

EL DORADO COUNTY EMS AGENCY

PREHOSPITAL PROTOCOLS



EMS Agency Medical Director

Effective: January 1, 2017

BLS Abdominal Emergencies

INFORMATION NEEDED:

- Discomfort:
 - Location, quality, severity, onset of symptoms, duration, aggravation, alleviation.
- Associated symptoms:
 - Nausea, emesis, diarrhea, fever, diaphoresis, vertigo, “heart burn”.
- Gastro-intestinal:
 - Time and description of last meal, time of last bowel movement, signs of blood in stool, vomiting blood or coffee-ground emesis.
- Gynecological:
 - Date of last menstrual period, possible pregnancy, history of vaginal bleeding or discharge.
- Medical History:
 - Surgery, related diagnosis (infection, hepatitis, kidney stones etc.) medications (OTC and prescribed), self-administered remedies.

OBJECTIVE FINDINGS:

- General Appearance:
 - Level of distress, skin color, diaphoresis
- Abdominal tenderness:
 - Guarding, rigidity, distention, rebound tenderness
- Pulsating masses (aneurysm)
- Quality of femoral pulses

TREATMENT:

1. ABC's
2. Place patient in position of comfort or supine with legs elevated if the patient presents with hypotension.

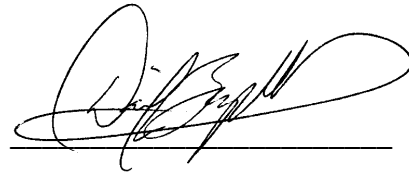
3. Oxygen 10-15L/min via non-rebreather mask or BVM if the patient presents with ineffective respirations.
4. Give patient nothing by mouth
5. Routine medical care

NOTE: completion of a thorough secondary exam and patient history are essential to identify potential cardiac involvement or early signs of shock.

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BLS Allergic Reaction – Anaphylaxis

INFORMATION NEEDED:

History of exposure to an allergen: bee/wasp stings, drugs or medication, nuts, seafood, new food consumed (especially infants), prior allergic reactions, Respiratory wheezing or respiratory distress.

OBJECTIVE FINDINGS:

- Mild:
 - Hives, rash, itching, anxiety
- Moderate:
 - Hives, rash, bronchospasms, wheezing, nausea (angioedema) (lip/tongue swelling)
- Severe:
 - Respiratory distress, chest tightness, difficulty swallowing, altered mental status, signs of shock (angioedema)

TREATMENT:

1. Primary survey- ABC's
2. Remove patient from contact of allergen and environment if warranted.
3. Confirm ALS response
4. For moderate to severe reaction:
 - a. EMT Basic: Assist patient with taking their own prescribed anaphylaxis medications (EPI-Pen, rescue inhaler, bee sting kit).
 - b. EMT Expanded Scope: Administer Epinephrine Auto-Injector:
 - i. Adult Dose: Benadryl 50mg PO. **Administer only if patient is alert and able to swallow**
 - ii. Pediatric Dose: Benadryl 1mg/kg (25mg max) liquid PO. **Administer only if patient is alert and able to swallow.**

- iii. Adult Dose: Greater than 30kg (greater than 66lbs) Epi-Pen Auto-injector 0.3mg IM. (0.3ml 1:1000) Repeat dose may be given in 10 minutes if ALS response is delayed and patient is not responding to treatment.
 - iv. Pediatric Dose: 15-30kg (33- 66lbs) Epi-Pen Jr. Auto-Injector 0.15mg IM. (0.3ml 1:2000) Repeat dose may be given in 10 minutes if ALS response is delayed and patient is not responding to treatment.
5. Oxygen 10-15L/min via non-rebreather mask or BVM and appropriate adjunct with ineffective ventilations.
 6. Secondary survey and routine medical care.
 7. Treat for shock as appropriate.

*Procedures may only be performed by an El Dorado County EMS Agency Extended Scope EMT working on duty with an approved extended scope provider.

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EMS Agency Medical Director

BLS Altered Level of Consciousness

NEEDED INFORMATION:

- Surroundings:
 - Syringes, blood glucose monitoring supplies, insulin
- Change in mental status:
 - Baseline status, onset and progression of altered state, symptoms prior to altered state such as headache, seizures, confusion, and trauma
- Medical History:
 - Diabetes, epilepsy, substance abuse, mental health, medications, and allergies.
- Consider: Stroke and overdose/intoxication

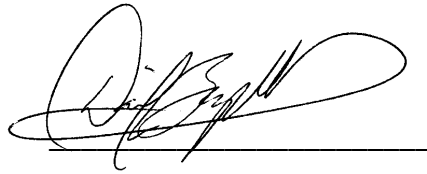
TREATMENT:

1. Reassure patient and place in position of comfort or supine if hypotensive.
2. ABC's
3. Ensure ALS Response
4. Oxygen 10-15 L/min via non-rebreather mask. Patients with ineffective respirations support with BVM ventilation.
5. Suction as needed
6. Routine Medical Care
7. For patients with signs and symptoms of hypoglycemia with the ability to maintain their own airway and swallow without difficulty administer 1 tube of **oral glucose paste** (15grams of prepared oral dextrose solution). May repeat in 10 minutes or encourage drinking/ eating a sugar containing beverage or food. For patients with their own glucose testing equipment a blood sugar value of less than 70 mg/dl should receive oral glucose.
8. For patients experiencing a behavioral emergency treat patient in a calm and reassuring manner using padded or soft leather restraints only to prevent from harming self or others, refer to **Restraint Policy**.

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BLS Bites- Snake

INFORMATION NEEDED:

- Type of snake or appearance:
 - Shape of pupil or head, color, stripes or rattle
- Time and type of bite:
 - Fang puncture or row of teeth marks
- Prior first aid by patient or bystanders

OBJECTIVE FINDINGS:

- Mild or Non-Envenomation-
 - No discoloration around puncture marks, minor pain or no pain after a few minutes
- Serious Envenomation-
 - Dark discoloration around punctures, swelling at or around puncture site, sever pain, altered mental status, abnormal motor function, hypotension, tachycardia, “metallic” taste, active bleeding from site, possible blistering.

TREATMENT:

1. Ensure personal safety – ensure ALS response
2. ABC's
3. Remove rings, watches, and other jewelry which might constrict circulation
4. DO NOT APPLY ICE
5. Routine medical care

Serious Envenomation

6. Avoid movement of the extremity (splint) and keep at or below level of the heart
7. Oxygen 10-15L/min via non-rebreather Mask. If respirations are ineffective support ventilations with BVM with appropriate adjunct.
8. Circle welling around puncture site with pen and note time.
9. Monitor distal pulses

10. Apply loose constricting band (not tourniquet) on extremity above swelling.

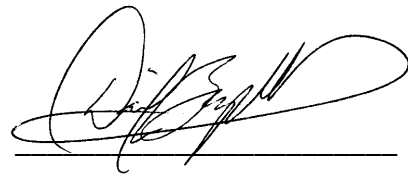
NOTE:

1. Do not incise snake bites
2. All patients need to be transported to a hospital for evaluation and possible antibiotic or antivenin therapy.
3. If dead or captured have animal control take care of the snake for identification
4. If patient does not exhibit signs and symptoms of envenomation within 30 minutes of being bitten the probability of having received venom through snake bite decreases.

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Superseded: January 1, 2017



EMS Agency Medical Director

BLS Bites and Stings

INFORMATION NEEDED:

- Type of animal or insect:
 - Time of exposure
- Wound site:
 - Puncture marks, teeth marks, stingers

OBJECTIVE FINDINGS:

- Local Reaction:
 - Rash, hives, localized swelling, hot to touch, decreased pain or sense of touch
- Systemic Reaction: Refer to Allergic Reaction - Anaphylaxis protocol.

TREATMENT:

1. Ensure personal safety
2. ABC's
3. Oxygen 10-15L/min via non-rebreather mask. Assist respirations with BVM and airway adjunct if respirations are ineffective.
4. Remove Stinger using a scraping motion, do not squeeze venom sac.
5. Circle Swelling- if any around bite mark(s) with a pen and note time. Measure the circumference of the extremity proximal to the bite and note time. This measurement is used as a baseline for determining the progress of swelling.
6. Avoid Movement of the affected extremity; keep the extremity in the neutral position.
7. Cold packs may be applied for pain (avoid placing ice directly on skin).
8. Dress wounds with gauze as needed.
9. Routine medical care.

NOTES:

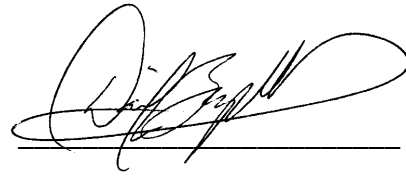
1. Notify animal control and law enforcement for all animal bites.

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2. Time since envenomation is important. Please document appropriately and inform hospital staff.

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BLS Burns

INFORMATION NEEDED:

- Type and Source of Burn
 - Chemical, electrical, steam, smoke, open flame
- Complicating Factors
 - exposure in enclosed space, total time exposed, drugs, alcohol
- Medical History
 - cardiac disease, respiratory disease, medications
- Associated Mechanism of Injury:
 - fall through roof, explosion, motor vehicle collision

OBJECTIVE FINDINGS:

- Evidence of inhalation injury:
 - Smoky sputum, singed nasal hair, hoarseness
- Depth of burn:
 - Full thickness, partial thickness, surface burn
- Size of burn:
 - Calculate total body surface area (TBSA) using rule of nines
- Entrance and exits from electrical burns
- Associated trauma from explosion
 - Fall, penetrations, etc.

