

# EMS OF LEFLORE COUNTY

## EMS Medical Control Authority

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EMS TREATMENT PROTOCOLS

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January 2012

Medical Director / Supervising Physician  
Jeff Spear, MD

# EMS OF LEFLORE COUNTY

## Receipt of Protocols Memorandum

Date: January 2012

To: EMS of LeFlore County Paramedics and EMTs

From: David Grovdahl, NREMT-P, Executive Director  
Jeff Spear, MD, Medical Director

Attached, please find a copy of the treatment Protocols for EMT-Paramedics, EMT-Intermediates, EMT-Basics and Emergency Medical Responders. Please discard any other protocols you may have. You are asked to review the protocols in their entirety. If you have any questions, please contact the EMS Office.

These protocols are written to the "Prudent EMT" level. Protocols written at this level assume core knowledge of EMS principles being mastered. A "prudent EMT" knows when they need to ask their physician advisor or training officer about a concept or procedure, which is unfamiliar or unclear. It is also the EMT's responsibility to maintain required continuing education.

Lastly, Protocol revision is a dynamic and continual process that needs your support. If you notice errors, whether they are grammatical or content based, please contact the EMS Director so they can be corrected.

Thank You.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## INTRODUCTION TO PREHOSPITAL CARE

The Medical Director has approved these standing orders. Oklahoma Statute requires that EMT's provide care through standing orders or verbal communications under the direction of a physician. These protocols constitute the standing orders of Jeff Spear, MD, the supervising physician.

These standing orders are designed for exclusive use by qualified Emergency Medical Technicians. **EMT's will use only those parts of the protocols which are within the scope of practice for their level of training, as defined by Oklahoma Statutes, and in accordance with Agency policy.**

This format recognizes that pre-hospital care is part of a continuum of care, which begins with access to the system and ends with the return of the patient to our community. No phase of this continuum can function ideally without communication between all the steps of the system. A seamless transfer of care between providers is the goal. Please remember to contact the receiving hospital as soon as possible in every acute situation.

Few patients will fall under a single protocol. More often than not, multiple protocols will be combined to provide patient care. Complete documentation of the physical examination and care rendered is required. These protocols shall serve as the written guideline for patient care. Remember the Prime Directive:

**RELY ON YOUR BEST JUDGEMENT - TREAT THE PATIENT NOT THE PROTOCOL !!**

These protocols represent a dynamic medical system and it is hoped that all providers will continue to be actively involved in their formulation and revision. Questions regarding the development, revision and implementation of these protocols should be directed to the EMS Executive Director and/or Medical Director.

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**Jeff Spear, MD**  
**Medical Director**

# EMS OF LEFLORE COUNTY

January 2012

TO WHOM IT MAY CONCERN:

I am the physician supervisor for the EMT's working for EMS OF LEFLORE COUNTY. They provide emergency medical care under the enclosed Treatment Protocols.

These protocols are regularly reviewed and are revised as needed. The most recent review and revision was completed November 2011.

Any questions regarding the development and approval of these protocols should be directed to Dr. Jeff Spear and/or EMS management.

Sincerely,

Jeff Spear, MD  
Medical Director/Physician Supervisor

David Grovdahl, NREMT-P  
EMS Executive Director

# ALS BLS Protocol

## Abdominal Pain & Severe Nausea Not Related To Pregnancy or Trauma

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### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. **NPO** – Nothing by mouth
3. Perform a detailed abdominal exam
4. Consider abdominal aortic aneurism (AAA) – assess distal pulses
5. Assess vital signs frequently
6. Allow the patient to assume the position of comfort

### Emergency Medical Technician (EMT)

7. Apply **Oxygen** using the appropriate rate/device based on patient condition
8. Consider cardiac involvement & applying **cardiac monitor** – be aware that ischemic cardiac pain can present as abdominal pain especially in older patients – If cardiac pain is suspected request ALS backup
9. If systolic **BP ≤ 90** mmHg
  - a. See Hypotension & Shock protocol
  - b. Provide rapid transport
  - c. Assess vitals frequently
  - d. Request ALS backup

### EMT - Intermediate

10. Consider **IV NS TKO** large bore if hypotension is present

### EMT - Paramedic

11. If severe pain refer to Pain Management protocol  
If severe nausea consider **ondansetron (Zofran) 4 mg IV/IO**, may repeat once if no significant relief within 5 minutes

#### EMT- Intermediate

1. Start BLS CPR & AED Protocol
2. Start **CPR immediately**
3. Attach monitor/defibrillator when available
4. Establish **IV/IO** access and begin pharmacological treatments

#### EMT - Paramedic

5. Consider possible causes and treatments (H's and T's)
6. Give vasopressor during CPR
  - a. **Epinephrine 1 mg 1:10,000 IV/IO** repeat every 3-5 minutes  
**OR**
  - b. May give **1 dose of vasopressin 40 U IV/IO** to replace the first or second dose of epinephrine
7. Continue CPR for 2 minutes, then perform rhythm check – If organized rhythm check for pulse for no longer than 10 seconds
8. If VF / VT or perfusing rhythm follow appropriate algorithm, otherwise continue above treatments
9. In a traumatic cardiac arrest see appropriate trauma protocol
10. Consider advanced airway placement - do not delay transport or interfere with CPR or medication administration
11. Manage acidosis with capnography, if ROSC achieved, consider **Sodium Bicarbonate 1 mEq/kg IV/IO**.
12. If ROSC achieved, continue to Induced Hypothermia Protocol
13. Consider **Calcium Chloride 10 mg/kg IV/IO** and/or **Sodium Bicarbonate 1 mEq/kg IV/IO** in a patient in suspected renal failure or dialysis patient.
14. If gastric distention is suspected place nasogastric or orogastric tube
15. **Contact medical** control to consider termination of efforts

### EMT - Intermediate

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal/advanced airway as needed
3. Apply **Oxygen** using the appropriate rate/device based on patient condition
4. Attach monitor/defibrillator when available
5. Establish **IV/IO access** and begin pharmacological treatments
6. Perform **12-lead EKG** when appropriate

### EMT - Paramedic

7. Consider H's and T's
8. To proceed with the treatments in this protocol patient heart rate must be less than 60 bpm AND have serious signs and/or symptoms (IE: acute altered mental status, ongoing chest pain, hypotension ( $\leq 80$  mmHg systolic), or other signs of shock) – If adequate pulse/perfusion observe/monitor  
– If poor/inadequate perfusion continue to follow this protocol
9. Consider **atropine 0.5 mg IV/IO**. May repeat to a total dose of 3 mg. If ineffective, begin pacing. 2<sup>nd</sup> degree AV blocks (type II), 3<sup>rd</sup> degree AV blocks, and patients with cardiac transplants will not respond to atropine treatment
10. Consider **Glucagon 1-2 mg IV/IO** for suspected beta blocker overdoses
  
11. Consider **epinephrine 2-10 mcg/min IV/IO** titrated to maintain adequate perfusion  
Mix 1 mg epinephrine 1:1,000 (1 ml) in 500 ml's D5W (2 mcg/ml concentration), set drip at 60 ml/hr to start at 2 mcg/min  
**OR**
12. **Dopamine 2-10 mcg/kg/min IV/IO** titrated to maintain adequate perfusion  
**OR**
  
13. Consider **transcutaneous pacing**,
  - a. Observe any contraindications
    - i. Traumatic cardiac arrest (excluding electrocution)
    - ii. Hypothermic cardiac arrest
    - iii. Flammable environment/substances

# ALS

## Protocol

## ACLS Narrow Complex Tachycardia SVT, Atrial Fibrillation, Atrial Flutter

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### EMT - Intermediate

1. Follow Universal Patient Care Protocol
2. Attach monitor/defibrillator when available
3. Establish IV/IO access and begin pharmacological treatments
4. Perform 12-lead EKG when appropriate
5. **4 chewable 81 mg aspirin PO**, administer even if patient has taken aspirin

### EMT - Paramedic

6. To proceed with the treatments in this protocol QRS complex should be narrow (<0.12 seconds).
7. If cardiac rhythm is narrow and regular – Suspected SVT
  - a. Attempt vagal maneuvers
  - b. Give **adenosine 6 mg IV/IO** rapid push with 20 cc NS flush
  - c. If no rhythm conversion
    - i. Give **adenosine 12 mg IV/IO** rapid push with 20 cc NS flush, may **repeat 12 mg dose once**
    - ii. Treat underlying cause of tachycardia, review H's and T's.
  - d. If rhythm conversion
    - i. Monitor and transport
    - ii. Obtain 12-lead EKG
8. If cardiac rhythm is narrow and irregular – suspected atrial fibrillation/flutter or MAT
9. If atrial flutter, atrial tachycardia, or junctional tachycardia, then consider
  - i. **Diltiazem 20 mg IV/IO** over 2 minutes
10. Treat reoccurrence with **diltiazem 20 mg IV/IO** over 2 minutes. May be repeated up to two times in 5 minute intervals (use with caution in CHF).
11. If synchronized cardioversion is indicated premedicate/sedate the patient prior to cardioversion if not deteriorating rapidly
  - a. **Ativan 1 mg IV/IO**

**OR**

**Versed 2 mg IV/IO**, titrate to effect every 2 minutes up to 6 mg while maintaining a systolic BP  $\geq$  90 mmHg
  - b. Consider administering **Fentanyl 50 mcg IV/IO** for pain prior to the cardioversion if patient requires rapid treatment.
12. If the patient becomes unstable (IE: acute altered mental status, ongoing chest pain, hypotension ( $\leq$ 80 mmHg systolic), or other signs of shock) at any point proceed immediately to **synchronized cardioversion**
  - a. Ensure that the therapy pads and monitor electrodes are applied
  - b. Synchronized cardioversion is indicated for patients with a pulse presenting in atrial fibrillation/flutter, ventricular tachycardia, and SVT
  - c. Engage the **SYNC** button and ensure the R waves are appropriately detected and marked, it may be necessary to adjust the monitor's gain
  - d. Energy sequence: **70J, 120J, 150J, 170J**
  - e. Ensure that the SYNC button remains engaged after each cardioversion
  - f. Disengage the SYNC button if the patient becomes pulseless and a defibrillation is needed
  - g. Unsynchronized cardioversion is indicated for patients with a pulse presenting in torsades de pointes
    - i. Energy sequence: 200J, 300J, 360J



### Intermediate

1. Follow Universal Patient Care Protocol
2. Attach monitor/defibrillator when available
3. Establish **IV/IO access** and begin pharmacological treatments
4. Perform **12-lead EKG** when appropriate

### Paramedic

5. To proceed with the treatments in this protocol QRS complex should be wider ( $\geq 0.12$  seconds).
6. If cardiac rhythm is wide and regular – Suspected ventricular tachycardia
  - a. Give **Amiodarone 150 mg IV/IO** over 10 minutes may repeat a second dose of Amiodarone  
**OR**
  - b. Consider **Lidocaine 0.5 – 0.75 mg/kg IV/IO** push
  - c. ☎ Consult with medical control regarding elective synchronized cardioversion ☎
7. If cardiac rhythm is wide and regular – Suspected SVT with aberrancy, follow SVT treatment in the Narrow Complex Tachycardia Protocol
8. If cardiac rhythm is wide and irregular – Suspected atrial fibrillation with aberrancy, follow atrial fibrillation treatment in the Narrow Complex Tachycardia Protocol.
9. If cardiac rhythm is wide and irregular – Suspected atrial fibrillation with WPW
  - a. Consult with medical control
  - b. Consider antiarrhythmic
    - i. **Amiodarone 150 mg IV/IO** over 10 minutes
    - ii. **Lidocaine 0.5 – 0.75 mg/kg IV/IO** push
10. If cardiac rhythm is wide and irregular – Suspected torsades de pointes
  - a. Consult with medical control
  - b. Give **magnesium 1-2 grams IV/IO** in 50 cc's of 100ml NS over 10 minutes
12. If synchronized cardioversion is indicated premedicate/sedate the patient prior to cardioversion if not deteriorating rapidly
  - a. **Ativan 1 mg IV/IO**  
**OR**  
**Fentanyl 50 mcg IV/IO** for pain prior to the cardioversion if patient requires rapid treatment
13. If the patient becomes unstable (IE: acute altered mental status, ongoing chest pain, hypotension ( $\leq 80$  mmHg systolic), or other signs of shock) at any point proceed immediately to **synchronized cardioversion**
  - a. Ensure that the therapy pads and monitor electrodes are applied
  - b. Synchronized cardioversion is indicated for patient's with a pulse presenting in atrial fibrillation/flutter, ventricular tachycardia, and SVT
  - c. Engage the **SYNC** button and ensure the R waves are appropriately detected and marked, it may be necessary to adjust the monitor's gain
  - d. Energy sequence: **70J, 120J, 150J, 170J**
  - e. Ensure that the SYNC button remains engaged after each cardioversion
  - f. Disengage the SYNC button if the patient becomes pulseless and a defibrillation is needed
  - g. Unsynchronized cardioversion is indicated for patient's with a pulse presenting in torsades de pointes
    - i. Energy sequence: **120J, 150J, 200J**

# ALS BLS Protocol

## BLS CPR & AED Adult > 8 Years

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### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Manually open the airway, consider c-spine precautions as needed, using oral/nasal/advanced airway as needed with supplemental oxygen (when available)
3. If not breathing provide two ventilations one second each with enough volume to make the chest start to rise
4. Perform carotid pulse check for no longer than 5-10 seconds
  - a. If a definite pulse is present begin rescue breathing
    - i. Give **1 breath** over 1 second **every 6 seconds**
    - ii. Recheck pulse every 2 minutes
  - b. If no definite pulse is present continue to follow this protocol
5. Start CPR – Chest compressions are the number one priority
  - a. Begin **2 minutes of continuous chest compressions**
  - b. Perform continuous chest compressions at 100 per minute and provide ventilations over 1 second every 6 seconds (do not interrupt compressions for ventilations)
  - c. Switch chest compressors every 2 minutes
  - d. Allow the chest to completely recoil, do not lean/rest on the patient's chest
  - e. **Do not interrupt chest compressions for any reason for greater than 10 seconds**
6. Attach AED when available
  - a. If a witnessed cardiac arrest or with bystander CPR in progress analyze immediately
  - b. If unwitnessed cardiac arrest or no bystander CPR provide 2 minutes prior to analyzing
  - c. Follow AEDs instructions regardless if they deviate from this protocol, administer shocks at the AEDs recommended energy and intervals
  - d. Ideally, AED analysis should occur every 2 minutes of CPR
  - e. If AED allows for a shock immediately resume CPR after energy is delivered without a pulse check, continue CPR until a sign of life is observed

### Emergency Medical Technician (EMT)

7. Follow above treatments Perform/Confirm All Above Interventions

### EMT - Intermediate

8. Establish IV access NS TKO en route to the receiving facility Perform/Confirm All Above Interventions
9. Follow appropriate ACLS algorithm

