours Cialis.

DOCUMENTATION- ESSENTIAL ELEMENTS

- SpO2

RELATED POLICIES/ PROCEDURES

- CPAP Procedure PR 13

MANAGEMENT OF LESS-THAN-LETHAL INTERVENTIONS

ALWAYS USE BODY SUBSTANCE ISOLATION PRECAUTIONS

INDICATION

- Injuries incurred from police interventions such as taser, bean bags, or chemical agents

CRITICAL INFORMATION

- Assess for symptoms of excited delirium: bizarre/aggressive behavior, dilated pupils, hyperthermia, incoherent speech, inconsistent breathing pattern, fear/panic, profuse sweating
- Suspected or known substance abuse
- Level of consciousness prior to injury
- Past medical history of cardiac or respiratory disease

TREATMENT

- BLS/ALS RMC
- Remove clothing if injured with pepper spray or tear gas
- Irrigate eyes with NS as needed
- Bio-Shield® or other OTC agent may be used to assist in minimizing chemical agent exposure
- If taser injury
    - Remove embedded probes and dispose of in sharps container. If probes cannot be removed due to patient's agitation / location of probe/ or safety hazard, cover the probe with gauze
    - Do NOT remove probes if located in the following areas:
        - Face
        - Neck
        - Groin
        - Spinal column or any area deemed to be problematic
- Pain management as appropriate
- All patients who sustain a taser injury must be transported to a hospital
- Treat according to Adult Sedation Protocol if agitation / combativeness interferes with critical ALS interventions and airway control or that endangers patient or caregiver

RELATED POLICIES/ PROCEDURES

- Destination Guidelines GPC 4
- Adult Pain Management ATG 2
- Trauma Triage Tool 4613a
- Adult Sedation ATG 3
- Patient Restraint GPC 3