TREATMENT

All Patients:

1. Stop the burning process.
2. Patient's with respiratory distress- oxygen 10-15L/min via non-rebreather mask.
Patients with ineffective respirations: support with ventilations via BVM and consider airway adjunct.
3. Consider CPAP for patients with significant respiratory distress.

Thermal or Electrical Burns:

4. Cool with water for up to 5 minutes to stop the burning process. Avoid prolonged cool water usage due to risk of hypothermia and local cold injury.
5. Remove jewelry and non-adhered clothing, do not break blisters
6. Cover burn with dry sterile dressings to avoid hypothermia.

- a. If <20% TBSA cover with sterile dressing soaked with sterile water
 - b. If >20% TBSA cover with dry sterile burn sheet or cleanest dry sheet.
7. If placing patient in cervical spine precautions cover backboard with dry sterile burn sheet or cleanest sheet available.
8. Electrical burns may produce extensive damage not apparently visible from surface wounds. For this reason, all patients suffering from an electrical burn should be placed on a cardiac monitor so ALS response is necessary.

Chemical Burns

9. Follow appropriate decontamination or HAZMAT procedures.
10. Brush off dry powders, remove contaminated clothing and irrigate with copious amounts of water. (Exception: dry lime, metallic sodium or lithium).
11. Do not attempt to remove tar or other adhered material.

Note: Consider early notification of base station for destination.

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BLS Cardiac Arrest

PURPOSE: To provide direction for BLS providers for resuscitation of patients in cardiopulmonary arrest.

DEFINITIONS:

- A. "MICR"- Minimally Interrupted Cardiac Resuscitation that focuses upon maintaining high quality chest compressions with both depth and rate.
- B. "EMS Crew"- the configuration of EMS responders and their defined roles to resuscitate a patient in cardiopulmonary arrest.

POLICY:

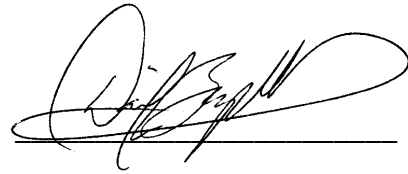
- I. Medical Cardiac Arrest for patients > 8 years old.
 - a. Information needed:
 - i. Estimated down time.
 - ii. Circumstances surrounding arrest.
 - iii. Onset (witnessed or un-witnessed).
 - iv. Preceding symptoms
 - v. Bystander CPR
 - vi. Duration of CPR
 - vii. Medications
 - viii. Environmental factors (hypothermia, inhalation, asphyxiation)
 - b. Contraindications for use of MICR include:
 - i. Traumatic arrest
 - ii. Patients with Ventricular Assistive Devices
 - c. Treatment
 - i. Conduct resuscitation using MICR for eight (8) minutes with the goal of preserving cerebral function.
 - 1. Provide high quality chest compressions at a rate of at least 100/min with minimal interruptions.
 - 2. Compression to breath ration of 30:2 using a BVM if available.
 - 3. Apply ECG or AED for analysis and defibrillation

4. Follow AED prompts
 5. Alternate provision of compressions between EMS crew every 2 minutes.
- ii. If no return of spontaneous circulation (ROSC) following eight (8) minutes of MICR, continue resuscitation efforts until ALS arrives. If an ALS airway is provided, give ventilations at a rate of 10 per minute. DO NOT HYPERVENTILATE. If an ALS airway is not available give compressions in a ratio of 30 compressions : 2 breaths
 - iii. For return of spontaneous circulation continue to monitor the patient and assist respirations only as needed, and prepare for transport.
- II. Traumatic Cardiac Arrest:
- a. Information Needed:
 - i. Patient down time
 - ii. Prior treatments
 - iii. Whether blunt or penetrating mechanism of injury
 - b. Document Findings if Found:
 - i. Unconscious with ineffective or absent respirations
 - ii. Absence of pulse
 - iii. Signs of trauma or blood loss
 - iv. Air and skin temperature
 - v. If signs of obvious death refer to **(Determination of Death Policy)**
 - c. Treatment:
 - i. Initiate chest compressions at a rate of 100/min
 - ii. Insert OPA or NPA followed by 100% oxygen via BVM and give compressions to ventilations in a ratio of 30:2
 - iii. Apply AED and follow prompts.

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BLS Chest – Abdominal Trauma

INFORMATION NEEDED:

- Mechanism of injury (MOI)
- Complaint:
 - Chest pain, respiratory distress, neck discomfort, abdominal pain
- Medical History:
 - Cardiovascular problems, respiratory problems, medications, or pregnancy

OBJECTIVE FINDINGS:

- DCAP-BTLS
 - Deformities, Contusions/Crepitus, Abrasions, Punctures/Penetrations, Burns, Tenderness, Lacerations, Swelling
- Paradoxical Chest Wall Movement (flail segment):
 - 2 or more ribs broken in 2 or more places
 - Rib cage/sternal and pelvic instability, abdominal rigidity and guarding
- Neck vein distension, tracheal position or deviation, air leaks, lung sounds, heart sounds, pulse pressure, oxygenation, skin signs, blood pressure in both arms

TREATMENT

1. ABC's
2. Oxygen 10-15L/min via non-rebreather mask. Patients with ineffective respirations: Support with ventilations via BVM and appropriate adjunct.
3. Spinal immobilization if indicated by mechanism of injury and patient assessment.
4. Control external bleeding and stabilize impaled objects with bulky dressings.
5. Transport patient in position of comfort if not in spinal precautions. Place pregnant patients in left lateral recumbent position.
6. Routine medical care
7. Flail Chest:
 - a. Stabilize the involved side of chest wall to reduce paradoxical movement

- i. Use thick bandages, towels, or pillows can be taped to the patient's chest.
- 8. Chest wounds with air leaks:
 - a. Cover (do not pack the wound)
 - b. Apply occlusive dressing taped on three (3) sides, continually assess for tension pneumothorax. If the patient's condition worsens after the application of occlusive dressing, remove dressing momentarily during forceful exhalation. Evaluate patient, then reapply by securing the dressing on three sides only.
 - i. Dressing acts as a one-way-valve allowing air to escape, but not enter the chest
- 9. Open Neck Wounds:
 - a. Cover the wound with an occlusive dressing and apply direct pressure. If uncontrolled hemorrhage occurs, pack wound with hemostatic gauze before covering wound with occlusive dressing.
- 10. Impaled Objects:
 - a. Do not remove object unless it interferes with CPR or upper airway.
 - b. Stabilize object in place.
- 11. Abdominal Evisceration
 - a. Cover with sterile saline-soaked dressing.
 - b. Cover saline-soaked dressing with occlusive dressing.

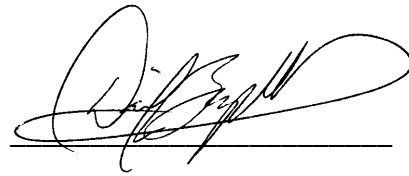
NOTE:

1. Continually assess for signs of shock.
2. Continually monitor patient's airway and breathing closely.

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BLS Chest Pain of Suspected Cardiac Origin

INFORMATION NEEDED:

Discomfort or pain: (OPQRST) Onset, Provocation, Quality, Radiation, Severity, Timing.

Associated Symptoms: Nausea, vomiting, diaphoresis, dyspnea, dizziness, palpitations, indigestion.

Medical History: Other medical problems, including hypertension, diabetes or stroke.

History of aspirin use: Has the patient taken an aspirin today?

Does the patient usually take aspirin?

Has the patient been advised by their private medical doctor to take one (1) aspirin a day?

OBJECTIVE FINDINGS:

- General Appearance:
 - Level of distress, apprehension, skin color, diaphoresis.
- Signs of CHF:
 - Dependent edema, respiratory distress, distended neck veins
- Chest auscultation:
 - Muffled heart tones, lung sounds, stridor, wheezes, rales, abd, tenderness

Asses pain on a 1-10 scale

TREATMENT:

1. Reassure patient and place in position of comfort, or supine if patient is hypotensive.
2. Ensure ALS Response.
3. Oxygen 10-15 L/min via non-rebreather mask, start at 2 L via cannula if the patient has a history of COPD. Be prepared to support ventilations with appropriate airway adjuncts.

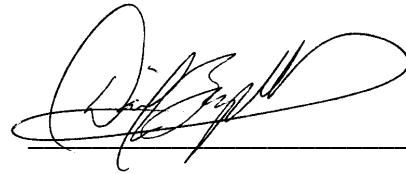
4. Assess patient: primary, secondary, history.
5. Assist patient in taking their own aspirin 324mg PO
6. Assist patient with taking their **own** sublingual nitroglycerin- **EMT ONLY** (1 tablet or metered spray dose sublingual) if systolic blood pressure is greater than 100. May be repeated every 5 minutes to a maximum of 3 doses, if systolic blood pressure remains greater than 100. Note: Nitroglycerin is contraindicated and should **NOT** be administered to patients of either gender who have taken any EDD medications such as Viagra, Levitra or Cialis within 36 hours.
7. Routine medical Care.