### EMT - Paramedic

10. Follow above treatments Perform/Confirm All Above Interventions

# ALS BLS Protocol

## BLS CPR & AED Child (1-8 years) & Infant (under 1 year)

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### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Manually open the airway, consider c-spine precautions as needed, using oral/nasal airway as needed with supplemental oxygen (when available)
  - a. Almost all pediatric pulseless arrests are result of respiratory failure/arrest
  - b. If resuscitative efforts are unsuccessful, reevaluate oxygen and ventilations
3. If not breathing provide two ventilations one second each with enough volume to make the chest start to rise
4. Perform carotid/brachial pulse check for no longer than 5-10 seconds
  - a. If a definite pulse is present begin rescue breathing
    - i. Give **1 breath** over 1 second **every 3-5 seconds**
    - ii. Recheck pulse every 2 minutes
  - b. If no definite pulse is present continue to follow this protocol
5. Start CPR
  - a. Begin CPR until a defibrillator is present or a sign of life is observed
    - i. Single rescuer: cycles of **30 compressions and 2 ventilations**
    - ii. Multiple rescuers: cycles of **15 compressions and 2 ventilations**
  - b. Perform continuous chest compressions at 100 per minute and provide ventilations over 1 second every 6 seconds (do not interrupt compressions for ventilations)
  - c. Switch chest compressors every 2 minutes
  - d. Allow the chest to completely recoil, do not lean/rest on the patient's chest
  - e. **Do not interrupt chest compressions for any reason for greater than 10 seconds**
6. Attach AED when available
  - a. AED not indicated for patient's less than one year old
  - b. For patient's 1-8 years (Age < 55 pounds) use pediatric AED patches, if not available and adult AED may be used provided the pads fit on the patient's chest without touching
  - c. If a witnessed cardiac arrest or with bystander CPR in progress analyze immediately
  - d. If unwitnessed cardiac arrest or no bystander CPR provide 2 minutes of CPR prior to analyzing
  - e. Follow AEDs instructions regardless if they deviate from this protocol, administer shocks at the AEDs recommended energy and intervals
  - f. Ideally, AED analysis should occur every 2 minutes
  - g. If AED allows for a shock immediately resume CPR after energy is delivered without a pulse check, continue CPR until a sign of life is observed

### Emergency Medical Technician (EMT)

7. Follow above treatments Perform/Confirm All Above Interventions

### EMT- Intermediate

8. Establish IV access NS TKO en route to the receiving facility
9. Follow appropriate ACLS/PALS algorithm Perform/Confirm All Above Interventions

### EMT - Paramedic

10. Follow above treatments Perform/Confirm All Above Interventions

#### EMT - Intermediate

1. Follow Universal Patient Care Protocol
2. Apply **cardiac monitor** as soon as possible and monitor continuously
3. Placing the patient on their left side may decrease the risk of inappropriate AICD shocks
4. Consider the possibility of an AMI and follow the Chest Pain Protocol when appropriate
5. Apply **Oxygen** using the appropriate rate/device based on patient condition
6. Establish **IV/IO access**
7. Perform **12-lead EKG** when appropriate
8. If the patient reported any chest pain, dyspnea, dizziness, syncope or near-syncope suspect a cardiac dysrhythmia occurred and follow the appropriate protocol(s)
9. If the patient denies any cardiac-related symptoms prior to the AICD discharge suspect an inappropriate firing; however the patient must continue to be closely monitored (continue to follow this protocol)

#### EMT - Paramedic

10. If the patient reported a single or multiple AICD discharges with no preceding cardiac-related symptoms; consider **Ativan 1 mg IV** to treat for anxiety
11. If the patient's AICD discharges while the cardiac rhythm is being monitored and it can be determined that the patient was not in a shockable rhythm
  - a. If Systolic BP > 100 mmHg
    - i. Reconfirm that AICD is inappropriately firing and that there is no evidence of a shockable rhythm
    - ii. If inappropriately firing, place cardiac magnet over AICD\* and secure
  - b. If systolic BP <100 and clinically unstable
    - i. Reconfirm that AICD is inappropriately firing and that there is no evidence of a shockable rhythm
    - ii. If inappropriately firing, place cardiac magnet over AICD\* and secure
  - c. If treatable dysrhythmia occurs see the appropriate ACLS protocol.
  - d. If patient presents with a shockable rhythm after the AICD device has been disabled remove the magnet from the patient's chest and the AICD should discharge within 15 seconds **OR** provide external cardioversion/defibrillation as needed per ACLS protocol
12. If the patient's AICD discharges while the cardiac rhythm is being monitored and it can be determined that the patient was not in a shockable rhythm
  - a. If Systolic BP > 100 mmHg
    - i. **Fentanyl 25 mcg IV/IO** every 5 minutes PRN to maximum of 100 mcg
    - ii. **Versed 1 mg IV/IO** every 5 minutes PRN to maximum of 5 mg
    - iii. Reconfirm that AICD is inappropriately firing and that there is no evidence of a shockable rhythm
    - iv. If inappropriately firing, place cardiac magnet over AICD\* and secure

\* Note:

- a. Not all AICDs can be disabled via cardiac magnet, continue above pharmacological treatments if inappropriate AICD firing continues after cardiac magnet placement
- b. Some manufacturer's AICDs may beep or periodically/continuously emit audible alerts when a cardiac magnet is placed and the device is disabled
- c. Placing a cardiac magnet may temporarily disable the shock-therapy functions; however the device's pacing functions (if equipped) will continue to function

# ALS BLS Protocol

## Altered Mental Status & Unresponsive

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### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal/advanced airway as needed
3. Implement C-spine precautions as needed
4. Keep patient warm
5. Perform a detailed patient assessment and review of medical history

### Emergency Medical Technician (EMT)

6. Apply **Oxygen** using the appropriate rate/device based on patient condition
7. If systolic **BP**  $\leq 90$  mmHg see Shock Protocol
8. Assess **blood glucose**, if  $\leq 60$  mg/dl consider
  - a. **Oral Glucose 15 grams** if patient is responsive and can follow commands to take oral medication without airway compromise, may repeat as needed to maintain adequate blood glucose
9. Recheck blood glucose in 5 minutes following treatment, if glucose remains  $\leq 60$  mg/dl contact medical control
10. Assess temperature. Follow hypothermia protocol if needed.

### EMT - Intermediate

11. Establish IV access NS TKO and
12. If **blood glucose**, if  $\leq 60$  mg/dl consider
  - a. Adult: **Dextrose 50% 12.5 - 25 grams IV/IO**
  - b. Recheck blood glucose in 5 minutes following treatment, if glucose remains  $\leq 60$  mg/dl repeat Dextrose and reassess blood glucose 5 minutes after administration

### EMT - Paramedic

13. Consider **Narcan** slow push to desired effect, if patient LOC increases post Narcan may repeat Narcan in up to 2 mg IV/IO increments every 10 minutes as needed to maintain effective respirations
  - a. Patient  $\geq 20$  kg: **Narcan** up to **2 mg IV/IO/IN/IM**
  - b. Patient  $\leq 20$  kg: **Narcan** up to **0.1 mg/kg IV/IO/IN/IM**
14. Consider applying cardiac monitor
15. If **blood glucose**, if  $\leq 60$  mg/dl consider
  - a. Child: **Dextrose 0.25-0.5 50% grams/kg IV/IO**
  - b. Infant: **Dextrose 0.25-0.5 25% grams/kg IV/IO**
  - c. Neonate: **Dextrose 0.25-0.5 12.5% grams/kg IV/IO**
16. **Glucagon 1 mg IM** if unable to rapidly establish IV access. Do not delay transport or treatment for IV start
17. Consider D5W maintenance drip titrated to maintain a blood glucose  $\geq 60$  mg/dl

# ALS BLS Protocol

## Anaphylaxis & Allergic Reaction

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### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal/ airway as needed
3. If anaphylaxis is resulting from a bee sting and the stinger is still present gently remove/scrape to remove and apply cold pack to the bite/sting site as necessary

### Emergency Medical Technician (EMT)

4. Apply **Oxygen** using the appropriate rate/device based on patient condition
5. If systolic BP  $\leq$  90 mmHg consider or airway/respiratory compromise:
  - a. **Epi-Pen Adult** 0.3 mg administered IM in the lateral thigh in a patient weighing over 30 kg or 66 lbs ☎
  - b. **Epi-Pen JR** 0.15 mg administered IM in the lateral thigh in a patient weighing less than 30 kg or 66 lbs ☎
6. ☎ Assess lung sounds, If bilateral wheezes are present or are diminished/absent lung sounds administer **Albuterol 2.5 mg** via nebulizer ☎
7. ☎ If symptoms persist, consider 2<sup>nd</sup> dose of Epinephrine as directed above 5 minutes after first Epinephrine dose ☎

### EMT - Intermediate

8. Assess lung sounds, If bilateral wheezes are present or are diminished/absent lung sounds administer **Albuterol 2.5 mg mixed with Atrovent 0.5 mg** via nebulizer
9. Establish IV access **IV NS TKO**
10. **Repeat albuterol** treatments as needed for respiratory distress/wheezing

### EMT - Paramedic

11. If systolic BP  $\leq$  90 mmHg consider:
  - a. Adult: **Epinephrine 0.3 mg 1:1,000 IM**
  - b. Pediatric: **Epinephrine 0.01 mg/kg IM up to 0.3 mg**
12. If systolic BP  $\leq$  90 mmHg AND signs/symptoms of severe shock or cardiovascular collapse consider:
  - a. Adult: **Epinephrine 1:10,000, IV** diluted in 9 ml of NS (1:100,000 dilution)  
Infuse over 5-10 minutes (1-2 ml/min) into wide open NS line
  - b. Pediatric: **Epinephrine 0.01 1:20,000 mg/kg IV** into wide open NS line
13. If shock persists may repeat Epinephrine treatment once 5 minutes after first Epinephrine dose then contact medical control if no improvement
14. Consider **Glucagon 1-2 mg IV/IO/IM** for patients who continue to have a tightness in their upper airway OR for patient's who take beta blockers and do not responder to Epinephrine treatment
15. If Itching or hives present
  - a. **Benadryl 50 mg IV/IO/IM**
16. For severe, persistent hypotension consider:  
**Epinephrine drip 2-10 mcg/min IV/IO** titrated to maintain adequate perfusion. Mix 1 mg epinephrine 1:1,000 (1 ml) in 500 ml's D5W (2 mcg/ml concentration), set drip at 60 ml/hr to start at 1 mcg/min  
**OR**  
**Dopamine 2-10 mcg/kg/min IV/IO** titrated to maintain adequate perfusion

# ALS BLS Protocol

## Asthma

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### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal/advanced airway as needed
3. Perform a detailed patient assessment and review of medical history

### Emergency Medical Technician (EMT)

4. Apply **Oxygen** using the appropriate rate/device based on patient condition
5. Perform a detailed lung sound assessment
6. If bilateral wheezes are present or are diminished/absent lung sounds administer **Albuterol 2.5 mg** via nebulizer
7. If little or no significant improvement in respiratory distress after albuterol consider additional albuterol treatments
8. Consider use of epinephrine for patients in severe respiratory distress
  - a. ☎ **Epi-Pen Adult** 0.3 mg administered IM in the lateral thigh in a patient weighing over 30 kg or 66 lbs ☎
  - b. ☎ **Epi-Pen JR** 0.15 mg administered IM in the lateral thigh in a patient weighing less than 30 kg or 66 lbs ☎

### EMT - Intermediate

9. Assess lung sounds, If bilateral wheezes are present or diminished/absent lung sounds consider nebulizer treatment
  - a. Patient >12 Years: **Albuterol 2.5 mg mixed with Atrovent 0.5 mg** via nebulizer
  - b. Patient ≤ 12 Years: **Albuterol 2.5 mg** via nebulizer
10. Consider the need for IV access; IV access should never take precedence over airway management
11. Administer a continuous albuterol treatment as needed

### EMT - Paramedic

12. Consider **Xopenex 1.25 mg** via nebulizer for heart rates greater than 110 beats per minute.
13. Consider **Magnesium Sulfate 25 mg/kg** up to 2 grams infused in 50 cc's of D5W over 20 minutes
14. Consider use of epinephrine for patients in severe distress with no improvement after treatment  
Adult: **Epinephrine 0.3 mg 1:1,000 IM**, may be repeated every 20 minutes up to 3 doses  
(*first dose may be administered pre-radio with acute respiratory distress in adult patient*)  
Pediatric: **Epinephrine 0.01 mg/kg IM up to 0.3 mg**, may be repeated every 20 minutes up to 3 doses
15. If severe difficulty breathing persists without favorable response to above treatments or compromised airway consider facilitated intubation/rapid sequence intubation.

# ALS BLS Protocol

## Burns Thermal, Chemical, & Electrical

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### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. **Ensure scene security prior to entry**
3. **Stop the burning process**
  - a. Thermal burns
    - i. Carefully remove involved clothing and jewelry
    - ii. Flood burned area with normal saline/sterile water (water may be used if sterile fluids are not available) **ONLY** if flames or smoldering are present and monitor closely for signs of hypothermia
  - b. Chemical burns
    - i. Consider the need for HAZMAT
    - ii. With a gloved hand carefully brush off (take care not to contaminate yourself) and dilute/irrigate, if indicated, exposed area with copious amount of saline/sterile water (water may be used if sterile fluids are not available)
    - iii. For eye exposure irrigate with at least 500 cc of Normal Saline and contact medical control for further orders
  - c. Electrical burns
    - i. Make sure the patient has been removed from the electrical source prior to making patient contact
    - ii. Suspect internal injuries
    - iii. Apply cardiac monitor and watch for arrhythmias
    - iv. Observe for entrance and exit wounds
4. Maintain **airway** - consider assisting ventilations and/or using oral/nasal/advanced airway as needed
5. Monitor closely for signs of shock, see Hypotension & Shock protocol
6. **Consider carbon monoxide** poisoning if victim was in an enclosed space, see Overdose protocol
7. Evaluate the degree of burn and the percent of body surface area involved
  - a. The size of the Patient's palm is approximately 1% of their body surface area
  - b. Refer to the Rule of 9's
8. Dress burns loosely with dry, sterile dressings – never tightly wrap a burn, especially with circumferential burn
9. Prevent unnecessary cooling and watch for signs of hypothermia

### Emergency Medical Technician (EMT)

10. If the patient is in respiratory distress administer high-flow **Oxygen**. Continue to closely monitor airway and respiratory effort
11. Determine if burn is a critical burn and consider air transport directly to Burn Center
  - a. Any 2<sup>nd</sup> degree burn with > 20 % body surface area involved
  - b. 3<sup>rd</sup> degree burn with > 10% body surface area involved
  - c. Burns around the nose or lips/mouth
  - d. Involvement of face, hands, feet, or genitalia
  - e. Circumferential, electrical, or deep chemical burns
  - f. Patient age < 10 years or > 50 years
12. 📞 Consider **Albuterol 2.5 mg** via nebulizer for respiratory distress 📞