Note: Possible thrombolytic/STEMI candidates should be identified and transported immediately with treatment performed en route. Not all AMI/ACS patients present with chest pain; other signs or symptoms (such as: feelings of impending doom, diaphoresis, palpitations, nausea, abd pain, dyspnea, pain in back, arm or jaw) may be present that could also indicate an ACS/AMI. Contact the base station hospital for all STEMI patients and for orders in all suspected AMI/ACS cases not presenting with chest discomfort, pain, or pressure. Consider air transport for STEMI patients in remote areas or for long distance ground transport times.

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BLS Child Birth

INFORMATION NEEDED:

- Estimated due date, month of pregnancy, any complications
- Contractions
 - Onset of regular contractions, frequency of contractions, rupture of membranes, and fluid and if so what color, urge to bear down, number of previous pregnancies and live births.

OBJECTIVE FINDINGS:

Observe perineal area for fluid, bleeding, crowning, and abnormal presentation (breech, extremity, cord).

TREATMENT:

The following questions should be asked to determine maternal history:

- Is the patient under a doctor's care?
- Are you having twins or more?
- Past medical history, current medications?
- What is the due date?
- Any problems with this or other pregnancy/delivery?
- When did the contractions start, How far apart and how long do they last?
- Has the patient's water broken? What color was fluid, was there an odor?
- Can you feel the baby moving?
- Does the patient feel the urge to push or bear down?

ALL PATIENTS

1. ABC's
2. Open OB kit
3. Oxygen 6L/min via nasal cannula or 10-15L/min via non-rebreather mask for respiratory distress.

4. If birth is not imminent place patient in left lateral recumbent position during transport.

Normal Delivery

1. Assist mother with delivery, clean, preferably sterile technique.
2. Control and guide delivery of neonate's head and body.
3. Observe for any obvious obstructions or meconium staining.
4. Check for cord around the neck: if present gently slide around the head if possible, if tight, double clamp and cut with a finger between the cord to ensure the baby is not injured. Unwind and deliver neonate as quickly as possible.
5. Continue delivery, encourage mother to push, once the head has been delivered.
6. Suction neonate's mouth then nose with bulb syringe.
7. After baby is delivered, dry baby thoroughly with towels and wrap in a warm blanket. Keep baby's head warm and dry, and positioned at or below the level of the vagina until the cord is cut
8. After 30 seconds, Double clamp cord 6 inches from the baby and cut umbilical cord.
9. Dry and wrap neonate for warmth (especially the head); if possible allow infant to breast feed or place on mother's chest skin to skin.
10. Note time of delivery and assess:
 - a. Respirations
 - b. Pulse rate
 - c. Strength of crying
11. Perform neonatal resuscitation if needed.
12. Evaluate mother post-delivery for any signs of shock due to excessive bleeding
13. Deliver placenta, and place in a biohazard bag and transport to hospital
14. Perform fundal massage to help stop postpartum bleeding

Breech Delivery:

1. Assist with and continue delivery if possible.
2. Provide airway for neonate with gloved hand if unable to continue delivery.
3. If unable to deliver, place mother in shock position.
4. Ensure ALS transport

Prolapsed Cord:

1. Place mother in shock position, elevate hips with pillows, if possible place mother in knee chest position.
2. If cord is present, assess cord for palpable pulse.
3. If strong regular pulse is absent, gently insert gloved hand into vagina to relieve pressure on cord.

4. Cover exposed cord with saline soaked dressing
5. Ensure ALS response

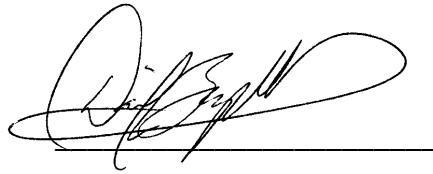
Notes:

1. First priority in childbirth is assisting the mother with delivery of child.
2. Neonates are susceptible to hypothermia
 - a. Ensure newborn is warm and dry
3. Ensure newborn has a clear airway, suction with bulb syringe as needed.
4. Keep baby at or below the level of mother's heart until the cord has been clamped.
5. Do not pull on the umbilical cord

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BLS Extremity Trauma

INFORMATION NEEDED:

- Mechanism (MOI)
- Medical History
 - Cardiovascular, respiratory problems, medications

OBJECTIVE FINDINGS:

- DCAP-BTLS
 - Deformities, Contusions/Crepitus, Abrasions, Puncture/Penetration, Bleeding, Tenderness, Laceration, Swelling
- Range of motion, distal pulses, sensation, and skin color
- Associated injuries

TREATMENT

1. ABC's
2. Oxygen 10-15L/min via non-rebreather mask. Patient's with ineffective respirations support ventilations with BVM and appropriate airway adjunct.
3. Control external bleeding and stabilize impaled objects with bulky dressings.
4. Elevate extremity and apply cold packs to reduce pain and decrease soft tissue swelling.
5. Routine medical care
6. Splint injured extremity in position found unless precluded by extrication consideration, no palpable pulse, or severe pain.
7. Amputation:
 - a. Place/cover amputated part in/with dry sterile dressing, place in sealed plastic bag or wrap with plastic, place dressed and wrapped part on top of ice or cold pack
8. Cover open wounds with sterile dressings

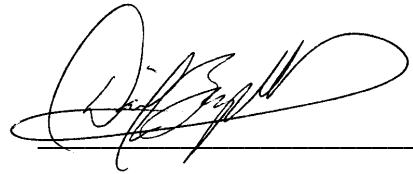
NOTE:

1. Pad all splinted extremities and recheck distal pulses and neurological function every 5 minutes.
2. Do not apply traction or try to reduce an open extremity fracture.

EL DORADO COUNTY EMS AGENCY

FIELD POLICY

Effective: January 1, 2017



EMS Agency Medical Director

EMT Basic Scope of Practice

PURPOSE:

To standardize and identify all skills and procedures an Emergency Medical Technician can do while on scene of an emergency incident, during transport of the sick and injured, or during an interfacility transfer.

AUTHORITY:

Title 22, chapter 2, §100063.

PROCEDURES:

1. Evaluate the ill and injured
2. Render Basic life support, rescue and emergency medical care to patients.
3. Obtain diagnostic signs to include, but not limited to, temperature, blood pressure, pulse and respiration rates, pulse oximetry, level of consciousness, and pupil status.
4. Perform Cardiopulmonary resuscitation (CPR), including the use of mechanical adjuncts to basic cardiopulmonary resuscitation.
5. Administer oxygen
6. Use the following adjunctive airway and breathing aids:
 - Oropharyngeal airway;
 - Nasopharyngeal airway;
 - Suction devices;
 - Basic oxygen delivery devices for supplemental oxygen therapy including, but not limited to, humidifiers, partial rebreathers, and venturi masks; and
 - Manual and mechanical ventilating devices designed for prehospital use including continuous positive airway pressure.
7. Use various types of stretchers and spinal immobilization devices.

8. Provide initial prehospital emergency care of trauma, including but not limited to:
 - Bleeding control through the application of tourniquets
 - Use of hemostatic dressings from a list approved by the authority;
 - Spinal immobilization
 - Seated spinal immobilization
 - Extremity splinting
 - Traction splinting

9. Administer over the counter medications when approved by the medical director of LEMSA, including, but not limited to:
 - Oral glucose or sugar solutions
 - Aspirin

10. Extricate entrapped persons

11. Perform field triage

12. Transport patients

13. Mechanical patient restraints (i.e. Backboard, c-collar, SMR)

14. Set up for ALS procedures, under the direction of an advanced EMT or Paramedic

15. Perform automated external defibrillation

16. Assist patients with the administration of physician-prescribed devices including, but not limited to, patient operated medication pumps, sublingual nitroglycerin, and self-administered emergency medications, including epinephrine devices.

NOTE:

The scope of practice of an EMT shall not exceed any of the above activities that are authorized in Title 22, Chapter 2, §100064 and §100063.

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FIELD PROCEDURE:

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Optional Scope Skill: EpiPen/EpiPen JR Administration

PURPOSE:

To provide immediate life-saving treatment to patients experiencing an anaphylactic reaction.

INDICATIONS:

- Allergic reaction/anaphylaxis as evidenced by:
 - Shortness of breath (wheezing, hoarseness, other abnormal sounds)
 - Itching/hives that are severe and rapidly progressing
 - Lip and tongue swelling/laryngospasm/difficulty swallowing, drooling
 - Hypotension/unresponsive
 - Patients with an exposure to a known allergen with progressively worsening symptoms (i.e. hives)
- Medication is prescribed for this patient by a physician or is carried on the BLS/ALS apparatus.
- Medical direction authorizes use for this patient.

ADVERSE EFFECTS:

- Hypertension-tachycardia, palpitations, headache
- Tremor, weakness
- Pallor, sweating, nausea, vomiting
- Nervousness, anxiety
- Increased myocardial oxygen demand and potentially increases myocardial ischemia
- Pain and redness at the injection site

CONTRAINDICATIONS:

- None when indicated

EQUIPMENT:

- EpiPen

- EpiPen JR

Procedure:

ADULT:

- For patients over 30kg (66lbs) EpiPen (Adult size) should be used.
- Dose: 0.3mg (0.3ml, 1: 1,000) IM.
- The preferred injection site is the antero-lateral thigh
- May repeat dose in 10 minutes if ALS response is delayed and patient condition warrants.

Pediatric:

- Patients 15-30kg (33-66lbs)
- EpiPen JR 0.15mg (0.3ml, 1: 2,000)IM
- The preferred injection site is the antero-lateral thigh
- May repeat in 10 minutes if ALS response is delayed and patient condition warrants.