# ALS BLS Protocol

## Burns Thermal, Chemical, & Electrical

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### EMT - Intermediate

13. Establish **large-bore IV** access NS TKO
  - a. Start IVs within unburned areas above the burn if possible (burned areas may be used if necessary)
14. Consider nebulizer treatments for respiratory distress
  - a. ☎ Patient >12 Years: **Albuterol 2.5 mg mixed with Atrovent 0.5 mg** via nebulizer ☎
15. ☎ Patient ≤ 12 Years: **Albuterol 2.5 mg** via nebulizer ☎  
Administer fluid resuscitation per the Parkland Burn formula  
 $4 \text{ ml of NS } \times \text{ patient weight in kg } \times \% \text{ BSI burned } / 2 / 16 = \text{fluid over first hour}$
16. If severe pain refer to **Pain Management protocol**

### EMT - Paramedic

17. If respiratory distress or possibility of facial or oral burns without favorable response to above treatments or compromised airway consider facilitated intubation/rapid sequence intubation
18. If unable to intubate consider performing a surgical cricothyrotomy, see Surgical Cricothyrotomy protocol
19. ☎ In the presence of a high voltage electrical injury or direct lightning strike with significant tissue destruction consider **Sodium Bicarbonate 1 mEq/kg (maximum of 100 mEq)** in 1000 cc's NS infuse wide open ☎

# ALS BLS Protocol

## Chest Pain Suspected Cardiac Origin

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Complete a review of medical history including an OPQRST pain assessment

### Emergency Medical Technician (EMT)

3. Apply **Oxygen** using the appropriate rate/device based on patient condition
4. Consider applying cardiac monitor
5. **4 chewable 81 mg aspirin PO**, administer even if patient takes aspirin 81 mg daily
6. ☎ **Assist** patient with their own Nitroglycerin SL 0.4 mg if patient has chest pain ☎
  - a. Nitroglycerin must be prescribed to the patient and non-expired
  - b. Nitroglycerin sublingual is contraindicated if systolic BP < 100 mmHg
  - c. Contraindicated if the patient has been taking medication for ED (Viagra, Tadalafil, Cialis) in the past 48 hours
  - d. Assist patient using caution with their own nitroglycerin every five minutes for a total of three - reassess BP between each nitroglycerin administration to maintain a systolic BP ≥ 90 mmHg

### EMT - Intermediate

7. Establish IV NS TKO while en route to the receiving facility
8. **Nitroglycerin 0.4 mg SL** if patient has chest pain
  - a. Nitroglycerin sublingual is contraindicated if systolic BP < 100 mmHg
  - b. Contraindicated if the patient has been taking medication for ED (Viagra, Tadalafil, Cialis) in the past 48 hours
  - c. Administer nitroglycerin every five minutes for a total of three - reassess BP between each nitroglycerin administration to maintain a systolic BP ≥ 90 mmHg
9. Continue Nitroglycerin 0.4 mg SL every 5 minutes as long as pain continues, maintaining a systolic BP > 90 mmHg

### EMT - Paramedic

- a. Monitor cardiac rhythm & perform **12-lead EKG**,
  - b. Anterior Septal Wall – ST elevation in leads V1-V4
  - c. Inferior Wall – ST elevation in leads II, III, aVF  
Consider 500-1000 mL NS bolus if BP less than 90 and the use of NTG IV (over SL)
  - d. Lateral Wall – ST elevation in leads I, aVL, V5-6
10. If suspected STEMI, follow Chest Pain: STEMI Protocol.
  11. **Morphine 2-4 mg IV/IM** increments, repeat as needed for pain up to 10 mg  
**OR**  
**Fentanyl 25-50 mcg IV/IO/IN/IM**, may repeat up to 100 mcg as needed for pain. Fentanyl administration is preferred over the use of morphine if an inferior wall AMI is suspected.
  12. Consider **Nitroglycerin IV/IO drip**
    - a. **Start at 5 mcg/min and increase by 5 mcg**
    - b. Increase in increments of 10 mcg/min titrated to pain and pressure
    - c. Never drop systolic BP below 90 mmHg
    - d. Contraindicated if the patient has been taking medication for ED (Viagra, Tadalafil, Cialis) in the past 48 hours
  13. If severe nausea consider **ondansetron (Zofran) 4 mg IV/IO**, may repeat once if no significant relief within 5 minutes
  14. Consider the use of **Ativan 1 mg IV** for tachycardia and hypertension secondary to anxiety
  15. If AMI is suspected, alert receiving facility ASAP and complete pre-hospital screening for fibrinolytics

# ALS BLS Protocol

## Congestive Heart Failure (CHF) Acute Pulmonary Edema

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Closely monitor patient respirations, if the patient becomes fatigued it may be necessary to assist/control ventilations

### Emergency Medical Technician (EMT)

3. Apply **Oxygen** using the appropriate rate/device based on patient condition
4. 📞 Consider **Albuterol 2.5 mg via nebulizer** only for patients with significant bronchospasm/wheezing 📞

### EMT - Intermediate

5. Establish IV access
6. If systolic BP < 100 mmHG with severe signs and symptoms of respiratory distress and hypotension contact medical control for the appropriate amount of NS & rate
7. If systolic BP > 100 mmHG with severe signs and symptoms of respiratory distress give **Nitroglycerin 0.4 mg SL**
  - a. Nitroglycerin sublingual is contraindicated if systolic BP < 100 mmHg
  - b. Relay to medical control if the patient has been taking medication for ED (Viagra, Tadalafil, Cialis,) in the past 24 hours
  - c. Administer nitroglycerin every five minutes for a total of three. Reassess BP between each nitroglycerin administration

### EMT - Paramedic

8. If the patient is in respiratory distress with the presence rales, rhonchi, wheezes, or decreased lung sounds initiate **CPAP** protocol
9. If symptoms persist and systolic BP > 100 mmHG consider **Nitroglycerin IV/IO drip**
  - a. **Start at 5 mcg/min and increase by 5 mcg**
  - b. Increase in increments of 10 mcg/min every 2-5 minutes as BP allows
  - c. Contraindicated if the patient has been taking medication for ED (Viagra, Tadalafil, Cialis) in the past 48 hours
10. If symptoms persist and systolic BP > 100 mmHG consider:
  - a. **Morphine** titrated in 2 mg increments up to 10 mg as BP allows
11. Consider **Lasix 20 mg IV** or double the patient's normal dose up to **80 mg IV**.
12. Consider obtaining 12-lead EKG
13. Consider Rapid Sequence Induction with pts that are lethargic and in respiratory distress

# ALS BLS Protocol

## Child Birth

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EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol

### Emergency Medical Technician (EMT)

2. Obtain pertinent history: number of previous births, prenatal care, possibility of multiple births, previous c-section, frequency of contractions, etc.
3. If the patient does not appear to be in active labor, no crowning present (no digital exams)
  - a. Place the patient on her **left side**
4. If the patient is having bleeding/pain (not labor) see Hypotension & Shock protocol
  - a. Monitor vitals
  - b. Discontinue following this protocol
5. 📞 If active labor and **abnormal presentation** contact medical control 📞
  - a. Foot, hand, cord, face: No field delivery – Elevate mother's hips or Trendelenburg. Prevent cord compression with a gloved hand to maintain a pulsating cord. Keep cord moist using saline solution.
  - b. Buttocks/Breech: Support legs & trunk. If the baby's head does not deliver and the baby begins to breath, place a gloved hand in the vagina and form a V-shape with your first 2 fingers to hold vaginal wall from the baby's face until relieved by an equal or higher trained personnel
    - i. Arms before head: Lower the infant's body to assist the head in passing
    - ii. As hairline appears, raise body by ankles upwards
    - iii. Bulb suction baby's mouth first then the nose
6. If **delayed labor** with the baby attempting to breath
  - a. DO NOT pull on the baby
  - b. Form a V-shape with your first 2 fingers to hold vaginal wall from the baby's face until relieved by an equal or higher trained personnel
7. If active labor and **normal presentation**
  - a. Control delivery with gentile pressure to prevent explosive delivery
  - b. Support head while it rotates
  - c. Bulb suction baby's mouth first then the nose
  - d. Guide the head upward to deliver the lower shoulder, then downward to deliver the upper shoulder
  - e. Control the delivery of the trunk and legs
8. If the **cord is around the baby's neck** (Nuchal cord)
  - a. Attempt to slip the cord over the head & shoulders

**OR**

  - b. If the cord is too tight to move, place clamps on the cord 2" apart and cut the cord
9. Keep newborn at level of vagina until cord is cut
10. Once cord pulsations cease, clamp the cord 8" from the navel with clamps or ties 2" apart and cut the cord
11. Briskly dry the baby and keep warm, cover head
12. Note time of birth
13. Assess baby and perform APGAR scoring at 1 and five minutes after birth

APGAR SCORE	0	1	2
Appearance (skin)	Blue, pale	Body pink	Completely Pink
Pulse	Absent	<100	>100
Grimace (irritability)	No response	Grimace	Cough/sneeze
Activity	Limp	Some flexion	Active
Respiration	Absent	Alow	Good, Crying

14. Refer to the Neonatal Resuscitation protocol as needed
15. Intermittently massage the fundus gently; however firmly, and place baby to mother's breast to promote placental delivery
16. Do not pull on the cord
17. Note the time of placental delivery

📞 = Contact Medical Control

# ALS BLS Protocol

## Child Birth

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### EMT - Intermediate

18. If mother's bleeding > 250 cc post labor Perform/Confirm All Above Interventions
- a. ☎ Contact medical control ☎
  - b. Place two large-bore IVs NS, see Shock Protocol
  - c. Intermittently massage the fundus gently; unless multiple births are anticipated
19. If patient is in active labor, consider IV access NS TKO and

### EMT - Paramedic

- Perform/Confirm All Above Interventions
20. Follow above treatments
21. For severe bleeding following placental delivery, consider **Pitocin 20 units** in 1L NS using 60 gtt set. Begin infusion at 20-30drops/minute.
- a. Contraindicated if not all babies have been delivered.

### EMT - Paramedic

1. Follow Universal Patient Care Protocol
2. Continue to ventilate patient
3. Confirm ET tube placement
  - a. Auscultate lung sounds and epigastrium
  - b. Assess for color change with colorimetric ETCO<sub>2</sub> device
  - c. Monitor SpO<sub>2</sub> & digital ETCO<sub>2</sub>
4. Assure adequate oxygenation and ventilation
5. Continue to follow this protocol only if signs of recovery after paralytic administration or ET intubation
6. Consider **Versed or Valium** if the patient has not received Versed or Etomidate in the past 20 minutes or if signs of inadequate sedation
  - a. **Valium 5 mg IV/IO**, repeat as needed for adequate sedation.
  - b. ☎ Initial Bolus: **Versed 0.05 mg/kg IV/IO** if BP is stable ☎
  - c. ☎ Re-Bolus: May repeat ½ **bolus dose** in 2-3 minutes if needed to maintain sedation and BP is stable ☎
  - d. ☎ Drip: **Versed 0.05 mg/kg/hr IV/IO** maintenance drip ☎
    - i. Mix 100 mg of Versed in 100 cc's of D5W or NS
    - ii. Consider Versed drip immediately after the administration of Vecuronium
    - iii. Titration of versed drip will likely be necessary
      1. Normal range 0.02 mg/kg/hr – 0.12 mg/kg/hr
      2. Use the lowest effective rate
      3. Children & pediatric patients may need to be at the upper end of this range
      4. Rates may be titrated up or down in 25%-50% doses
7. Consider **Vecuronium or Rocuronium** bolus
  - a. Vecuronium has no known effect on pain or consciousness, administration of this drug must be accompanied by adequate anesthesia
  - b. Prior administration of Succinylcholine may enhance the effect and duration of Vecuronium
  - c. Maintenance doses may be given at relatively short intervals 12-15 minutes as needed and directed by medical control physician
  - d. Adult – 16 years of age
    - i. ☎ Initial Bolus: **Vecuronium 0.1 mg/kg IV/IO** ☎
    - ii. ☎ Re-Bolus: **Vecuronium 0.025 – 0.05 mg/kg IV/IO** ☎
  - e. 2 – 15 years of age
    - i. Sedation with Versed may be adequate without the administration of Vecuronium
    - ii. ☎ Initial Bolus: **Vecuronium 0.15 mg/kg IV/IO** ☎
    - iii. ☎ Re-Bolus: **Vecuronium 0.025 – 0.05 mg/kg IV/IO** ☎
8. Consider **Fentanyl 25-50 mcg IV/IO/IN**, may repeat as needed for signs of pain/discomfort

# ALS BLS Protocol

## COPD With Acute Distress

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Closely monitor patient respirations, if the patient becomes fatigued it may be necessary to assist/control ventilations

### Emergency Medical Technician (EMT)

3. Apply **Oxygen** using the appropriate rate/device based on patient condition
4. If wheezes are present or are diminished/absent lung sounds administer **Albuterol 2.5 mg** via nebulizer

### EMT - Intermediate

5. Assess lung sounds, If bilateral wheezes are present or diminished/absent lung sounds consider **Albuterol 2.5 mg mixed with Atrovent 0.5 mg** via nebulizer
6. Establish IV access NS
7. Consider applying cardiac monitor
8. May repeat **Albuterol 2.5 mg** via nebulizer as needed

### EMT - Paramedic

9. If the patient is in respiratory distress with the presence rales, rhonchi, wheezes, or decreased lung sounds initiate CPAP Protocol
10. Consider **Xopenex 1.25 mg** via nebulizer for heart rates greater than 110 beats per minute.
11. Consider facilitated/rapid sequence intubation for severe distress or pt obtunded.

# ALS BLS Protocol

## Continuous Positive Airway Pressure CPAP

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EMS Medical Control Authority

### EMT - Paramedic

1. Use protocol in conjunction with the appropriate respiratory distress protocol
  2. Maintain airway - consider assisting ventilations and/or using oral/advanced airway as needed
  3. Observe indications, respiratory distress from:
    - a. Pulmonary edema/CHF
    - b. COPD
    - c. Near drowning
    - d. Carbon monoxide poisoning
  4. Observe contraindications
    - a. Unprotected or obstructed airway
    - b. Vomiting
    - c. GCS < 13
    - d. Altered mental status
    - e. Hypotension with systolic BP < 90 mmHg
    - f. Cardiac arrest, respiratory arrest, or agonal respirations
    - g. Possibility of a pneumothorax
  5. Complete a detailed respiratory assessment including lung sounds, SpO<sub>2</sub>, and patient mentation
  6. Assemble equipment as directed by the manufacturer and explain the procedure to the patient
  7. For patient's with pulmonary edema/CHF **start at 5-10 cmH<sub>2</sub>O**, do not exceed 15 cmH<sub>2</sub>O
  8. For patient's with **COPD, asthma, or carbon monoxide poisoning start at 5 cmH<sub>2</sub>O**, do not exceed 15 cmH<sub>2</sub>O
  9. Frequently monitor that patient's response and vitals, if the patient does not improve and further decompensates proceed immediately to manual ventilation
  10. If bilateral wheezes are present or are diminished/absent lung sounds administer **Albuterol 2.5 mg** via nebulizer
    - a. Albuterol is not indicated in cases with pulmonary edema secondary to CHF
    - b. If the patient is in respiratory distress with the presence rales, rhonchi, wheezes, or decreased lung sounds initiate CPAP Protocol
  11. Contact receiving facility as soon as possible and alert to the use of CPAP so that treatment can be continued on arrival
  12. If the patient becomes hypotensive with a systolic BP < 90 mmHg, consider:
    - a. 250 cc Normal Saline bolus
    - b. Decrease the PEEP pressure (if possible)
- If the patient is agitated by the procedure or experiences claustrophobia, consider **Ativan 1 mg IV/IO**
13. If severe difficulty breathing persists without favorable response to above treatments or compromised airway consider facilitated intubation/rapid sequence intubation.

### EMT - Paramedic

1. Observe indications
  - a. Severe facial or nasal injuries
  - b. Severe anaphylaxis
  - c. Critical burns
  - d. Chemical inhalation injury
  - e. When other means of establishing an airway are not adequate or possible
2. Observe contraindications
  - a. Patients who can be intubated with an ET tube
  - b. Patient's who's airway can be secured with a King Airway
3. Locate the cricothyroid membrane
  - a. Anterior trachea, midline
  - b. Soft aspect just below the thyroid cartilage and above the cricoid ring
4. Cleanse the site with antiseptic using aseptic technique
5. Test the cuff in the cric kit
6. Using a scalpel make a 0.5-1 cm vertical incision through the skin over the cricothyroid membrane
7. Exert pressure to introduce the dilator into the airway until the tube is in position with the face plate against the skin of the neck
8. Remove the dilator and secure the tube to the patient. Inflate the cuff and confirm tube placement:
  - a. Auscultate lung sounds
  - b. Assess for color change with colorimetric ETCO<sub>2</sub> device
  - c. Monitor SpO<sub>2</sub> & waveform ETCO<sub>2</sub> capnography.

# ALS BLS Protocol

## Croup & Epiglottitis

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Approach the patient in a calm reassuring fashion - Anxiety is likely to exacerbate the condition
3. Allow the child to adopt a position of comfort
4. Be prepared to assist/control ventilations with BVM
5. Determine croup vs. epiglottitis
  - a. Croup
    - i. Age typically 6 months – 3 years
    - ii. **Gradual onset**
    - iii. Signs/Symptoms: Often preceded by an upper respirator infection, worse at night. **“barking” cough**  
May or may not have fever, drooling, leaning forward to breathe, difficulty speaking, and retractions
  - b. Epiglottitis
    - i. Age typically > 2 years
    - ii. **Rapid onset**
    - iii. Signs/Symptoms: **Stridor**, hoarse voice, fever, sick appearance, air hunger, nasal flaring, restlessness, drooling, retraction, and wants to sit upright

### Emergency Medical Technician (EMT)

6. Consider **blow-by Oxygen**
7. Monitor closely

### Intermediate

8. Follow above treatments
9. Avoid consideration or attempted IV access as to not further aggravate the patient's airway

### Paramedic

10. If croup is suspected, consider **3 cc normal saline via nebulizer**
11. If respiratory distress continues consider **racemic epinephrine 0.5 ml premixed** solution via nebulizer
12. Treat fever with **Tylenol** rectal suppository **10 mg/kg** if indicated
13. ☎ Consider facilitated intubation/rapid sequence intubation ☎
14. ☎ If intubation is unsuccessful and ventilation is not possible, see Cricothyrotomy Protocol ☎

# ALS BLS Protocol

## Death in the Field Withholding & Discontinuing Life Support

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### ALL LICENSED HEALTHCARE PROVIDERS

#### Withholding Life Support Measures

1. Life support may be withheld if any of the following exists
  - a. Patient qualifies for DNR status (with one of the following)  
State of Oklahoma
    - i. Do-Not-Resuscitate Order Form signed by the patient
  - b. Decapitation
  - c. Rigor mortis in a warm environment
  - d. Dependant lividity: venous pooling in dependant body parts
2. All hypothermic patients (whom are not completely frozen), electrocution/lightning strike, and drowning victims should receive resuscitation measures and be transported
3. Attach cardiac monitor (if available) and confirm asystole is present, preferably in multiple leads
4. After obvious death has been determined:
  - a. Cover the body with a sheet
  - b. Contact the appropriate authorities
  - c. Secure the scene - do not remove personal property from the body, disturb the scene, or leave the body unattended
  - d. If not already present request law enforcement and the coroner/medical examiner
  - e. Assess the need for pastoral services for family and friends (if present). Contact the appropriate authorities as needed.
  - f. Complete a detailed scene assessment and report
5. Relinquish scene control to law enforcement, coroner, or medical examiner

#### Discontinuing Life Support Measures

1. Follow the BLS AED and/or the appropriate ALS ACLS protocol
2. If the patient is in a viable rhythm or has a positive response to treatment
  - a. Continue resuscitation as needed
  - b. Transport ASAP
3. ☎ Contact medical control and consult regarding the termination of efforts ☎

# ALS BLS Protocol

## Drowning & Near Drowning

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Remove the victim from the water (situation may require a trained rescuer with the appropriate equipment)
3. **Maintain airway**
  - a. Consider assisting ventilations and/or using oral/nasal/advanced airway as needed
  - b. Ventilations, if required, should be initiated ASAP while the patient is being rescued (if possible)
4. If a fall or diving accident consider the need for C-spine precautions and spinal immobilization
5. **Keep patient warm**, remove wet clothing, and prevent further heat loss

### Emergency Medical Technician (EMT)

6. ☎ Consider **Albuterol 2.5 mg via nebulizer** for bronchospasm/wheezing ☎
7. Assess temperature, if less than 35° Celsius (95° Fahrenheit)
  - a. Initiate re-warming, see Hypothermia protocol
8. Notify receiving facility ASAP

### EMT - Intermediate

9. Consider IV access NS TKO en route to the receiving facility  
Albuterol-only nebulizer treatments as described above as needed
10. Use of Solumedrol is not indicated
11. Ventilations via BVM with use of PEEP may be beneficial

### EMT - Paramedic

12. Perform a detailed lung sound assessment – observe patient for pulmonary edema, if present consider the use of **CPAP** starting at 5 cmH<sub>2</sub>O, see CPAP protocol
13. Consider nasogastric or orogastric tube placement if gastric distension is present

# ALS BLS Protocol

## Pre-Eclampsia & Eclampsia

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Consider signs and symptoms of pre-eclampsia & eclampsia
  - a. Pregnant mother in her 3<sup>rd</sup> trimester (pregnancy  $\geq$  28 weeks)
  - b. Hypertension typically greater than 140/90
  - c. Extremity edema and/or excessive weight gain
  - d. Headache and/or blurred vision
  - e. Dizziness
  - f. Confusion
  - g. Epigastric pain (RUQ abdominal pain often indicates an impending seizure)
3. Maintain a **calm and quiet** environments, make attempts to minimize excessive noise, lighting, and stimulation in order to decrease the risk of seizure
4. Consider assessing blood glucose
5. Place patient in the left **lateral recumbent position**

### Emergency Medical Technician (EMT)

6. Apply **Oxygen** using the appropriate rate/device based on patient condition
7. Consider applying cardiac monitor

### EMT- Intermediate

8. Establish **IV NS TKO**

### EMT - Paramedic

9. If seizures are present see Seizure Protocol and administer **Ativan 1-2 mg IV**
10. ☎ If systolic BP is greater than 140 systolic or 90 diastolic and patient appears agitated and at risk for seizures contact medical control and consider **Magnesium 2 grams IVPB over 10 minutes** ☎
11. If seizures are present administer **magnesium 2 grams IM** in each hip, then **magnesium 4 g in 100 cc's NS IV/IO over 20 minutes**
  - a. Monitor for signs of adverse reaction (hypotension, pulmonary edema, respiratory compromise, etc)
  - b. Administer **Calcium Chloride 4 mg/kg in 100 cc's NS over 20 minutes** as an antidote for magnesium reactions.

### EMT - Paramedic

1. Follow Universal Patient Care Protocol Perform/Confirm All Above Interventions
2. Maintain airway - assisting ventilations using an oral/nasal airway as needed
3. If unable to manually ventilate patient using a BVM **DO NOT PROCEED** if patient has adequate oxygenation
4. Observe indications
  - a. Acute or impending respiratory failure with intact gag reflex
  - b. Multiple system trauma where the airway is not protected
  - c. Unconsciousness
  - d. Intractable seizures
  - e. Head trauma
  - f. Critical burns with suspected inhalation injury
  - g. General considerations
    - i. SpO2 < 90% despite the appropriate therapies
    - ii. Respiratory rate <10 or >29
    - iii. GCS < 10
5. **Pre-oxygenate** patient with 100% oxygen, do not hyperventilate as this causes gastric distention
6. Establish IV/IO access NS TKO
7. Monitor heart rate and SpO2 during procedure
8. If patient is bradycardic consider **Atropine 0.5 mg IV/IO**
9. If the patient has suffered a traumatic injury and/or increased intracranial pressure/bleed is suspected consider **Lidocaine 1-1.5 mg/kg IV/IO** preferably at least 3 minutes prior to intubation
10. Consider sedation with **Etomidate 20 mg IV/IO**
11. Consider using backward, upward, right (BURP) pressure
12. Intubate, see Intubation protocol
13. **Confirm** ET tube placement
  - a. Auscultate lung sounds and epigastrium
  - b. Assess for color change with colorimetric ETCO2 device
  - c. Monitor SpO2 & digital ETCO2 capnography and waveform.
14. If ET tube placement cannot be established/definitively confirmed within **60 seconds** after the onset of adequate sedation place a **Rescue airway**.
15. If rescue airway placement cannot be established/definitively confirmed and the patient can be manually ventilated via BVM, place an oral or nasal airway (when appropriate) and continue to manually ventilate the patient
16. If the patient can no longer be ventilated manually via BVM and advanced airway placement is unsuccessful consider an emergency cricothyrotomy, see Cricothyrotomy protocol
17. Refer to the Continued Sedation protocol if intubation is successful to provide long-term sedation and paralysis
18. Reassess tube placement frequently
19. Keep patient warm
20. Upon arrival at the receiving hospital have the ED physician immediately confirm the ET tube placement via auscultation and review of the ETCO2 capnography and waveform prior to transferring the patient from the ambulance cot to the ED bed – **request physician to sign ePCR, at the appropriate time, attesting that ET tube placement was confirmed upon ED arrival.**

### EMT - Paramedic

1. Follow Universal Patient Care Protocol Perform/Confirm All Above Interventions
2. Maintain airway - assisting ventilations using an oral/nasal airway as needed
3. If unable to manually ventilate patient using a BVM **DO NOT PROCEED** if patient has adequate oxygenation
4. Observe indications
  - a. Acute or impending respiratory failure with intact gag reflex
  - b. Multiple system trauma where the airway is not protected
  - c. Unconsciousness
  - d. Intractable seizures
  - e. Head trauma
  - f. Critical burns with suspected inhalation injury
  - g. General considerations
    - i. SpO2 < 90% despite the appropriate therapies
    - ii. Respiratory rate <10 or >29
    - iii. GCS < 10
5. **Pre-oxygenate** patient with 100% oxygen, do not hyperventilate as this causes gastric distention
6. Establish IV/IO access NS TKO
7. Monitor heart rate and SpO2 during procedure
8. Consider **Atropine 0.02 mg/kg IV/IO**
  - a. Minimum dose: 0.1 mg
  - b. Maximum dose: 0.5 mg (Child)
  - c. Maximum dose: 1 mg (Adolescent)
9. If the patient is has suffered a traumatic injury and/or increased intracranial pressure/bleed is suspected consider **Lidocaine 1-2 mg/kg IV/IO** preferably at least 3 minutes prior to intubation
10. Consider sedation with **Versed 0.05 mg/kg IV/IO**
11. Continue to manually ventilate the patient via BVM until the patient becomes flaccid
12. Consider using backward, upward, right (BURP) cricoid pressure
13. Intubate, see Intubation protocol
14. **Confirm** ET tube placement
  - a. Auscultate lung sounds and epigastrium
  - b. Assess for color change with colorimetric ETCO2 device
  - c. Monitor SpO2 & digital ETCO2 capnography and waveform.
15. If ET tube placement cannot be established/definitively confirmed within **60 seconds** after the onset of adequate sedation place a **Rescue airway** in patient.
16. If rescue airway placement cannot be established/definitively confirmed and the patient can be manually ventilated via BVM, place and oral or nasal airway (when appropriate) and continue to manually ventilate the patient
17. If the patient can no longer be ventilated manually via BVM and advanced airway placement is unsuccessful consider an emergency cricothyrotomy, see Cricothyrotomy protocol
18. Refer to the Continued Sedation protocol if intubation is successful to provide long-term sedation and paralysis
19. Reassess tube placement frequently
20. Keep patient warm
21. Upon arrival at the receiving hospital have the ED physician immediately confirm the ET tube placement via auscultation and review of the ETCO2 capnography and waveform prior to transferring the patient from the ambulance cot to the ED bed – **request physician to sign ePCR, at the appropriate time, attesting that ET tube placement was confirmed upon ED arrival.**

# ALS BLS Protocol

## Foreign Body Airway Obstruction Adult, Child, & Infant

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. To proceed with this protocol the patient must have signs of severe airway obstruction
  - a. Poor air exchange and increased difficulty breathing
  - b. A silent cough
  - c. Cyanosis
  - d. Inability to speak or breathe, ask the patient "are you choking?" if they cannot answer, proceed
3. If **under one year** of age (infant)
  - a. If the patient is **responsive**
    - i. Manually open the airway with head tilt-chin lift or jaw thrust and consider using oral airway as needed
    - ii. Look for an airway obstruction and if visible, remove it digitally or with a Magill forceps (do not perform a blind finger sweep)
    - iii. Attempt manual ventilation, if unsuccessful proceed to back slaps and chest thrusts until unconsciousness or the airway is cleared
  - b. If the patient is **unresponsive**
    - i. Manually open the airway with head tilt-chin lift or jaw thrust and consider using oral airway as needed
    - ii. Look for an airway obstruction and if visible, remove it digitally or with a Magill forceps (do not perform a blind finger sweep)
    - iii. Attempt manual ventilation, if unsuccessful proceed to CPR
    - iv. Each time the airway is opened to perform ventilations look for an airway obstruction and if visible, remove it digitally or with a Magill forceps (do not perform a blind finger sweep)
    - v. Ventilate or assist ventilations until consciousness returns
4. If **greater than one year** of age (child or adult)
  - a. If the patient is **responsive**
    - i. If possible consider performing the Heimlich maneuver  
**OR**
    - ii. Perform a series of abdominal thrusts until unconsciousness or the airway is cleared
  - b. If the patient is **unresponsive**
    - i. Manually open the airway with head tilt-chin lift or jaw thrust and consider using oral/nasal/advanced airway as needed
    - ii. Look for an airway obstruction and if visible, remove it digitally or with a Magill forceps (do not perform a blind finger sweep)
    - iii. Attempt manual ventilation, if unsuccessful proceed to CPR
    - iv. Each time the airway is opened to perform ventilations look for an airway obstruction and if visible, remove it digitally or with a Magill forceps (do not perform a blind finger sweep)
    - v. Ventilate or assist ventilations until consciousness returns

### EMT - Basic

5. Follow above treatments

### EMT - Intermediate

6. Consider ET intubation

### EMT - Paramedic

7. Consider cricothyrotomy if ET intubation is not possible in an adult patient

 = Contact Medical Control

# ALS BLS Protocol

## Glasgow Coma Scale (GCS)

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### ALL LICENSED HEALTHCARE PROVIDERS

1. Follow Universal Patient Care Protocol
2. Follow the appropriate medical/trauma protocol
3. Assess and re-assess the patients GCS frequently and record each observation along with patient vital sets

Adult/Child Glasgow Coma Scale		
<b>Eye Opening</b>	Spontaneous	4
	To Voice	3
	To Pain	2
	None	1
<b>Best Verbal Response</b>	Oriented	5
	Confused	4
	Inappropriate Words	3
	Incomprehensible Words	2
	None	1
<b>Best Motor Response</b>	Obeys Commands	6
	Localizes Pain	5
	Withdraws From Pain	4
	Flexion (Towards Body)	3
	Extension (Away From Body)	2
	None	1
Total From Each Category:		

Infant/Toddler Glasgow Coma Scale		
<b>Eye Opening</b>	Spontaneous	4
	To Voice	3
	To Pain	2
	None	1
<b>Best Verbal Response</b>	Smiles, Interacts	5
	Consolable	4
	Cries to Pain	3
	Moans to Pain	2
	None	1
<b>Best Motor Response</b>	Normal Movement	6
	Localizes Pain	5
	Withdraws From Pain	4
	Flexion (Towards Body)	3
	Extension (Away From Body)	2
	None	1
Total From Each Category:		

# ALS BLS Protocol

## Hypertension Not related to pregnancy

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EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Confirm hypertension by manual BP
  - a. Systolic BP  $\geq$  220 mmHg
  - b. Diastolic BP  $\geq$  130 mmHg
  - c. Symptoms of organ compromise (CHF, pulmonary edema, chest pain, changes in mental status, and etc.)