1. Obtain patient's auto-injector or auto-injector that is carried on your BLS/ALS apparatus.

Ensure:

- Prescription is written for the patient that is experiencing the allergic reaction unless your protocols permit carrying the auto-injector on your ambulance.
- Medication should not be discolored.
- Medication has not expired.

2. Obtain an order from medical direction On-line or off-line.

3. Remove the safety cap from the auto-injector.

4. Grasp the center of the auto-injector (to avoid accidentally injecting yourself).

5. Place the tip of the auto-injector on the patient's antero-lateral thigh between waist and knee.

6. Push the injector firmly against the thigh until the injector activates.

7. Hold the injector in place until the medication is injected (at least 10 seconds).

8. Record administration and time.

9. Dispose of auto-injector in designated biohazard container.

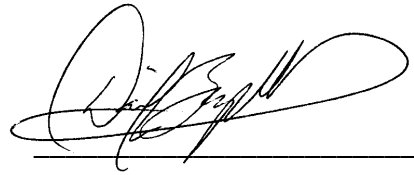
NOTE:

Use with caution in elderly or pregnant patients, but don't withhold if patient has serious signs or symptoms. (I.e. airway compromise, severe SOB, profound hypotension).

EL DORADO COUNTY EMS AGENCY

FIELD PROCEDURE:

Effective: January 1, 2017



EMS Agency Medical Director

Optional Scope Skill: Over the Counter Medication Administration

PURPOSE:

To Deliver over the counter medications (Acetaminophen, Ibuprofen, Aspirin, Diphenhydramine, Glucose, and Neosynephrine) to patients experiencing a medical emergency.

ACETAMINOPHEN (Tylenol, APAP, N-acetyl-para-aminophenol, Paracetamol)

INDICATIONS:

A febrile seizure patient who has either not been given any antipyretics or who has been given ibuprofen without a marked reduction in fever.

CONTRAINDICATIONS:

- Liver disease

DOSAGE:

15mg/kg PO. See dosage chart

IBUPROFEN (Motrin, Advil, IBU,)

INDICATIONS:

A febrile seizure patient who has either not been given any antipyretics or who has been given acetaminophen without a marked reduction in fever.

CONTRAINDICATIONS:

- Asthmas
- Ulcers
- Renal failure
- CHF

DOSAGE:

10mg/kg PO. See dosage chart

DOSAGE CHARTS

Acetaminophen dosage chart

Recommended Dosages

Important Note: Infant concentrated drops have been phased out but are safe to use if the dose is correct. They're three times as concentrated as the new infant liquid, so use caution: Know your baby's weight and follow the dosage chart. Find out how to tell the difference between the old and new medicine at www.babycenter.com/acetaminophen.

Your child's weight: 6 to 11 lbs Dose: 40 mg Old infant drops: ½ dropper (0.4 ml) New infant liquid: 1.25 ml in syringe	Your child's weight: 12 to 17 lbs Dose: 80 mg Old infant drops: 1 dropper (0.8 ml) New infant liquid: 2.5 ml in syringe Children's liquid: ½ tsp (2.5 ml in cup)	Your child's weight: 18 to 23 lbs Dose: 120 mg Old infant drops: 1½ droppers (1.2 ml) New infant liquid: 3.75 ml in syringe Children's liquid: ¾ tsp (3.75 ml in cup) Children's chews or meltaways: 1 ½ Junior-strength chews or meltaways: ¾
Your child's weight: 24 to 35 lbs Dose: 160 mg Old infant drops: 2 droppers (1.6 ml) New infant liquid: 5 ml in syringe Children's liquid: 1 tsp (5 ml in cup) Children's chews or meltaways: 2 Junior-strength chews or meltaways: 1	Your child's weight: 36 to 47 lbs Dose: 240 mg Children's liquid: 1 ½ tsp (7.5 ml in cup) Children's chews or meltaways: 3 Junior-strength chews or meltaways: 1 ½	Your child's weight: 48 to 59 lbs Dose: 320 mg Children's liquid: 2 tsp (10 ml in cup) Children's chews or meltaways: 4 Junior-strength chews or meltaways: 2
Your child's weight: 60 to 71 lbs Dose: 400 mg Children's liquid: 2 ½ tsp (12.5 ml in cup) Children's chews or meltaways: 5 Junior-strength chews or meltaways: 2 1/2 Adult regular-strength tabs (325 mg): 1	Your child's weight: 72 to 95 lbs Dose: 480 mg Children's liquid: 3 tsp (15 ml in cup) Children's chews or meltaways: 6 Junior-strength chews or meltaways: 3 Adult regular-strength tabs (325 mg): 1 to 1 ½	Your child's weight: 96+ lbs Dose: 640 mg Children's liquid: 4 tsp (20 ml in cup) Children's chews or meltaways: 8 Junior-strength chews or meltaways: 4 Adult regular-strength tabs (325 mg): 2

Active Ingredients

Old infant drops: 80 mg/0.8 ml per dropper (shake well before using)
New infant liquid: 160 mg/5 ml per included syringe (shake well before using)
Children's liquid: 160 mg/5 ml per teaspoon (shake well before using)
Children's chews or meltaways: 80 mg each
Junior-strength chews or meltaways: 160 mg each
Adult regular-strength tablets: 325 mg each

Six Safety Tips for Acetaminophen

1. Don't give to a baby under 3 months without a doctor's approval.
2. Don't confuse infant drops with the new infant liquid. Infant drops are three times more concentrated. Learn more at www.babycenter.com/acetaminophen.
3. Always use the measuring device that comes with the medicine.
4. The proper dosage is based on weight, not age. To determine the weight of a very young child, weigh yourself and then weigh yourself while holding your child. Then subtract your weight from the combined weight.
5. Never give acetaminophen to a child who's taking other medicines unless directed by a doctor. Other medicines may also contain acetaminophen, creating a dangerous overdose.
6. Don't exceed five doses in 24 hours.



Ibuprofen dosage chart

Recommended Dosages

Note: The proper dosage for your child is based on weight, not age. If you don't know how much your child weighs, and he's too young to stand on a scale himself, weigh yourself while holding him, and then weigh yourself alone. Subtract your weight from the combined weight to get his current weight.

Your child's weight: 12 to 17 lbs Dose: 50 mg Infant drops: 1 dropper OR 2/3 syringe (1.25 ml) Children's liquid: ½ tsp	Your child's weight: 18 to 23 lbs Dose: 75 mg Infant drops: 1½ droppers OR 1 syringe (1.875 ml) Children's liquid: ¾ tsp	Your child's weight: 24 to 35 lbs Dose: 100 mg Infant drops: 2 droppers OR 1 1/3 syringe (2.5 ml) Children's liquid: 1 tsp
Your child's weight: 36 to 47 lbs Dose: 150 mg Infant drops: 3 droppers OR 2 syringes (3.75 ml) Children's liquid: 1 ½ tsp Children's chews: 3 chews	Your child's weight: 48 to 59 lbs Dose: 200 mg Infant drops: 4 droppers OR 2 2/3 syringe (5.0 ml) Children's liquid: 2 tsp Children's chews: 4 Junior-strength chews or caplets: 2	Your child's weight: 60 to 71 lbs Dose: 250 mg Children's liquid: 2 ¼ tsp Children's chews: 5 Jr. strength chews or caplets: 2 ½ Adult regular-strength tabs: 1
Your child's weight: 72 to 95 lbs Dose: 300 mg Children's liquid: 3 tsp Children's chews: 6 Junior-strength chews or caplets: 3 Adult regular-strength tabs: 1 to 1 ½	Your child's weight: 96+ lbs Dose: 400 mg Children's liquid: 4 tsp Children's chews: 8 Junior-strength chews or caplets: 4 Adult regular-strength tabs: 2	

Active Ingredients

Infant drops: 50 mg (1.25 ml) per dropper / 1.875 ml (50 mg) per syringe (shake well before using)

Note: The drops come with either a dropper or a syringe, depending on the brand.

Children's liquid: 100 mg (5 ml) per teaspoon (shake well before using)

Children's chewables: 50 mg each

Junior-strength chewables or caplets: 100 mg each

Adult regular-strength tablets: 200 mg each

5 Safety Tips for Ibuprofen

1. Don't give it to a baby under 6 months without a doctor's approval.
2. Always use the measuring device that comes with the medicine – not a spoon from the kitchen.
3. Never give to a child who's taking other medicines unless directed by a doctor. The other medicine may also contain ibuprofen, creating a dangerous overdose.
4. Don't confuse infant drops with children's liquid. Infant drops are much more concentrated. Hint: Drops come with a dropper; children's liquid doesn't.
5. You can repeat the dose every six to eight hours. Don't exceed four doses in 24 hours.



ASPIRIN (ASA, Acetylsalicylic Acid)

INDICATIONS:

Patients experiencing chest pain with suspected myocardial ischemia.