### EMT - Basic

3. Consider the most likely cause:
  - a. If CHF or cardiac origin, follow the Congestive Heart Failure protocol

### EMT - Intermediate

4. Consider IV access with saline lock, do not infuse fluid unless directed by medical control

### EMT - Paramedic

5. Consider the most likely cause:
  - a. If CHF or cardiac origin, follow the Congestive Heart Failure protocol
  - b. If head trauma, follow Trauma: Head Injury protocol
  - c. If stroke or encephalopathy AND hypertensive crisis (systolic BP  $\geq$  220 mmHg or diastolic BP  $\geq$  130 mmHg, and symptoms of organ compromise) consider:
    - i. **Labetolol 10 mg IV/IO** slowly over two minutes, may repeat once after 10 min.
      1. Discontinue if heart rate  $<$  60
      2. Contraindicated in a 2<sup>nd</sup> degree AV Type II heart block or patients with cocaine related chest pain/MI
      3. Use with caution with patients in CHF
      4. Contraindicated in the presence of cocaine use
    - ii. SLOWLY decrease BP by 25% over 30-60 minutes
      - i. iii. Target to obtain BP below 190 mmHg systolic and 110 mmHg diastolic

# ALS BLS Protocol

## Hyperthermia Environmental Heat Exhaustion & Stroke

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### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal/advanced airway as needed
3. Move patient to a cool environment
4. Perform a detailed patient assessment and review of medical history
5. If the patient is alert and can follow commands to take oral fluid without airway compromise give oral fluids such as **Gatorade or water**
6. If shock is present, see Hypotension & Shock protocol
7. Anticipate potential for seizure activity
8. Assess and document GCS

### EMT - Basic

9. Apply Oxygen using the appropriate rate/device based on patient condition
10. **Assess temperature** and if temperature is greater than 104° Fahrenheit
  - a. Implement **rapid cooling measures** (fan patient, apply moist towels, apply ice, etc.)
  - b. Guard against shivering

### EMT - Intermediate

11. If the patient is not alert and/or if temperature is greater than 104° Fahrenheit, establish IV access NS TKO

### EMT - Paramedic

12. Follow above treatments

# ALS BLS Protocol

## Hypoglycemia

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal airway as needed
3. Watch for signs of hypothermia

### EMT - Basic

6. Apply Oxygen using the appropriate rate/device based on patient condition
7. Assess **blood glucose**, if  $\leq 60$  mg/dl consider
  - a. **Oral Glucose 15 grams** or sweetened juice if patient is responsive and can follow commands to take oral medication without airway compromise, may repeat as needed to maintain adequate blood glucose
8. Recheck blood glucose in 5 minutes following treatment, if glucose remains  $\leq 80$  mg/dl contact medical control

### EMT - Intermediate

9. Consider **IV D5W**.  
If **blood glucose**, if  $\leq 60$  mg/dl consider
  - a. **Oral Glucose 15 grams** or sweetened juice if patient is responsive and can follow commands to take oral medication without airway compromise, may repeat as needed to maintain adequate blood glucose
  - b. Adult: **Dextrose 50% 12.5 - 25 grams IV/IO slowly**  
Child: **Dextrose 0.25-0.5 50% grams/kg IV/IO slowly**
  - c. Infant: **Dextrose 0.25-0.5 25% grams/kg IV/IO slowly**
  - d. Neonate: **Dextrose 0.25-0.5 12.5% grams/kg IV/IO slowly**
  - e. Recheck blood glucose in 5 minutes following treatment, if glucose remains  $\leq 60$  mg/dl repeat Dextrose and reassess blood glucose 5 minutes after administration

### EMT - Paramedic

10. **Glucagon 1 mg IM** if unable to rapidly establish IV access

# ALS BLS Protocol

## Hypotension & Shock

EMS OF LEFLORE COUNTY  
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### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Keep patient warm if cold, cool if warm

#### Signs of Shock

- Pulse > 120 (adult)
- Systolic BP < 90 mmHg (adult)
- Skin moist/cool & delayed capillary refill
- Confusion, restlessness, thirst, syncope

### EMT - Basic

3. Apply **Oxygen** using the appropriate rate/device based on patient condition
4. If Hypovolemic Shock is suspected
  - a. Control any external bleeding, see Trauma Protocol as needed
  - b. Elevate Legs
5. If Cardiogenic Shock is suspected, see Pulmonary Edema / Congestive Heart Failure Protocol

### EMT - Intermediate

6. If Hypovolemic Shock is suspected with systolic BP  $\leq$  90 mmHg
  - a. Establish large-bore IV NS bilaterally
  - b. ☎ Contact medical control to determine rate and volume of IV fluid ☎
7. If Septic Shock is suspected (HR > 90, fever > 100.4° Fahrenheit, respirations > 20)
  - a. Establish large-bore IV NS bilaterally
  - b. ☎ Contact medical control to determine rate and volume of IV fluid ☎
8. When Hypovolemic and Septic Shock are suspected, administer NS fluid boluses:  
Adult: Administer up to 2L NS if no contraindications present  
Pediatric: 20 cc/kg NS, may repeat for a total of 3 boluses  
Infant: 10 cc/kg NS, may repeat for a total of 3 boluses

### EMT - Paramedic

9. **Dopamine 2-10 mcg/kg/min IV/IO** titrated to maintain adequate perfusion  
**OR**
10. Consider **epinephrine 2-10 mcg/min IV/IO** titrated to maintain adequate perfusion  
Mix 1 mg epinephrine 1:1,000 (1 ml) in 500 ml's D5W (2 mcg/ml concentration), set drip at 60 ml/hr to start at 2 mcg/min

☎ = Contact Medical Control

# ALS BLS Protocol

## Hypothermia Environmental

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EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal/advanced airway as needed
3. Passive rewarming (remove wet clothing, move to warm environment, etc.)
4. Prevent head loss/wind exposure
5. Maintain a horizontal patient position
6. Avoid rough patient movement
7. Consider assessing the patient's blood glucose in diabetic patients and in moderate to severe cases of hypothermia
8. If no pulse, follow BLS CPR & AED protocol

### EMT - Basic

9. Apply Oxygen using the appropriate rate/device based on patient condition
10. Monitor temperature
  - a. 34-36° Celsius (93.2-96.8° Fahrenheit) – Mild hypothermia
    - i. Passive rewarming
    - ii. Active external rewarming (electrical/chemical warming devices, heat packs, etc.)
  - b. 30-34° Celsius (86-93.2° Fahrenheit) – Moderate hypothermia
    - i. Passive rewarming
    - ii. Active external rewarming (electrical/chemical warming devices, heat packs, etc.) of truncal areas only (do not warm extremities or limbs)
  - c. < 30° Celsius (86° Fahrenheit) – Severe hypothermia
    - i. Request ALS backup
    - ii. Passive rewarming
    - iii. Cautious active external rewarming (electrical/chemical warming devices, heat packs, etc.) of truncal areas only (do not warm extremities or limbs)
11. Consider monitoring cardiac rhythm
12. Notify receiving hospital ASAP in cases of moderate to severe hypothermia

### EMT - Intermediate

13. Consider warm IV access NS TKO in moderate and severe cases of hypothermia

### EMT - Paramedic

14. Follow above treatments

### EMT - Paramedic

#### Inclusion Criteria:

1. Patient has a ROSC post cardiac arrest and is in a perfusing rhythm within 50 min of initial arrest.
2. Etiology of cardiac arrest was not related to trauma.
3. Patient has no speech, no eye opening, or purposeful movement to painful stimuli.
4. Systolic BP >90. (with or without the use of pressors)
5. Advanced airway in place and the patients is being mechanically ventilated.
6. Initial temperature >95f.
7. ETCO2 >20.
8. Patient age  $\geq$  18 years.
9. CBG is between 70-200.
10. Patient is not known to be pregnant.
11. No indication of a reversible cause for coma (overdose, stroke, hypoglycemia)
12. No known history of bleeding or clotting disorders.
13. No known intracranial event.
14. No major surgery within 72 hours.
15. No DNR.
16. Receiving hospital must be able to continue Hypothermia treatment.

**If the patient meets ALL of the inclusion criteria continue with the protocol.**

**☎If not, contact medical control. ☎**

#### Procedure:

1. Manage any life threatening problems first. (CAB's)
2. Insure that the patient meets all inclusion criteria.
3. Obtain a baseline temperature.
4. Expose the patient.
5. Draw rainbow of blood tubes for lab testing
6. Apply ice packs to the axilla, groin, neck, and head.
7. Start cold NS (4° Celsius (39° Fahrenheit) bolus of 30ml/kg over 30-60min through peripheral IV or IO.
8. Record temperatures q 15 min. If temperature falls bellow 91f, discontinue cooling. If temperature is above 91f, continue cooling measures to target temperature of 33° Celsius (92° F).
9. If patient begins to shiver consider **Etomidate 20mg IV/IO**. If patient continues to shiver consider **Vecuronium 0.15mg/kg IV/IO**, then refer to the continued sedation protocol.
10. Record VS, ETCO2, temp., and rhythm q 15 min.
11. Perform EKG with right and posterior views q 15 min.
12. If patient's systolic BP becomes less than 90 refer to hypotension protocol.
13. **CALL HOSPITAL ASAP.**

# ALS BLS Protocol

## Overdose and Poisoning

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. **Confirm scene safety prior to EMS entry**
2. Follow Universal Patient Care Protocol
3. Maintain airway - consider assisting ventilations and/or using oral/nasal/advanced airway as needed
4. If safely possible, bring the source of poisoning with the patient to the receiving hospital
5. If internal overdose/poisoning determine what was ingested, at what time, what amount, and past history
6. If external poisoning remove contaminated clothing, brush away excess substances, and flush contaminated skin and eyes with copious amounts of water/normal saline if indicated – **DO NOT** flush phosphorus, sodium metal, phenol, or acids
7. Assess level of consciousness/GCS, if decreased LOC follow Altered Mental Status protocol
8. Assess pupillary response
  - a. Constricted/pinpoint – narcotics, opiates, phenothiazines, cholinergics
  - b. Dilated – tricyclics, anticholinergics, cocaine
9. Monitor airway closely and prepare for seizure, decreased LOC, confusion, vomiting, and/or cardiovascular collapse
10. If hypotension is present (systolic BP  $\leq$  90 mmHg) see Hypotension/Shock protocol

### EMT – Basic

11. Apply **Oxygen** using the appropriate rate/device based on patient condition
12. If suspected **carbon monoxide** poisoning immediately remove from environment and apply **high flow oxygen** via non-rebreather mask
  - a. Signs/Symptoms – headache, dyspnea, fatigue, nausea, vomiting, confusion, ataxia, seizure, syncope, respiratory arrest, incontinence, irritability
  - b. Pulse oximetry cannot distinguish oxygen from carbon monoxide, DO NOT rely on pulse oximetry
13. If suspected **cyanide** poisoning immediately remove from environment and apply **high flow oxygen** via non-rebreather mask
  - a. DO NOT rely on pulse oximetry, blood may be oxygen enriched, but cells cannot receive the oxygen
  - b. Prepare for seizure, nausea/vomiting, respiratory depression, and cardiac arrest
  - c. **Notify receiving facility of possible cyanide overdose**
14. If suspected **organophosphate** poisoning immediately remove from environment, **decontaminate**, and apply **high flow oxygen** via non-rebreather mask
  - a. Common organophosphates are insecticides/fertilizers
  - b. Observe for SLUDGE: salivation, lacrimation, urination, defecation, gastrointestinal distress, and emesis
  - c. Signs/Symptoms: SLUDGE, headache, muscle cramping, weakness, seizure, coma, paralysis, cardio respiratory failure
15. Consider applying cardiac monitor if abnormal pulse

### EMT - Intermediate

16. Establish IV NS TKO,

# ALS BLS Protocol

## Overdose and Poisoning

EMS OF LEFLORE COUNTY  
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### EMT - Paramedic

17. If suspected **narcotics** overdose consider **Narcan** slow push to desired effect, if patient LOC increases post Narcan may repeat Narcan up to 2 mg IV/IO increments every 10 minutes as needed to maintain effective respirations
- Perform/Confirm All Above Interventions  
Above ☎ Are Standing Orders
- a. Patient  $\geq$  20 kg: **Narcan** up to **0.2 to 0.4 mg IV/IO/IN/IM**, may be repeated every 5 minutes to a total of 10 mg
  - b. Patient  $\leq$  20 kg: **Narcan** up to **0.1 mg/kg IV/IO/IN/IM**
18. In the presence of **carbon monoxide** poisoning:
- a. Ventilations via BVM with use of PEEP may be beneficial
  - b. Consider the use of CPAP at 5 cmH<sub>2</sub>O in patients who are acutely symptomatic with significant exposure, but able to maintain effective ventilations
  - c. ☎ If suspected **organophosphate** poisoning contact medical control for **atropine IV/IO** administration. Large doses may be required, if unable to reach medical control quickly give **atropine 1-2 mg IV/IO slowly** (adult)
19. If suspected **beta blocker** overdose consider:
- a. Adult: **Glucagon 1-2 mg IV/IO**  
Pediatric: **Glucagon 0.05 to 0.1 mg/kg IV/IO**
  - b. For symptomatic bradycardia see ACLS/PALS Bradycardia protocol
20. If suspected **calcium channel** blocker overdose consider
- a. **Glucagon 1-2 mg IV/IO**
  - b. ☎ **Calcium Chloride 10 mg/kg IV/IO** ☎
21. If suspected **tricyclic antidepressant** overdose consider the following:
- a. Signs/Symptoms – wide QRS, tachycardia, ventricular arrhythmias, decreased LOC, seizures, cardiovascular collapse
  - b. ☎ Consider **Sodium Bicarbonate 50 mEq in 1L NS** and infuse at 150-200 ml/hr IV ☎