CONTRAINDICATIONS:

- Allergy to ASA
- Peptic Ulcer disease vs. recent GI bleed
- Hypersensitivity to salicylates

ADVERSE EFFECTS:

- Nausea-GI upset
- Kidney toxicity
- Occult blood loss

- Anaphylaxis

Dosage:

Adult: 324-325mg (chewable baby ASA) PO

Pediatric: Not recommended for pediatric use

DIPHENHYDRAMINE (Benadryl)

INDICATIONS:

Patients that are experiencing an allergic reaction or have a known history of allergic reaction and have been exposed to the allergen

ADVERSE EFFECTS:

- Hypotension
- Drowsiness
- Tachycardia
- Bradycardia
- Dry mouth

CONTRAINDICATIONS:

- Patients without a gag reflex should not be given anything by mouth

Dosage:

ADULT:

50mg by mouth. Measure out the liquid (DO NOT REPEAT DOSING)

PEDIATRIC:

1mg/kg up to 25mg total (see chart)

DIPHENHYDRAMINE DOSAGE CHART

Weight (pounds)	Elixir (12.5 mg/5 ml)	Fast Melt Chewable (12.5 mg tablets)	Tablets/ Quick Dissolve Strips (25 mg)	Weight (kg)
8-9	1.25 ml (¼ tsp)			4
10-11	2 ml			5
12-16	2.5 ml (½ tsp)			6-7
17-21	3.75 ml (¾ tsp)			8-9
22-25	4 ml			10-11
26-33	5 ml (1 tsp)	1		12-14
33-39	6 ml	1		15-17
40-45	7 ml (1½ tsp)	1½		18-20
46-52	9 ml	1½		21-23
53-58	10 ml (2 tsp)	2	1 tab/strip	24-26
59-65	11 ml	2	1 tab/strip	27-29
66-72	12 ml (2½ tsp)	2½	1½ tab/strip	30-32
73-80	14 ml	2½	1½ tab/strip	33-36
81-88	15 ml (3 tsp)	3	1½ tab/strip	37-40
89-99	17 ml	3	2 tabs/strip	41-44
100-109	18 ml	4	2 tabs/strip	45-49
≥ 110	20 ml (4 tsp)	4	2 tabs/strip	≥ 50

GLUTOSE (Oral Glucose)

INDICATIONS:

Patients with suspected or known diabetic history.

CONTRAINDICATIONS:

- Patients not able to follow commands
- Do not administer if patient is unresponsive

ADVERSE EFFECTS:

- Nausea/vomiting
- Aspiration
- Hyperglycemia

Dosage:

ADULT:

15 Grams by mouth, may repeat if no response

PEDIATRICS:

15 Grams by mouth, may repeat if no response

NEOSYNEPHRINE (Phenylephrine)

INDICATIONS:

Patients experiencing persistent epistaxis (nose bleeding)

CONTRAINDICATION:

- Hypersensitivity to phenylephrine or sulfites
- Severe hypertension
- Ventricular tachycardia
- Closed-angle glaucoma

ADVERSE EFFECTS:

- Headache
- Reflex bradycardia
- Excitability
- Restlessness

DOSAGE:

ADULT: 1-2 sprays per effected nare (spray into each nostril for 1-2 seconds)

PEDIATRIC: 1-2 sprays per effected nare (spray into each nostril for 1-2 seconds)

Naloxone (Narcan)

INDICATIONS:

- Suspected narcotic overdose with respiratory depression
- Altered level of consciousness with respiratory depression

CONTRAIDICATIONS:

- None

ADVERSE EFFECTS:

- Hypertension
- Tremors
- Nausea/vomiting
- Dysrhythmias
- Diaphoresis

ADMINISTRATION:

ADULT:

IV: 0.4mg in 1 minute increments slow IV push titrated to effect (max 2mg).

IN: 0.4mg (max of 0.5ml per nostril) may repeat in 5 min if no response (max 2mg).

IM: 1mg if unable to establish IV. May repeat in 5 minutes if no response (max 2mg).

ET: 1mg diluted to 5-10 ml May repeat in 5 minutes if no response (max 2mg)

(IN/IM routes are preferred in no IV)

If no response to normal doses or if patient is in extremis, administer 2mg IV/IM/IO/ET/IN q 5 minutes.

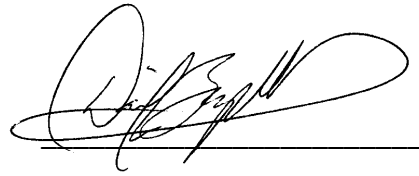
PEDIATRIC:

0.1mg/kg IV/IN/IO/IM titrated to effect (max 2mg). May repeat initial dose if no response within 5 minutes if that dose does not exceed 2mg.

EL DORADO COUNTY EMS AGENCY

PREHOSPITAL PROTOCOLS

Effective: January 1, 2017



EMS Agency Medical Director

BLS Head - Neck - Facial Trauma

INFORMATION NEEDED:

- Mechanism of injury (MOI)
- Medical History
 - Cardiac problems, diabetes, or seizure disorders

OBJECTIVE INFORMATION:

- DCAP-BTLS
 - Deformity, contusions/crepitus, abrasion, puncture/penetration, bleeding/burns, tenderness, lacerations, swelling
- Signs of airway obstruction
 - Stridor, abnormal voice, difficulty breathing
- Glasgow Coma Scale
- Neurological impairment or focal deficit
 - Paralysis, weakness
- Eyes/vision:
 - Pupil equality and reactivity, eye tracking, impaired vision (double vision, stars)

TREATMENT:

1. ABC's
2. Oxygen 10-15L/min via BVM with appropriate adjunct.
3. Spinal immobilization if indicated by mechanism of injury and patient assessment. **Refer to Spinal SMR Protocol/Procedure.**
4. Control external bleeding and stabilize impaled objects with bulky dressings.
5. Apply cold packs to reduce pain and decrease soft tissue swelling.
6. Routine medical care
7. Eye injury:
 - a. Apply dressing as appropriate, loosely cover affected and unaffected eye.
8. Tooth injury:

- a. Keep avulsed teeth in saline soaked gauze (or commercial tooth saver kit) and transport with patient.
9. Mandible fracture:
 - a. Splint with Cravat or bandage

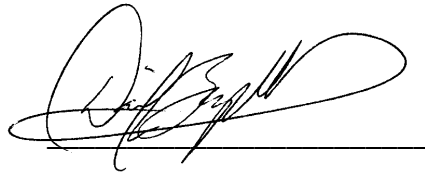
Note:

1. All patients with a period of unconsciousness should be transported to the hospital for evaluation.
2. Continually monitor Glasgow Coma Scale
3. Observe for fluid drainage from the ears and nose.

EL DORADO COUNTY EMS AGENCY

PREHOSPITAL PROTOCOLS

Effective: January 1, 2017



EMS Agency Medical Director

BLS Hyperthermia

INFORMATION NEEDED:

- Patients age, activity level, medications,
- Associated symptoms
 - Headache, chest pain, cramps, nausea, weakness, temperature, humidity, presence of clothing

OBJECTIVE FINDINGS:

Heat Cramps- Consists of benign muscle cramps or weakness, normal to elevated temperature, dehydration and warm moist skin.

Heat Exhaustion- Consists of dehydration, dizziness, fever, headache, cramping, nausea and vomiting. Vital signs usually consist of tachycardia, hypotension and elevated temperature with warm or cool moist skin.

Heat Stroke- Consists of dehydration, tachycardia, hypotension and temperature greater than 104 with altered mental status. Sweating disappears as temperatures reach 104, hot dry skin.

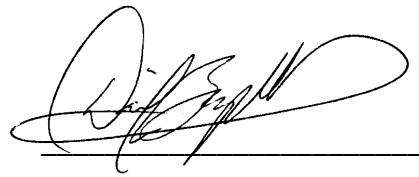
TREATMENT:

1. ABC's
2. Note patient's temp if possible
3. Move patient to cool environment
4. Remove excess clothing
5. Wipe with cool damp cloth for evaporative cooling measures.
6. Oxygen 10-15L/min via non-rebreather mask. Patient's with ineffective respirations: support ventilations with BVM and appropriate adjunct.
7. For heat cramps or heat exhaustion may give patient cool/cold liquid by mouth.
8. May stretch cramped muscles to relieve pain
9. Routine medical care.

EL DORADO COUNTY EMS AGENCY

PREHOSPITAL PROTOCOLS

Effective: January 1, 2017



EMS Agency Medical Director

BLS Hypothermia – Frostbite

INFORMATION NEEDED:

- Length and history of exposure
 - Air temp. water temp. wind velocity, was patient wet or dry
- History and time of mental status changes
- Medical history:
 - Trauma, alcohol consumption, medications, pre-existing medical problems

OBJECTIVES FINDINGS:

- Altered mental status, body temp, exposure
- Evidence of local cold injury:
 - Blanching, red or hot looking skin, especially ears, nose, fingers and toes, burning, numbness in affected areas.

TREATMENT:

1. ABC's
2. Gently move patient to warm environment
3. Remove wet clothing and cover with warm blankets
4. Heat pack that are less than 110 degrees may be applied to groin and axillary for warming measures.
5. Oxygen 10-15L/min via non-rebreather mask. Patients with ineffective respirations: support ventilations with BVM and appropriate adjunct.
6. Place patient in a warm environment.
7. Patient should be handled gently; avoid patient exertion.
8. Pulse should be taken for 60 seconds for accuracy.
9. Routine medical care
10. **If frostbite is present:** Do NOT attempt to thaw out frost bitten areas or apply heat packs to frostbite sites. Immobilize and wrap affected extremity with thick warm blankets or clothing. Do not rub skin to rewarm. Do not allow refreezing.