### EMT - Paramedic

1. Follow Universal Patient Care Protocol
2. Apply Oxygen using the appropriate rate/device based on patient condition
3. Establish IV access
4. Observe indications for standing pre-radio order (☎ if criteria not met contact medical control ☎)
  - a. Musculoskeletal injury with bony deformity or near/complete amputation
  - b. Burns without any respiratory involvement
  - c. Abdominal pain
5. Observe contraindications for standing pre-radio order (☎ if criteria not met contact medical control ☎)
  - a. Patient age < 12
  - b. If pregnant, greater than 20 weeks gestation
  - c. Altered mental status
  - d. Currently under the influence of illicit drugs or alcohol
  - e. History of allergy to the desired analgesic
  - f. Signs of symptoms of circulatory shock
  - g. Systolic BP < 100 mmHg
  - h. Head trauma or multisystem trauma
6. If spinal precautions have been initiated administer **ondansetron (Zofran) 4 mg IV/IO** prior to administering analgesia
7. Consider **Fentanyl**
  - a. Adult: **Fentanyl 25-50 mcg IV/IO/IN/IM**, may repeat up to 100 mcg
  - b. Age ≤ 12: **Fentanyl 2 mcg/kg IV/IO/IN/IM**
8. Consider **Morphine** as an alternative to Fentanyl if transport greater than 45 min.
  - a. **Morphine in 2-4 mg increments slowly IV/IO/IM**
  - b. May repeat every 4-5 minutes until desired pain relief or unacceptable side effects occur
  - c. May administer up to 10 mg prior to contact with medical control
  - d. Pediatric: **Morphine 0.1-0.2 mg/kg IV/IM/IO** titrated as needed for pain
9. Monitor/treat any adverse side effects
  - a. If hypotension occurs administer a normal saline bolus 20 cc/kg IV/IO
  - b. If respiratory depression with SpO<sub>2</sub> < 92% consider **Narcan up to 2 mg IV/IO/IN/IM** slowly and titrate to maintain adequate respirations
  - c. If the patient's LOC decreases, discontinue the use of analgesics
10. If the patient becomes nauseated consider **ondansetron (Zofran) 4 mg IV/IO**
11. May also consider the following for severe musculoskeletal injuries with anxiety
  - a. **Ativan 0.25-0.5 mg IV up to 2 mg IV.**
12. If pain level not responding to Morphine/Fentanyl consider **Dilaudid 0.5-1 mg IV/IO**

# ALS

## Protocol

### PALS Asystole & Pulseless Electrical Activity (PEA)

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EMS Medical Control Authority

#### EMT - Intermediate

1. Start BLS CPR & AED Protocol
2. Maintain airway - provide ventilations using oral/nasal/advanced airway as needed
3. Start CPR immediately
4. Attach monitor/defibrillator when available
5. Establish IV/IO access and begin pharmacological treatments

#### EMT - Paramedic

6. Consider possible causes and treatments (H's and T's)
7. Give When IV/IO available, give **epinephrine 0.01 mg/kg (1:10,000: 0.1 ml/kg) IV/IO** repeat every 3-5 minutes during CPR
8. Continue CPR for 2 minutes, then perform rhythm check – If organized rhythm check for pulse for no longer than 10 seconds
9. If VF / VT or perfusing rhythm follow appropriate algorithm, otherwise continue above treatments
10. Consider advanced airway placement - do not delay transport or interfere with CPR or medication administration
11. **Contact medical** control to consider termination of efforts

### EMT - Intermediate

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal/advanced airway as needed
3. Apply **Oxygen** using the appropriate rate/device based on patient condition
4. Attach monitor/defibrillator when available
5. Establish IV/IO access and begin pharmacological treatments
6. Perform **12-lead EKG** when appropriate
7. Consider H's and T's
8. Proceed to follow this protocol if bradycardia remains unresolved after airway management and the patient's heart rate is less than 60 bpm AND signs of poor perfusion/cardiorespiratory compromise (hypotension, respiratory distress, altered level of consciousness)
  - If adequate pulse/perfusion observe/monitor
9. **Start CPR**

### EMT - Paramedic

10. Consider **epinephrine 0.01 mg/kg (1:10,000: 0.1 ml/kg) IV/IO**, repeat every 3-5 minutes as needed
11. If increased vagal tone is suspected to have caused the bradycardia or primary AV block (1<sup>st</sup> degree AV or 2<sup>nd</sup> degree AV type II), consider **atropine** prior to the use of epinephrine
  - a. **Atropine 0.02 mg/kg IV/IO**, may repeat every 3-5 minutes
  - b. Minimum dose 0.1 mg
  - c. Maximum total dose 1 mg
12. Consider transcutaneous pacing:
  - a. Age appropriate therapy pads should ideally be placed in the anterior/posterior position with the negative electrode placed to the left anterior chest between the xiphoid process and the left nipple and the positive red electrode placed on the posterior left chest between the scapula and the spine
  - b. Set the pacer **rate at 100 BPM**. The rate can be adjusted up or down based on clinical response once pacing is established.
  - c. Set the current to maximum output. Energy may then be decreased until capture is lost. Set current 5 milliamperes above the dose at which consistent capture is observed.
13. Consider **Glucagon 0.05 to 0.1 mg/kg IV/IO** for suspected beta blocker overdoses.
14. If pacing is successful and will be continued on a conscious patient consider sedation with Ativan and Versed
  - a. ☎ **Fentanyl 1-2 mcg/kg IV/IO/IN/IM** every 5 minutes PRN to maximum of 100 mcg ☎
  - b. ☎ **Versed 50 mcg/kg IV/IO/IN/IM** every 5 minutes PRN to maximum of 0.6 mg/kg ☎

### EMT - Intermediate

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal/advanced airway as needed
3. Apply **Oxygen** using the appropriate rate/device based on patient condition
4. Attach monitor/defibrillator when available
5. Prepare for intubation
6. Establish **IV/IO** access and begin pharmacological treatments
7. Perform **12-lead EKG** when appropriate

### EMT - Paramedic

8. If the patient becomes unstable (IE: acute altered mental status, ongoing chest pain, hypotension ( $\leq 80$  mmHg systolic), or other signs of shock) at any point proceed immediately to Cardioversion Protocol
9. If cardiac rhythm is narrow ( $< 0.08$  seconds) and regular – Suspected sinus tachycardia
  - a. Infant rate usually  $< 220$ /min  
Child rate usually  $< 180$ /min
  - b. Search for and treat potential underlying cases (Consider H's and T's)
10. If cardiac rhythm is narrow ( $< 0.08$  seconds) and regular – Suspected SVT
  - a. Infant rate usually  $\geq 220$ /min  
Child rate usually  $\geq 180$ /min
  - b. Attempt vagal maneuvers
  - c. ☎ Give **adenosine 0.1 mg/kg IV/IO** (maximum first dose 6 mg) rapid push with 10 cc NS flush ☎
  - d. If no rhythm conversion
    - i. ☎ Give **adenosine 0.2 mg/kg IV/IO** (maximum first dose 12 mg) rapid push with 10 cc NS flush, may **repeat second dosage once** ☎
    - ii. Search for and treat potential underlying cases (Consider H's and T's)
  - e. If rhythm conversion
    - i. Monitor and transport
    - ii. Obtain 12-lead EKG
    - iii. Treat reoccurrence with **adenosine**.
11. If cardiac rhythm is narrow ( $> 0.08$  seconds) and regular – Suspected ventricular tachycardia
  - a. If the patient is unstable, see Cardioversion protocol
  - b. Search for and treat potential underlying cases (Consider H's and T's)
  - c. ☎ Consider **amiodarone 5 mg/kg IV/IO over 20 minutes** ☎
12. ☎ Consider cardioversion if patient has a perfusing tachycardia and evidence of cardiovascular compromise ☎
  - a. Consult with medical control prior to proceeding with cardioversion of a pediatric patient with a pulse
  - b. Ensure that the age appropriate therapy pads and monitor electrodes are applied
  - c. Engage the **SYNC** button and ensure the R waves are appropriately detected and marked, it may be necessary to adjust the monitor's gain.
  - d. Energy sequence: **0.5 J/kg, 1 J/kg, 2 J/kg**
  - e. Ensure that the SYNC button remains engaged after each cardioversion
  - f. Disengage the SYNC button if the patient becomes pulseless and a defibrillation is needed.
  - g. Unsynchronized cardioversion is indicated for patient's with a pulse presenting in torsades de pointes
    - i. Energy sequence: **2 J/kg, 4 J/kg**
13. ☎ Consider premedicating/sedation the patient prior to cardioversion if not deteriorating rapidly ☎
  - a. ☎ **Fentanyl 1-2 mcg/kg IV/IO/IN/IM** ☎
  - b. ☎ **Versed 50 mcg/kg IV/IO/IN/IM** ☎



# ALS BLS Protocol

## Psychiatric & Behavioral Emergencies Physical & Chemical Restraint

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. **Confirm scene safety prior to EMS entry**
2. Do not let the patient come between you and the exit
3. Carefully remove any dangerous objects
4. Follow Universal Patient Care Protocol
5. Remain calm and attempt **verbal de-escalation** (if possible) prior to using physical restraint
6. If it is necessary and can be performed safely **physically restrain** the patient
  - a. Place in lateral recumbent position or supine (preferably on a long board to facilitate airway management) – closely monitor respiratory effort and airway
  - b. Only soft-style restraints are permitted, hard restraints (leathers, handcuffs, etc.) are not permitted
  - c. Handcuffs are only allowed if an officer will ride with the patient, otherwise ask the officer to assist you in removing the handcuffs and applying the soft restraints
  - d. DO NOT place patient in the prone position for any length of time
  - e. Continuously evaluate for signs of positional airway compromise
  - f. Assess/Document CMS distal to restraints before and after application as well as every 15 minutes
7. Obtain history and search (if/when possible) for potential causes of change in behavior - hypoglycemia, hypoxia, hypotension, head injury, anticholinergic poisoning, stroke, illicit drugs, alcohol use, and alcohol withdrawal
8. If the patient feels warm to the touch implement mild cooling methods
9. If the patient is suicidal alert law enforcement and do not leave the patient alone at any time – document any suicide related comments the patient makes

### EMT - Basic

10. Follow above treatments Perform/Confirm All Above Interventions

### EMT - Intermediate

11. Consider IV NS TKO Perform/Confirm All Above Interventions

### EMT - Paramedic

12. If all attempts were made to verbally de-escalate the behavior and physical restraints were attempted and the patient remains a threat to self/others consider chemical restraint: Perform/Confirm All Above Interventions  
Above ☎ Are Standing Orders
- a. **Ativan 1 mg IV OR Versed 5 mg IM/IN OR Versed 2.5 mg IV**, may repeat once as needed
  - b. For patients > 50 kg consider **Haldol 2-5 mg IM**
    - i. Contraindicated in known pregnancy  
Use with caution in patients with a seizure or dystonia history or suspicion of cocaine use (hypotension)
    - ii. If dystonic reaction occurs, consider **Benadryl 25-50 mg IV/IM**
    - iii. ☎ If no improvement additional Haldol may be requested 10 minutes after first dose ☎

# ALS BLS Protocol


## Refusal of Care

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Assess mental status, history of illness, mechanism of injury
3. If at any time the patient consents to treatment and transfer proceed to follow the appropriate protocol
4. Determine if the patient is alert: conscious and oriented to person, place, and time
5. If the **patient is not alert** (GCS of 15), complete a detailed patient assessment, **transport is indicated**

### EMT - Basic

6.  If the **patient refuses care and is alert** complete a patient care report and have the patient sign the refusal documentation.
  - a. Inform the patient and/or responsible parties of the potential consequences of their decision to refuse treatment and/or transport and
  - b. Ensure that the patient understands these consequences
  - c. If medical control is contacted and determines that the patient needs to be further assessed at the ED relay this information to the patient and along with the reason the physician would like to further evaluate the patient - If the patient continues to refuse treatment/transport the release is **against medical advice**
  - d. Relay to the patient that the release applies to this incident only and that EMS should be requested again if necessary or desired
  - e. Have the patient sign release documentation in the presence of a witness
    - i. Ideally the witness should not be affiliated with EMS and should sign the release documentation stating that they acted as a witness
    - ii. If the patient refuses to sign release documentation, document the refusal to sign and obtain 2 witness signatures if possible
  - f. When possible, leave the patient in the care of family, friend, caregiver, or legal guardian

### EMT - Intermediate

7. Follow above treatments

### EMT - Paramedic

8. Follow above treatments

# ALS BLS Protocol

## Respiratory Distress

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal airway as needed

### EMT - Basic

3. Apply **Oxygen** using the appropriate rate/device based on patient condition
  - a. If lung sounds are clear and equal, monitor and transport
  - b. If lung sounds are clear and unilateral, consider possibility of pneumothorax, see Chest Trauma protocol
  - c. If lung sounds are decreased or wheezes, consider **Albuterol 2.5 mg** via nebulizer
    - i. May contact medical control and request second **Albuterol 2.5 mg** if no or little improvement
    - ii. Consider use of epinephrine for patients in severe distress:
      1. ☎ **Epi-Pen Adult** 0.3 mg administered IM in the lateral thigh in a patient weighing over 30 kg or 66 lbs ☎
      2. ☎ **Epi-Pen JR** 0.15 mg administered IM in the lateral thigh in a patient weighing less than 30 kg or 66 lbs ☎
  - d. If lung sounds have rales/crackles and are unilateral, consider possibility of pneumonia
    1. Does the patient have a productive cough? Fever/chills?
    2. Consider **Albuterol 2.5 mg** via nebulizer
    3. May contact medical control and request second **Albuterol 2.5 mg** if no or little improvement
  - e. If lung sounds have rales/crackles bilaterally, consider possibility of CHF, see CHF Protocol
  - f. If lung sounds have rales/crackles unilaterally, consider possibility of pneumonia
4. If systolic BP  $\leq$  90 mmHg, see Hypotension/Shock protocol and request ALS backup

### EMT - Intermediate

5. Assess lung sounds, If bilateral wheezes are present or diminished/absent lung sounds consider nebulizer treatment
  - a. Patient >12 Years: **Albuterol 2.5 mg mixed with Atrovent 0.5 mg** via nebulizer
  - b. Patient  $\leq$ 12 Years: **Albuterol 2.5 mg** via nebulizer
6. Consider the need for IV access