AED equipped BLS instructions (patient > 1 year old only):

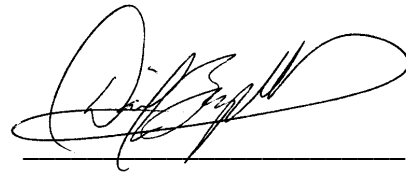
CARDIAC ARREST (prior to EMS arrival) – Perform 2 minutes of CPR while attaching automatic or semiautomatic external defibrillator to patient if so equipped. **If defibrillation is indicated, limit shocks to one (1) only.** Follow with two (2) minutes of CPR. If there is still no pulse or evidence of breathing, continue CPR until ALS personnel take over care of patient.

CARDIAC ARREST (during patient treatment)- Attach automated or semiautomatic external defibrillator to patient if so equipped. **If defibrillation is indicated limit to only one (1) shock.** Follow with two (2) minutes of CPR. IF there is still no pulse or evidence of breathing, continue with CPR until ALS personnel take over care of patient. IF no defibrillator is available perform CPR until return of spontaneous circulation or ALS personnel take over care of patient.

EL DORADO COUNTY EMS AGENCY

PREHOSPITAL PROTOCOLS

Effective: January 1, 2017



EMS Agency Medical Director

BLS Neonatal Resuscitation

OBJECTIVE FINDINGS:

- Patients less than 24 hours of age
- Heart rate

TREATMENT:

1. Position airway and suction mouth and nose with bulb syringe.
2. Warm and dry neonate with thermal blankets or dry towel.
3. Stimulate neonate by drying vigorously including head and back
4. Assess/evaluate breathing and heart rate (APGAR)
5. Ensure ALS transport

Heart Rate > 100 beats per minute

1. Assess skin color – if peripheral cyanosis (blue skin) is present administer 100% oxygen via blow by
2. Reassess heart rate and respiratory rate every 30-60 seconds

Heart Rate 80-100 beats per minute

1. Oxygen 100% via mask
2. Stimulate neonate
3. Reassess – if < 100 after 30 seconds of oxygenation and stimulation, begin assisted ventilations with 100% oxygen via neonatal BVM at 40-60 breaths per minute.
4. Reassess heart rate and respiratory rate every 15-30 seconds.

Heart rate 60-80 beats per minute

1. Assist ventilations with 100% oxygen via neonatal BVM 40-60 breaths per minute.
2. Start CPR 120 compressions per minute, if no increase in heart rate following initiation of ventilations. If heart rate increases continue ventilations without compressions for 15-30 seconds. **NOTE:** preferred compression technique is encircling with both hands and compressing sternum with thumbs.

3. Reassess heart rate and respirations every 15-30 seconds

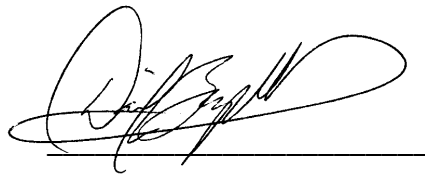
Heart Rate < 60 beats per minute

1. Assist ventilations with 100% oxygen via neonatal BVM at 40-60 breaths per minute
2. Start CPR 120 compressions per minute
3. Reassess heart rate and respirations every 15-30 seconds.

EL DORADO COUNTY EMS AGENCY

PREHOSPITAL PROTOCOLS

Effective: January 1, 2017



EMS Agency Medical Director

BLS Obstetric Gynecological Emergencies

INFORMATION NEEDED:

- Last menstrual period and possibility of pregnancy
- Duration and amount of any bleeding
- If pregnant
 - Month of pregnancy, any complications
- Presence of contractions, cramps, or discomfort
- Pertinent past medical history

OBJECTIVE FINDINGS:

- Estimated blood loss
- Hypotension or hypertension
- Spontaneous abortion
 - Presence of fetal tissue
 - Fetus less than 20 weeks gestation
- Headache, blurred vision, severe abdominal cramps or sharp abdominal pain

TREATMENT:

1. ABC's
2. Place in shock position if warranted. If pregnant place in left lateral position.
3. Oxygen via non-rebreather mask. Patient's with ineffective respirations: support ventilations with BVM and appropriate adjuncts.
4. Do not visualize genital region except for:
 - a. known or suspected active bleeding
 - b. Severe trauma to region
 - c. Active labor
5. For active bleeding place bulky dressing externally to absorb blood flow
6. Routine medical care

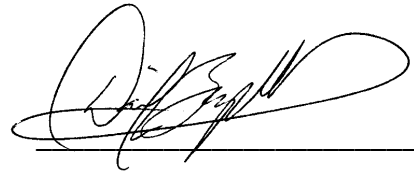
NOTE:

1. Do not pack vagina with any material, use external dressings only.
2. When possible have an EMT of the same gender perform examination of the genitalia/pelvic region.
3. Consider neonatal resuscitation in all deliveries.

EL DORADO COUNTY EMS AGENCY

PREHOSPITAL PROTOCOLS

Effective: January 1, 2017



EMS Agency Medical Director

BLS Patient Assessment – Primary Survey

PROCEDURE:

The purpose of the primary survey is to identify and immediately correct life-threatening problems.

- I. Scene Size Up:
 - a. Recognize hazards, ensure safety of scene and secure a safe area for patient treatment.
 - b. Apply universal precautions (body substance isolation).
 - c. Recognize hazards to patient and protect from further injury.
 - d. Identify the number of patients and initiate ICS/MCI operations if warranted:
 - i. Ensure an ALS response and order additional resources.
 - ii. Consider/confirm air ambulance response.
 - iii. Initiate triage if more than one patient.
 - e. Observe position of patient(s).
 - f. Determine mechanism of injury.
 - g. Plan strategy to protect evidence at potential crime scene. Notify Law Enforcement for evidence handling.
- II. General Impression:
 - a. Check for life threatening conditions.
 - b. Introduce self to patient.
 - c. Determine chief complaint or mechanism of injury.
- III. Airway:
 - a. Ensure open airway (Refer to Respiratory Distress Protocol as needed).
 - b. Protect spine from unnecessary movement in patients at risk for spinal injury.
 - c. Look and listen for evidence of upper airway problems and potential obstructions:
 - i. Vomit.
 - ii. Bleeding.
 - iii. Loose or missing teeth.
 - iv. Dentures.

- v. Facial Trauma
- d. Utilize any appropriate adjuncts (OPA or NPA) as indicated to maintain airway.
- IV. Breathing:
 - a. Look, listen, and feel in order to assess ventilation and oxygenation.
 - b. Expose chest, if necessary, and observe for chest wall movement.
 - c. Determine approximate rate and depth and assess character of quality.
 - d. Reassess mental status.
 - e. Intervene for inadequate ventilation with:
 - i. Pocket mask or BVM device.
 - ii. Supplemental oxygen.
 - f. Assess for other life threatening respiratory problems and treat as needed.
- V. Circulation:
 - a. Check for pulse and begin CPR and AED if necessary.
 - b. Control life-threatening hemorrhage with direct pressure.
 - c. Palpate radial pulse.
 - i. Determine absence or presence.
 - ii. Assess general quality (strong/weak).
 - iii. Identify rate (slow, normal, or fast).
 - iv. Assess regularity (regular/irregular).
 - d. Assess skin for signs of hypo-perfusion (signs of SHOCK) or hypoxia (capillary refill, cyanosis etc.).
 - e. Reassess mental status for signs of hypo-perfusion (SHOCK).
- VI. Level of Consciousness (LOC):
 - a. Determine need for spinal immobilization (refer to spinal immobilization protocol).
 - b. Determine level of consciousness (LOC) using AVPU
 - i. Alert (alert, awake, aware of time, place, date, person, etc.).
 - ii. Verbal (responds to verbal stimuli, i.e. answers questions and responds to commands).
 - iii. Pain (responds to painful stimuli, i.e. withdraw from pain).
 - iv. Unresponsive (patient unconscious or fails to respond to verbal and painful stimuli).
- VII. Expose, Examine, Evaluate:
 - a. In situations with suspected life-threatening mechanism of injury, complete a Rapid Trauma Assessment.
 - b. Expose head, trunk, and extremities.
 - c. Head to Toe for DCAP-BTLS
 - i. Deformity

- ii. Contusion/Creptus.
 - iii. Abrasion.
 - iv. Puncture/Penetration.
 - v. Bruising/Bleeding.
 - vi. Tenderness.
 - vii. Laceration.
 - viii. Swelling.
- d. Treat any newly discovered life-threatening wounds as appropriate.

EL DORADO COUNTY EMS AGENCY

PREHOSPITAL PROTOCOLS

Effective: January 1, 2017



EMS Agency Medical Director

BLS Patient Assessment – Secondary Survey

PROCEDURE:

- I. The secondary survey is the systematic assessment and complaint focused relevant physical examination of the patient. The secondary survey may be done concurrently with the patient history and should be performed after the Primary Survey and the initiation of Routine Medical Care. The purpose of the secondary survey is to identify problems which, though not immediately life or limb threatening, could increase patient morbidity and mortality. Exposure of the patient for examination may be reduced or modified as indicated due to environmental factors (cutting off or removing clothing in extreme cold temperatures).
- II. History:
 - a. The patient's history should be optimally obtained from the patient directly. If language, culture, age, disability barriers or patient condition interferes with obtaining the history, consult with family members, significant others or scene bystanders. Check for advanced directives such as POLST form or DNR order. Be aware of the patient's environment and issues such as domestic violence, child or elder abuse or neglect and report concerns. The following information should be obtained during the history:
 - i. Allergies;
 - ii. Current medications;
 - iii. Past medical history relevant to the chief complaint.
 - iv. Have patient prioritize his or her chief complaint if complaining of multiple problems;
 - v. Mechanism of injury or onset of current symptoms;
 - vi. In addition obtain history relevant to specific patient complaints.
- III. Head and Face:
 - a. Observe and palpate skull (anterior and posterior) and face for DCAP-BTLS;
 - b. Check eyes for equality, responsiveness of pupils, movement and size of pupils, foreign bodies, discoloration, contact lenses or prosthetics eyes;
 - c. Check nose and ears for foreign bodies, fluid or blood;

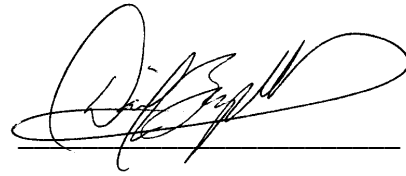
- d. Recheck mouth for potential airway obstruction (swelling, dentures, bleeding, loose or avulsed teeth, vomit, absent or present gag reflex) and odors, altered voice or speech patterns and evidence of dehydration.
- IV. Neck:
- a. Observe and palpate for DCAP-BTLS, jugular vein distension, use of neck muscles for breathing, tracheal deviation, stoma and medical information medallions.
- V. Chest:
- a. Observe and palpate for DCAP-BTLS, scars, implanted devices such as pacemakers and indwelling IV/arterial catheters, medication patches, chest wall movement, asymmetry and accessory muscle use while breathing.
 - b. Have patient take a deep breath if possible and observe and palpate for signs of discomfort, asymmetry and air leak from any wound.
- VI. Abdomen:
- a. Observe and palpate for DCAP-BTLS, scars and distension;
 - b. Palpation should occur in all four quadrants taking special note for tenderness, masses and rigidity.
- VII. Pelvis/Genital-Urinary:
- a. Generally, a patient's genital area should not be exposed and examined unless it is necessary for patient care. If possible have an EMT of the same gender do the exam.
 - b. Observe and palpate for DCAP-BTLS, asymmetry, sacral edema and as indicated for other abnormalities.
 - c. Palpate and gently compress lateral pelvic rims and symphysis pubis for tenderness, crepitus or instability.
 - d. Palpate for bilateral femoral masses or deformities, if warranted.
- VIII. Shoulder and upper Extremities:
- a. Observe and palpate for DCAP-BTLS, asymmetry, skin color, capillary refill, edema, medical information bracelet, and equality of distal pulses;
 - b. Assess sensory and motor function as indicated.
- IX. Lower Extremities:
- a. Observe and palpate for DCAP-BTLS, asymmetry, skin color, capillary refill, edema and equality of distal pulses;
 - b. Assess sensory and motor function as indicated.
- X. Back:
- a. Observe and palpate for DCAP-BTLS, asymmetry and sacral edema.
- XI. Complete set of vital signs and metrics include the following:
- a. Blood pressure.
 - b. Pulse rate.

- c. Respiratory rate.
 - d. Pupil size and reaction.
 - e. Level of consciousness.
 - f. Body temperature.
- XII. Precautions and comments:
- a. Observation and palpation can be done while gathering a patient's history.
 - b. A systematic approach will allow the rescuer to be rapid and thorough and not miss subtle findings that may become life-threatening.
 - c. Minimize scene times, especially with trauma patients and pediatrics, by preparing the patient for immediate transport.
 - d. Complete the examination before treating other identified non-life-threatening problems.
 - e. Reassessment of vital signs and other observations are necessary, particularly in critical or rapidly changing patients. Vital signs (BP, pulse, respirations) should be taken and recorded approximately every 5 minutes. Changes and trends observed in the field are essential data to be documented and communicated to the transport personnel and /or receiving facility.
 - f. As stated in the primary survey DCAP-BTLS is a mnemonic that stand for:
 - i. Deformity
 - ii. Contusion/crepitus
 - iii. Abrasion
 - iv. Puncture/Penetration
 - v. Bruising/Bleeding
 - vi. Tenderness
 - vii. Laceration
 - viii. swelling

EL DORADO COUNTY EMS AGENCY

PREHOSPITAL PROTOCOLS

Effective: January 1, 2017



EMS Agency Medical Director

BLS Poisoning and Overdose

INFORMATION NEEDED:

- Surroundings and safety check:
 - Syringes, containers, flammables, gas cylinders, weapons, unusual odors.
- For drug ingestion NOTE:
 - Drug(s) taken, dosage, number of pills remaining in the bottle, date prescription filled.
- For toxic ingestion or exposure NOTE:
 - Identifying information, warning labels, placards, MSDS, check for commercial antidote kits (cyanide) in occupational settings
- Duration of illness:
 - Onset and progression of present state, symptoms, prior to exposure such as headache, seizures, confusion, difficulty breathing
- History of event:
 - Ingested substance, drugs, alcohol, toxic exposure, work, environment, possible suicide
- Past medical history:
 - Behavioral emergencies, psychiatric care, allergic reaction, neurological disorders; confirm with family member or bystander if possible

OBJECTIVE FINDINGS:

Breath odor, track marks, drug paraphernalia, prescription opioid pain medication, vital signs, pupil assessment, skin signs, lung sounds, airway

TREATMENT

1. Primary survey- ensure ABC's
2. Remove patient from hazardous material or environment
3. Confirm ALS response
4. Oxygen 10-15L/min via non-rebreather or BVM if patient has ineffective respirations
5. Give patient nothing by mouth

6. Secondary survey and routine medical care.
7. Suspected opioid overdose with respiratory depression:
 - a. Remove any opioid patches
 - b. OPTIONAL SKILL EMT-
 - i. Administer naloxone intranasal with mucosal atomization device:
 1. ADULT DOSE: (weight greater than 44lbs) 2mg intranasal. May repeat once (1) in 2-3 minutes for a total dose of 4mg.
 2. PEDIATRIC DOSE: 0.1mg/kg intranasal

PEDIATRIC WEIGHT DOSE CHART

PEDIATRIC PATIENT IS 14 YEARS OR YOUNGER

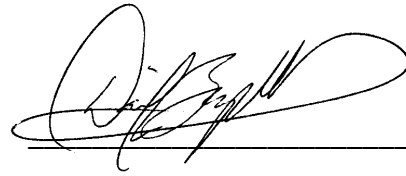
Pediatric Weight	kg/lbs	Dose
5kg	11lbs	0.5mg
10kg	22lbs	1.0mg
15kg	33lbs	1.5mg
20kg	44lbs	2.0mg Do Not Exceed 2.0mg Max Dose

NOTE: Procedure may only be done by an EL Dorado EMS Agency Extended Scope EMT working on duty as an approved Extended scope skills provider.

EL DORADO COUNTY EMS AGENCY

PREHOSPITAL PROTOCOLS

Effective: January 1, 2017



EMS Agency Medical Director

BLS Respiratory Distress

INFORMATION NEEDED:

- Patient History:
 - Fever, sputum production, medications, asthma, COPD, exposures (allergens, toxins, fire/smoke), trauma (blunt/penetrating).
- Symptoms:
 - Chest pain, shortness of breath, cough, inability to speak in full sentences.

OBJECTIVE FINDINGS:

Respiratory rate (less than 10 greater than 30), rhythm (abnormal pattern, shallow) effort (labored), lung sounds (wheezing, stridor), cough, fever, spitting/coughing blood or pink froth, barking, Rash urticaria, heart rate, blood pressure, skin signs, mental status, evidence of trauma, anxiety, and restlessness.

TREATMENT:

1. Reassure patient and place in a position of comfort or supine if hypotensive.
2. ABC's
3. Ensure ALS response
4. Oxygen 10-15 L/min via non-rebreather mask. Patient's with ineffective respirations: support ventilations with BVM
5. Suction as needed
6. Assist patient in using their own prescribed respiratory inhaler medication (**EMT ONLY**)
7. Routine Medical Care
8. Upper airway obstruction: Relieve obstruction by positioning, suction, abdominal thrusts; infants use back blows and chest thrusts instead of abdominal thrusts.
9. Chest wound: cover open chest wound with occlusive dressing taped on three (3) sides
10. **For Children** with signs and symptoms of epiglottitis (recent infection, fever, stridor, quiet crying, excessive drooling, use of accessory muscles)
 - a. Allow parent to hold child;
 - b. Have the parent administer high flow blow/by oxygen (humidified)
 - c. Immediate transport to closest facility and refrain from siren use
 - d. **DO NOT PLACE ANYTHING IN MOUTH OR VISUALIZE AIRWAY**

11. **For children** with signs and symptoms of croup (mild fever, hoarseness, seal bark coughing, respiratory distress, restlessness, pale and cyanotic)
- a. Place child in position of comfort
 - b. Administer high flow humidified oxygen
 - c. Cool night air may help reduce edema in the airway tissues

CHF/ PULMONARY EDEMA

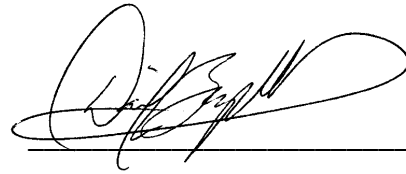
12. **CPAP (if trained and equipped)** – Start with valve at 7.5cm setting and 100% O2 flow rate. Titrate to patient's condition. If patient's respiratory status does not improve change valve setting to 10.0cm. Be prepared to support ventilations with appropriate airway adjuncts. Monitor and record vital signs every 5 minutes. Be prepared for possible hypotension. If hypotension develops, decrease valve setting.
13. **IF CPAP is not available:** Attempt to assist breathing with BVM after explaining procedure to patient.