### EMT - Paramedic

7. Consider **Xopenex 1.25 mg** via nebulizer for heart rates greater than 110 beats per minute.
8. Consider **Magnesium Sulfate 25 mg/kg** up to 2 grams infused in 50 cc's of D5W over 20 minutes
9. If the patient is in respiratory distress with the presence rales, rhonchi, wheezes, or decreased lung sounds initiate CPAP Protocol
10. If severe difficulty breathing persists without favorable response to above treatments or compromised airway consider facilitated intubation/rapid sequence intubation

☎ = Contact Medical Control

### EMT - Paramedic

1. Follow Universal Patient Care Protocol
2. Maintain airway - assisting ventilations using an oral/nasal airway as needed
3. If unable to manually ventilate patient using a BVM **DO NOT RSI** if patient has adequate oxygenation
4. Observe indications
  - a. Impending respiratory failure due to intrinsic pulmonary disease such as chronic obstructive pulmonary disease (COPD), congestive heart failure (CHF), asthma or pneumonia
  - b. Acute airway disorder that threatens airway patency such as facial burns, laryngeal or upper airway trauma and epiglottitis
  - c. Altered mental status with significant risk of vomiting and aspiration as in head trauma with a GCS of less than or equal to 8 and compromised and unprotected airway
5. Perform an airway assessment to determine if the patient may be a difficulty intubation
6. Perform 12-lead EKG when appropriate, evaluate for hyperacute "peaked" T waves indicating hyperkalemia
7. **Pre-oxygenate** patient with 100% oxygen, do not hyperventilate as this causes gastric distention
8. Establish IV/IO access NS TKO
9. Monitor heart rate and SpO2 during procedure
10. If patient is bradycardic consider **Atropine 0.5 mg IV/IO**
11. If the patient is has suffered a traumatic injury and/or increased intracranial pressure/bleed is suspected consider **Lidocaine 1-1.5 mg/kg IV/IO** preferably at least 3 minutes prior to intubation
12. Consider sedation with **Etomidate 0.3 mg/kg IV/IO**
13. Consider the paralytic **Succinylcholine 1.5 mg/kg IV/IO**
  - a. Do not administer Succinylcholine if patient or family history of Malignant Hyperthermia is noted
  - b. Caution if suspected rhabdomyolysis or hyperkalemia
  - c. Caution if penetrating eye injuries
  - d. Caution in severe burns or crush injuries that are more than 24 hours old
  - e. Use with caution if history of renal insufficiency/failure
14. Continue to manually ventilate the patient via BVM until the patient becomes flaccid
15. Consider using backward, upward, right (BURP) cricoid pressure
16. Intubate, see Intubation protocol
17. **Confirm** ET tube placement with:
  - a. Auscultate lung sounds and epigastrium
  - b. Assess for color change with colorimetric ETCO2 device
  - c. SpO2 & digital ETCO2 capnography and waveform
18. If ET tube placement cannot be established/definitively confirmed within **60 seconds** after the onset of adequate sedation place a **Rescue airway**.
19. If rescue airway placement cannot be established/definitively confirmed and the patient can be manually ventilated via BVM, place and oral or nasal airway (when appropriate) and continue to manually ventilate the patient
20. If the patient can no longer be ventilated manually via BVM and advanced airway placement is unsuccessful consider an emergency cricothyrotomy, see Cricothyrotomy protocol
21. Refer to the Continued Sedation protocol if intubation is successful to provide long-term sedation and paralysis
22. Reassess tube placement frequently
23. Keep patient warm
24. Upon arrival at the receiving hospital have the ED physician immediately confirm the ET tube placement via auscultation and review of the ETCO2 capnography and waveform prior to transferring the patient from the ambulance cot to the ED bed – **request physician to sign ePCR, at the appropriate time, attesting that ET tube placement was confirmed upon ED arrival.**

### EMT - Paramedic

1. Follow Universal Patient Care Protocol
2. Maintain airway - assisting ventilations using an oral/nasal airway as needed
3. If unable to manually ventilate patient using a BVM **DO NOT RSI** if patient has adequate oxygenation
4. Observe indications
  - a. Impending respiratory failure due to intrinsic pulmonary disease such as chronic obstructive pulmonary disease (COPD), congestive heart failure (CHF), asthma or pneumonia
  - b. Acute airway disorder that threatens airway patency such as facial burns, laryngeal or upper airway trauma and epiglottitis
  - c. Altered mental status with significant risk of vomiting and aspiration as in head trauma with a GCS of less than or equal to 8 and compromised and unprotected airway
5. Perform an airway assessment to determine if the patient may be a difficulty intubation
6. Perform 12-lead EKG when appropriate, evaluate for hyperacute peaked T waves indicating hyperkalemia
7. **Pre-oxygenate** patient with 100% oxygen, do not hyperventilate as this causes gastric distention
8. Establish IV/IO access NS TKO
9. Monitor heart rate and SpO<sub>2</sub> during procedure
10. Consider **Atropine 0.02 mg/kg IV/IO**
  - a. Minimum dose: 0.1 mg
  - b. Maximum dose: 0.5 mg (Child)
  - c. Maximum dose: 1 mg (Adolescent)
11. If the patient is has suffered a traumatic injury and/or increased intracranial pressure/bleed is suspected consider **Lidocaine 1-2 mg/kg IV/IO** preferably at least 3 minutes prior to intubation
12. Consider defasciculation dose of **Vecuronium 0.01 mg/kg IV/IO**
13. Consider sedation with **Versed 0.05 mg/kg IV/IO**
14. Consider the paralytic **Succinylcholine 2 mg/kg IV/IO**
  - a. Do not administer Succinylcholine if patient or family history of Malignant Hyperthermia is noted
  - b. Contraindicated is suspected rhabdomyolysis or hyperkalemia
  - c. Contraindicated in penetrating eye injuries
  - d. Contraindicated in severe burns or crush injuries that are more than 24 hours old
15. Continue to manually ventilate the patient via BVM until the patient becomes flaccid
16. Consider using backward, upward, right (BURP) cricoid pressure
17. Intubate, see Intubation protocol
18. **Confirm** ET tube placement with:
  - a. Auscultate lung sounds and epigastrium
  - b. Assess for color change with colorimetric ETCO<sub>2</sub> device
  - c. SpO<sub>2</sub> & digital ETCO<sub>2</sub> capnography and waveform.
19. If ET tube placement cannot be established/definitively confirmed within **60 seconds** after the onset of adequate sedation place a **Rescue airway**.
20. If rescue airway placement cannot be established/definitively confirmed and the patient can be manually ventilated via BVM, place and oral or nasal airway (when appropriate) and continue to manually ventilate the patient
21. If the patient can no longer be ventilated manually via BVM and advanced airway placement is unsuccessful consider an emergency cricothyrotomy, see Cricothyrotomy protocol
22. Refer to the Continued Sedation protocol if intubation is successful to provide long-term sedation and paralysis
23. Reassess tube placement frequently
24. Keep patient warm
25. Upon arrival at the receiving hospital have the ED physician immediately confirm the ET tube placement via auscultation and review of the ETCO<sub>2</sub> capnography and waveform prior to transferring the patient from the ambulance cot to the ED bed – **request physician to sign ePCR, at the appropriate time, attesting that ET tube placement was confirmed upon ED arrival**

# ALS BLS Protocol

## Seizure

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal/advanced airway as needed
3. Protect the patient from injury before and after the seizure, do not restrain or place anything in the mouth during seizure
4. Consider nasal airway if patient is seizing
5. Implement C-spine precautions as needed
6. Place patient in the lateral recumbent position post seizure if trauma is absent
7. Note history of seizures, motor activity during the seizure, duration of seizure, and duration of post ictal phase
8. May assist patient in using Vagus Nerve Stimulator once every 3-5 minutes, up to 3 times

### EMT - Basic

9. Apply Oxygen using the appropriate rate/device based on patient condition
10. Assess **blood glucose**, if  $\leq 60$  mg/dl consider
  - a. **Oral Glucose 15 grams** if patient is responsive and can follow commands to take oral medication without airway compromise after a seizure episode, may repeat as needed to maintain adequate blood glucose  
Recheck blood glucose in 5 minutes following treatment, if glucose remains  $\leq 80$  mg/dl contact medical control

### EMT - Intermediate

11. Establish **IV NS TKO**  
Contact medical control to determine rate and volume of IV fluid
12. If **blood glucose**, if  $\leq 60$  mg/dl consider
  - a. **Oral Glucose 15 grams** if patient is responsive and can follow commands to take oral medication without airway compromise, may repeat as needed to maintain adequate blood glucose
  - b. Adult: **Dextrose 50% 12.5 - 25 grams IV/IO**  
Child: **Dextrose 0.25-0.5 50% grams/kg IV/IO**
  - c. Infant: **Dextrose 0.25-0.5 25% grams/kg IV/IO**
  - d. Neonate: **Dextrose 0.25-0.5 12.5% grams/kg IV/IO**
  - e. Recheck blood glucose in 5 minutes following treatment, if glucose remains  $\leq 60$  mg/dl repeat Dextrose and reassess blood glucose 5 minutes after administration

### EMT - Paramedic

13. **Glucagon 1 mg IM** if unable to gain IV access.
14. If pregnant and in third trimester ( $\geq 24$  weeks), suspect Eclampsia, see Pre-Eclampsia & Eclampsia protocol
15. If seizure is in progress, patient reports aura, or patient is unresponsive and petite mal seizure is suspected administer Ativan:  
Adult  $> 25$  kg: **Ativan 1-2 mg IV/IO/PR**, may repeat dosage once  
Pediatric  $< 25$  kg: **Ativan 0.1 mg/kg IV/IO/PR**, may repeat dosage once
16. If pediatric patient with elevated temperature, administer **Tylenol 10 mg/kg PR**, loosen clothing
17. Consider Valium in place of Ativan:  
Adult  $> 25$  kg: **Valium 5 mg IV, repeat as needed.**  
Pediatric  $< 25$  kg: **Valium 0.25 mg/kg IV/IO**, may repeat dosage once
18. Consider **Versed 2-5 mg IN** if unable to gain IV access.

# ALS BLS Protocol

## Selective Spinal Immobilization

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol

### EMT - Basic

2. Follow Universal Patient Care Protocol

### EMT - Intermediate

3. Follow above treatments

### EMT - Paramedic

Perform/Confirm All Above Interventions

4. Patients who had suffered trauma where spinal injury is a consideration should be immobilized with C-collar, long board, and CIDs using inline spinal immobilization
5. If none of the following are present selective spinal immobilization may be considered
  - a. Loss of consciousness or possible loss of consciousness
  - b. Midline neck or back pain/tenderness/stiffness/deformities upon palpation
  - c. Abnormal neurologic exam including reported numbness, tingling, or unusual sensations in the patient's extremities
  - d. Altered mental status from any cause
  - e. Any significant distracting injuries or multisystem trauma
  - f. Less than 8 years old
6. Providers should then consider the mechanism of injury and the general age and health of the patient
7. If no contraindications/exclusions exist the patient may be transported in the position of comfort without spinal immobilization using the provider's discretion
8. If any doubt exists in the opinion of the provider full spinal precautions should be implemented immediately

# ALS BLS Protocol

## Stroke Cerebral Vascular Accident (CVA)

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal/advanced airway as needed
3. Perform a detailed patient assessment and review of medical history
4. **Assess blood glucose**, if  $\leq 60$  mg/dl see Hypoglycemia Protocol
5. Perform the Cincinnati Pre-hospital Stroke Scale assessment
  - a. **Facial Droop** (Have the patient show their teeth or smile)
    - i. Normal/Negative – Both sides of the face move equally
    - ii. Abnormal/Positive – One side of the face does not move as well as the other
  - b. **Arm Drift** (have the patient close their eyes and hold their arms straight)
    - i. Normal/Negative – Both arms move the same OR both arms do not move or “drift” at all
    - ii. Abnormal/Positive – One arm does not move OR one arm drifts down compared with the other
  - c. **Speech** (have the patient say “you can’t teach an old dog new tricks”)
    - i. Normal/Negative – Patient uses the correct words with no slurring
    - ii. Abnormal/Positive – Patient slurs words, uses inappropriate words, or is unable to speak
6. Attempt to establish the exact time of onset of symptoms

### EMT - Basic

7. Apply **Oxygen** using the appropriate rate/device based on patient condition
8. Consider cardiac monitor

### EMT - Intermediate

9. Consider 2 IV access NS TKO in the unaffected side
10. Perform the Los Angeles Prehospital Stroke Screen (LAPSS). Inclusion criteria include:
  - a. Age over 45 years
  - b. No prior history of seizure disorder
  - c. New onset of neurologic symptoms in last 24 hours
  - d. Patient was ambulatory at baseline (prior to event)
  - e. Blood glucose between 60 and 400
  - f. Exam Facial smile/grimace for obvious asymmetry
  - g. Exam Grip for obvious asymmetry
  - h. Exam Arm weakness for obvious asymmetry
  - i. Patient has only unilateral weakness
11. If LAPSS criteria for stroke is met and symptom onset is less than 4 hours, call receiving hospital with “Code Stroke.”
12. If LAPSS criteria for stroke is met and symptom onset is greater than 4 hours, call receiving hospital and notify of possible stroke.
13. Complete pre-hospital screening for fibrinolytics
14. Obtain a **12-lead EKG**

### EMT - Paramedic

15. If systolic BP  $\geq 200/120$  see Hypertension protocol

 = Contact Medical Control

# ALS BLS Protocol

## Syncope

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Implement C-spine precautions as needed
3. Maintain airway - consider assisting ventilations and/or using oral/nasal/advanced airway as needed
4. If the patient remains unresponsive, see Altered Mental Status & Unresponsive protocol and consider the possibility of overdose, diabetic, heat-related disorder, etc.
5. Assess mental status and calculate GCS score
6. Assess **blood glucose**, if  $\leq 60$  mg/dl see Hypoglycemia protocol
7. Perform a detailed patient assessment and review of medical history
8. If systolic BP  $< 90$  mmHg or the patient complains of feeling "lightheaded" or dizzy place the patient in the Trendelenburg position.