Protocol Procedure: Flow of protocol presumes that condition is continuing. If patient is in severe respiratory distress due to excessive fluid in the lungs, immediate, rapid transport is essential with treatment performed en route.

EL DORADO COUNTY EMS AGENCY

PREHOSPITAL PROTOCOLS

Effective: January 1, 2017



EMS Agency Medical Director

BLS Routine Medical Care

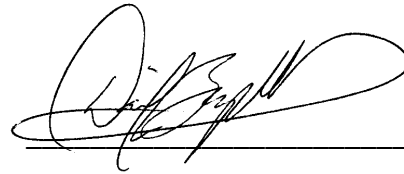
Routine medical care is provided to all patients regardless of presenting complaint.

- I. Standard Precautions:
 - a. Application of body substance isolation precautions including the use of appropriate personal protective equipment (PPE) shall apply to all patients receiving care, regardless of their diagnosis or presumed infectious status.
 - b. Body substance isolation precautions apply to :
 - i. Blood;
 - ii. All bodily fluids, secretions, and excretions except sweat, regardless of whether or not they contain visible blood;
 - iii. Non intact skin
 - iv. Mucous membranes
 - v. Standard precautions are designed to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection in the prehospital setting.
- II. Patient Assessment:
 - a. Primary Survey
 - b. Secondary Survey
- III. Initiation of appropriate basic life support (BLS) treatment including, when appropriate:
 - a. Monitoring vital signs
 - i. Initial set.
 - ii. Repeat every 5-10 minutes.
 - b. Initiation of spinal precautions.
 - c. Administration of oxygen.
 - d. Hemorrhage control.
 - e. Ensuring ALS transport response.
 - f. Initiation of specific treatments in accordance with El Dorado County EMS Agency Policies and Procedures.

EL DORADO COUNTY EMS AGENCY

PREHOSPITAL PROTOCOLS

Effective: January 1, 2017



EMS Agency Medical Director

BLS Seizures

INFORMATION NEEDED:

- Patient History:
 - Recent infection, trauma, environment (heat/cold), epilepsy
- Current Seizure History:
 - Onset, duration, frequency, description of seizure
- Change in Mental Status:
 - Baseline status, onset and progression of altered state, symptoms prior to altered state such as headache, seizures, confusion, and trauma.

OBJECTIVE FINDINGS:

- Level of Consciousness (AVPU) and neurological assessment
- Evidence of Trauma
- High Temperature (febrile state)
- Current Seizure Activity
- Medical Information Tags, Bracelets or Medallions

TREATMENT

1. Protect patient from further injury – move furniture and ensure safe area for treatment.
2. ABC's
3. Spinal immobilization as indicated
4. Protect patient from injury by loosening any restricting clothing items and/or padding or removing any sharp or dangerous items from the patient's proximity. **Do not place anything in the patient's mouth.**
5. Ensure ALS response
6. Oxygen 10-15 L/min via non-rebreather mask. Patient's with ineffective respirations support with a BVM.
7. Institute appropriate cooling measures if indicated by history and findings (rectal temperature 104).
8. After seizure has stopped, place patient in left lateral recumbent position and be prepared to suction airway.

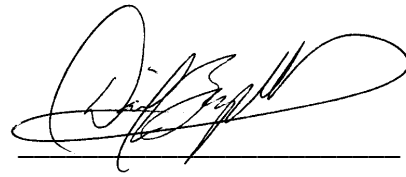
9. If hypoglycemia is suspected in a known diabetic who is conscious and able to follow simple commands, give the patient a prepared oral dextrose solution or encourage drinking/eating of a sugar-containing beverage or food.
10. Routine Medical Care
11. Continually assess neurological status.

PROTOCOL PROCEDURE: Flow of protocol presumes that condition is continuing. Consider etiology: shock, toxic exposure, insulin shock, or head trauma. If patient is in distress, immediate, rapid transport is preferred with treatment performed en route.

EL DORADO COUNTY EMS AGENCY

PREHOSPITAL PROTOCOLS

Effective: January 1, 2017



EMS Agency Medical Director

BLS Shock Non – Traumatic

INFORMATION NEEDED:

- Patient History
 - Onset of symptoms and duration, fluid loss (nausea, emesis, diarrhea, diuretics), fever infection, trauma, medication or substance ingestion, allergic reaction, past history of cardiac disease, abnormal EKG or internal bleeding disorder.

OBJECTIVE FINDINGS:

- Compensating patients:
 - Anxiety, agitation, restlessness, tachycardia, normal blood pressure, normal or delayed capillary refill, signs and symptoms of mild or moderate anaphylaxis.
- Decompensating patients:
 - Decreased level of consciousness, bradycardia or decreasing heart rate, hypotension, cyanosis, delayed capillary refill, inequality of central and distal pulses.

TREATMENT

1. ABC's
2. Place the patient in shock position face up with legs elevated 12 – 18 inches. May be modified per patient.
3. Oxygen 10 – 15L/min via non-rebreather mask. Patient's with ineffective respirations: support with ventilations via BVM.
4. Give patient nothing by mouth
5. Keep patient warm
6. Routine medical care

Consider Cause

ANAPHYLACTIC- Severe allergic reaction- refer to Allergic reaction Protocol.

SEPTIC- Overwhelming Infection- Refer to Sepsis Protocol

HYPOVOLEMIC- Decreased circulating volume due to blood or fluid loss. i.e. Trauma, anticoagulants, history of GI or vaginal bleeding, ectopic pregnancy, vomiting, diarrhea

CARDIOGENIC- Circulatory Failure is due to inadequate cardiac function, i.e. Acute MI, CHF, congenital defect

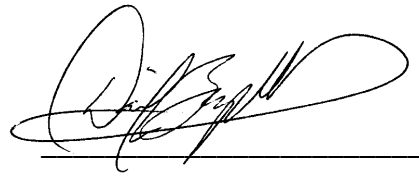
NEUROGENIC- Loss of sympathetic tone causing decrease in peripheral vascular resistance. Occurs in head and spinal cord injuries.

PROTOCOL PROCEDURE: Flow of protocol presumes patient is in shock or that the patient is compensating for impending shock. Rapid transport and procedures en route is a standard.

EL DORADO COUNTY EMS AGENCY

FIELD POLICY

Effective: January 1, 2017



EMS Agency Medical Director

Optional Scope EMT Skills

Purpose:

To standardize the skills identified as expanded scope used and provide a method for annual evaluation of all El Dorado County Agency certified Expanded Scope EMT's ability to safely, efficiently and accurately perform them.

Authority:

Title 22, chapter 2, §100063 and §100064

Definitions:

Expanded Scope Skills: Those skills, identified below, that are performed in the prehospital setting in El Dorado County. If the EMT leaves the county they will practice under the EMT Basic scope of practice only.

- A. EMT Expanded Scope Skills
 - a. Administration of EpiPen
 - b. Administration of Over the Counter Medications (OTC)
 - c. Use of King Airway Device
 - d. Naloxone (Narcan)

POLICY:

- A. Each BLS/ALS service provider in El Dorado County shall verify that every EMT in their agency has successfully completed the assigned curriculum and training on expanded scope skills at least once every 12 months. An extension to the 12 month requirement resulting from special circumstances may be individually approved by the El Dorado County EMS Agency upon request.
- B. These skills will be verified by successful performance in a structured training environment.
- C. Skills competency shall be verified by one of the following personnel:
 - a. BLS/ALS service provider's CQI Coordinator or their designee:

- i. Training Coordinator
 - ii. Field Training Officer
 - b. Service provider's Medical Director
 - c. Base Prehospital Coordinator or their designee
- D. BLS/ALS Service providers shall utilize the El Dorado County EMS Expanded Scope Skills Verification of Maintenance checklists for evaluating skills competency.
- E. All EMS training modules will be given to Field Training Officers or Training Coordinators. These will be provided by the El Dorado EMS Agency and need to be followed in an instructor based format (i.e. – structured classroom or one on one setting). All EMT's need to complete training before they are allowed to implement these expanded skills. EMT personnel are encouraged to complete this training as appropriate but this is not a mandatory requirement for BLS personnel.
- F. BLS/ALS service providers shall maintain documentation of skills competency and regional training module completion for each EMT for a period not less than (4) years.
 - a. The El Dorado EMS Agency Skills competency/ Regional Training Module Verification Summary shall be used for documenting the completion of these requirements.
 - b. Documentation of skills competency and regional training module completion is subject to audit by the El Dorado EMS Agency. Any EMT who is determined to not have current skills verification and/or regional training module completion documentation on file will not be allowed to function as an Expanded scope EMT until they have completed the required skills verification and/or regional training module.



EL DORADO COUNTY EMS AGENCY

PROGRAM POLICY

EXPANDED SCOPE EMT SKILLS

SKILLS COMPETENCY/REGIONAL TRAINING MODULE VERIFICATION SUMMARY

PROVIDER AGENCY _____

NAME _____ DATE _____

CERTIFICATION# _____

REGIONAL TRAINING MODULE COMPLETION DATE _____

SKILLS VERIFICATION	DATE OF VERIFICATION	EVALUATOR INITIALS
1. Over the Counter Medication		
2. King Airway Device		
3. EpiPen		
4. Naloxone (Narcan)		