### EMT - Basic

9. Apply **Oxygen** using the appropriate rate/device based on patient condition
10. Follow above treatments
11. If the patient has chest discomfort, see Chest Pain protocol
12. If the patient has a systolic BP  $< 90$  mmHg, see Hypotension/Shock protocol
13. Consider applying cardiac monitor

### EMT - Intermediate

14. If the patient remains unresponsive or the patient complains of feeling "lightheaded" or dizzy, consider IV NS TKO

### EMT - Paramedic

15. Observe for cardiac arrhythmias, follow the appropriate ACLS protocol
16. Consider obtaining 12-lead EKG
17. If the patient remains hypotensive, administer NS fluid boluses:
  - Adult: 500 cc's NS, repeat as necessary to maintain a systolic BP  $> 90$  mmHg
  - Pediatric: 20 cc/kg NS, may repeat for a total of 3 boluses
  - Infant: 10 cc/kg NS, may repeat for a total of 3 boluses

# ALS BLS Protocol

## Taser Discharge & Removal

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. **Confirm scene safety prior to EMS entry**
3. Prior to coming into physical contact with any patient that has been Tased, confirm with law enforcement that it is safe to approach and take care not to interfere with the Taser wires
4. Determine the patient's condition prior to and after the Taser discharge
5. Refer to Psychiatric & Behavioral Emergencies protocol as needed
6. Providers may remove Taser probes that are not embedded in the face, neck or groin
  - a. Place one hand on the patient in the area where the probe is embedded and stabilize the skin surrounding the puncture site
  - b. Place other hand firmly around the probe
  - c. In one quick motion pull the probe straight out from the puncture site
  - d. Repeat procedure with second probe
  - e. Removed probes should be handled and disposed of in a designated sharps container

### EMT - Basic

7. Follow above treatments

### EMT - Intermediate

8. Follow above treatments

### EMT - Paramedic

9. Follow above treatments

# ALS BLS Protocol

## Trauma: Abdominal

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal/advanced airway as needed using jaw thrust
3. Protect **C-Spine** injury is suspected or as dictated by mechanism of injury
4. Monitor closely for shock, see Hypotension & Shock protocol and elevate patient legs (if possible)
5. Detailed abdominal assessment and consider underlying anatomy
6. If penetrating abdominal injury – note entrance/exit wounds and direction, injury instrument size/shape/caliber and distance from muzzle
7. If abdominal injury resulting from a MVA – note details of vehicle/scene, steering wheel, associated fatalities
8. If evisceration injury
  - a. Do not reduce or attempt to replace abdominal contents
  - b. Cover exposed tissues with a moist sterile dressing and cover with an occlusive dressing
9. Calculate Glasgow Coma Scale, see GCS protocol

### EMT - Basic

10. Apply **Oxygen** using the appropriate rate/device based on patient condition Perform/Confirm All Above Interventions
11. **Load & Go** - (On scene goal < 10 minutes) and notify receiving facility with a trauma alert (if indicated)
12. Expose the injury - if significant mechanism of injury cut/remove all clothing to allow for a complete assessment
13. Perform a complete head-to-toe trauma assessment as reassess as needed
14. Frequent vital signs
15. Keep patient warm
16. Consider applying the cardiac monitor

### EMT - Intermediate

17. Establish large-bore IV access NS TKO bilaterally to main systolic BP≥ 100 mmHg Perform/Confirm All Above Interventions

### EMT - Paramedic

18. Consider nasogastric tube placement, place tube orally if facial or head trauma is suspected Perform/Confirm All Above Interventions  
Above ☎ Are Standing Orders

# ALS BLS Protocol

## Trauma: Amputation

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal/advanced airway as needed using jaw thrust
3. Protect **C-Spine** injury is suspected or as dictated by mechanism of injury
4. Monitor closely for shock, see Hypotension & Shock protocol and elevate patient legs (if possible)
5. Frequent vital sign assessment
6. Calculate Glasgow Coma Scale, see GCS protocol
7. If active bleeding is present, control bleeding with direct pressure - If bleeding persists consider **Celox and/or a tourniquet**
8. Cover the stump with a sterile dressing moistened with normal saline, covered by a dry sterile dressing
9. Wrap the amputated part in a sterile dressing moistened with normal saline and place in a plastic bag, place the plastic bag on ice (do not freeze or soak in saline) and **transport amputated part with patient**

### EMT - Basic

10. Apply **Oxygen** using the appropriate rate/device based on patient condition
11. **Load & Go** - Transport ASAP (On scene goal < 10 minutes) and notify receiving facility with a trauma alert (if indicated)
12. Expose the injury - if significant mechanism of injury cut/remove all clothing to allow for a complete assessment
13. Perform a complete head-to-toe trauma assessment as reassess as needed
14. Frequent vital signs
15. Keep patient warm
16. Consider applying the cardiac monitor

### EMT - Intermediate

17. Establish large-bore IV access NS TKO bilaterally.
18. When Shock is suspected, administer NS fluid boluses:
  - Adult: 500 cc's NS, repeat as necessary to maintain a systolic BP > 90 mmHg
  - Pediatric: 20 cc/kg NS, may repeat for a total of 3 boluses

### EMT - Paramedic

19. If patient is in pain, consider **Morphine 2-10 mg IV/IM/IO** titrated as needed for pain
20. If patient is in pain, consider **Fentanyl 50 mg IV/IO/IN/IM**, may repeat once as needed for pain
21. ☎ May also consider **Ativan 1 mg IV or Versed 5 mg IM/IN** ☎

# ALS BLS Protocol

## Trauma: Chest

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Medical First Responder

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal airway as needed using jaw thrust
3. Protect **C-Spine** injury is suspected or as dictated by mechanism of injury
4. Monitor closely for shock, see Hypotension & Shock protocol and elevate patient legs (if possible)
5. Detailed chest assessment and consider underlying anatomy
6. If a sucking chest wound is present
  - a. Apply an **occlusive dressing secured on 4 sides**
  - b. Monitor closely for signs of a tension pneumothorax
  - c. It may be necessary to periodically "burp" the wound if signs in of tension pneumothorax are present or a change in respiratory effort is observed/reported
7. Perform detailed lung sound assessment – if absent or diminished suspect tension pneumothorax
8. If a flail chest segment is suspected, stabilize the area with gentle pressure. It may be necessary to assist ventilations with positive pressure ventilation.
9. Calculate Glasgow Coma Scale, see GCS protocol

### EMT - Basic

10. Apply **Oxygen** using the appropriate rate/device based on patient condition
11. **Load & Go** - Transport ASAP (On scene goal < 10 minutes) and notify receiving facility with a trauma alert (if indicated)
12. Expose the injury - if significant mechanism of injury cut/remove all clothing to allow for a complete assessment
13. Perform a complete head-to-toe trauma assessment as reassess as needed
14. Frequent vital signs
15. Keep patient warm
16. Consider applying the cardiac monitor

### EMT - Intermediate

17. Establish large-bore IV access NS TKO bilaterally.

### EMT - Paramedic

18. If a tension pneumothorax is suspected, perform a needle decompression of the chest, see Tension Pneumothorax Decompression Procedure  
*Bilatera Tension pneumothorax decompression is pre-radio in a patient with no pulse*
19. If severe difficulty breathing persists without favorable response to above treatments or compromised airway consider facilitated intubation/rapid sequence intubation

# ALS BLS Protocol

## Trauma: Eye Injuries

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal/advanced airway as needed using jaw thrust
3. Protect **C-Spine** injury is suspected or as dictated by mechanism of injury
4. Perform detailed eye assessment and assess GCS
5. If a small foreign body is present consider **flushing eye** gently with 500-1000 cc's of sterile normal saline
6. If an impaled object is present
  - a. Do not attempt to remove
  - b. Stabilize the object and dress the affected eye(s)
  - c. Patch the unaffected eye
  - d. Offer reassurance and discourage the patient from making any eye movement
7. If a chemical burn is present flush the affected eye(s) for 5-20 minutes with sterile normal saline
8. If blunt trauma is present, assess for blow out fracture of the orbit, hyphaema, and symptoms of retinal detachment

### EMT - Basic

9. Apply **Oxygen** using the appropriate rate/device based on patient condition
10. Transport ASAP and notify receiving facility with a trauma alert (if indicated),

### EMT - Intermediate

11. Follow above treatments

### EMT - Paramedic

12. Follow above treatments

# ALS BLS Protocol

## Trauma: Facial

EMS OF LEFLORE COUNTY  
EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal/advanced airway as needed using jaw thrust
3. Protect **C-Spine** injury is suspected or as dictated by mechanism of injury
4. Monitor closely for shock, see Hypotension & Shock protocol and elevate patient legs (if possible)
5. If external bleeding is present, control bleeding with direct pressure - If bleeding persists consider **Celox and/or a tourniquet**
6. If broken/missing teeth
  - a. Remove dislodged teeth from the mouth and collect dislodged teeth from the scene
  - b. Pick up dislodged teeth by the crown (protect the root) and place in milk (if available) or normal saline
7. If nose injury is present apply pressure and cold pack to the nose
8. If suspected fracture of the mandible
  - a. Apply Kerlex-type bandage to secure the mandible
  - b. DO NOT compromise the airway
9. If suspected fracture of the maxilla, maintain the airway and apply ice
10. Calculate Glasgow Coma Scale, see GCS protocol

### EMT - Basic

11. Apply **Oxygen** using the appropriate rate/device based on patient condition
12. **Load & Go** - Transport ASAP (On scene goal < 10 minutes) and notify receiving facility with a trauma alert (if indicated)
13. Continuously monitor the airway
14. Expose the injury - if significant mechanism of injury cut/remove all clothing to allow for a complete assessment
15. Perform a complete head-to-toe trauma assessment as reassess as needed
16. Frequent vital signs
17. Keep patient warm
18. Consider applying the cardiac monitor

### EMT - Intermediate

19. Establish large-bore IV access NS TKO bilaterally to maintain systolic BP  $\geq$  100 mmHg

### EMT - Paramedic

20. If severe difficulty breathing persists without favorable response to above treatments or compromised airway consider facilitated intubation/rapid sequence intubation

# ALS BLS Protocol

## Trauma: General Management

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EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal/advanced airway as needed using jaw thrust
3. Protect **C-Spine** injury is suspected or as dictated by mechanism of injury
4. Control bleeding with direct pressure - If bleeding persists consider **Celox and/or a tourniquet**
5. Monitor closely for shock, see Hypotension & Shock protocol and elevate patient legs (if possible)
6. Calculate Glasgow Coma Scale, see GCS protocol
7. Keep patient warm
8. Refer to specific trauma protocol

### EMT - Basic

9. Apply **Oxygen** using the appropriate rate/device based on patient condition
10. **Load & Go** - Transport ASAP (On scene goal < 10 minutes) and notify receiving facility with a trauma alert (if indicated)
11. Expose the injury - if significant mechanism of injury cut/remove all clothing to allow for a complete assessment
12. Perform a complete head-to-toe trauma assessment as reassess as needed
13. Frequent vital signs
14. Consider applying the cardiac monitor

### EMT - Intermediate

15. Establish large-bore IV access NS TKO bilaterally to maintain systolic BP  $\geq$  100 mmHg
  1. Do not delay transport to obtain IV access

### EMT - Paramedic

16. If severe respiratory distress or compromised airway consider facilitated intubation/rapid sequence intubation
17. If patient is entrapped and has had a constant crushing injury for greater than 4 hours, consider 100 **Sodium Bicarbonate 1 mEq/kg** in 1L NS ran at wide open to buffer acidosis

# ALS BLS Protocol

## Trauma: Head Injury & Traumatic Brain Injury

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### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/advanced airway as needed using jaw thrust
3. Protect **C-Spine** injury is suspected or as dictated by mechanism of injury
4. Monitor closely for shock, see Hypotension & Shock protocol (isolated head injuries rarely cause shock, assess for secondary cause)
5. Control bleeding with direct pressure - If bleeding persists consider **Celox and/or a tourniquet**
6. Calculate Glasgow Coma Scale, see GCS protocol.

### EMT - Basic

7. Apply **Oxygen** using the appropriate rate/device based on patient condition, avoid nasal airways.
8. **Load & Go** - Transport ASAP (On scene goal < 10 minutes)
  - a. Notify receiving facility with a trauma alert (if indicated),
  - b. Every head-injured patient who has had a period of unconsciousness should be evaluated at the hospital
9. Expose the injury - if significant mechanism of injury cut/remove all clothing to allow for a complete assessment
10. Perform a complete head-to-toe trauma assessment as reassess as needed
11. Frequent vital signs
12. Keep patient warm
13. Consider applying the cardiac monitor

### EMT - Intermediate

14. Establish large-bore IV access NS TKO bilaterally to maintain systolic BP  $\geq$  100 mmHg.

### EMT - Paramedic

15. Consider oral intubation if GCS less than 9
16. If hypertensive crisis (systolic BP  $\geq$  220 mmHg or Diastolic BP  $\geq$  130 mmHg, must be confirmed by 2 blood pressures, follow Hypertension protocol
17. If severe difficulty breathing persists without favorable response to above treatments or compromised airway consider facilitated intubation/rapid sequence intubation
18. **Dopamine 2-10 mcg/kg/min IV/IO** titrated to maintain adequate perfusion

# ALS BLS Protocol

## Trauma: Orthopedic

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EMS Medical Control Authority

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal/advanced airway as needed using jaw thrust
3. Protect **C-Spine** injury is suspected or as dictated by mechanism of injury
4. Control bleeding with direct pressure - If bleeding persists consider **Celox and/or a tourniquet**
5. Monitor closely for shock, see Shock protocol and elevate patient legs (if possible)
6. Calculate Glasgow Coma Scale, see GCS protocol
7. Check distal circulation, motion, and sensation (CMS) and mark the site where the pulse can be palpated
  - a. If CMS is not present may make one attempt to re-align a fracture by applying gentle axial traction
  - b. ☎ If CMS is not present and a dislocation is suspected, contact medical control ☎
  - c. ☎ If pulses are not restored with one attempt, contact medical control ☎
8. Expose and **immobilize the injury** by splinting the joint above and below the injury in the position found/position of comfort (with the exception of compromised CMS, see above)
9. If a mid-shaft femur fracture is suspected without injury of pelvis or other fractions of the distal leg/knee apply inline manual traction while preparing to apply a traction splint
10. If an open fracture is present, stabilize and dress with a dry sterile dressing
11. Reassess CMS after splinting the injury
12. Apply ice and elevate to the patient's position of comfort

### EMT - Basic

13. Apply **Oxygen** using the appropriate rate/device based on patient condition.
14. **Load & Go** - Transport ASAP (On scene goal < 10 minutes) and notify receiving facility with a trauma alert (if indicated), see Trauma Activation protocol
15. Expose the injury - if significant mechanism of injury cut/remove all clothing to allow for a complete assessment
16. Perform a complete head-to-toe trauma assessment as reassess as needed
17. Continue CMS checks distal to the suspected fracture, applying an SpO2 probe to the affected extremity can assist in monitoring the patient's CMS
18. Frequent vital signs
19. Keep patient warm
20. Consider applying the cardiac monitor

### EMT - Intermediate

21. Establish IV access NS TKO and maintain systolic BP  $\geq$  100 mmHg

### EMT - Paramedic

22. If the patient is in pain, refer to Pain Management protocol

# ALS BLS Protocol

## Trauma: Revised Trauma Score (RTS)

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### ALL LICENSED HEALTHCARE PROVIDERS

1. Follow Universal Patient Care Protocol
2. Follow the appropriate medical/trauma protocol
3. Assess and re-assess the patients RTS & GCS frequently and record each observation along with patient vital sets

Revised Trauma Score		
<b>Respiratory Rate</b>	10 – 29	4
	> 29	3
	6 – 9	2
	1 – 5	1
	NO RESPIRATIONS	0
<b>Systolic BP</b>	> 89	4
	76 – 89	3
	50 – 75	2
	1 – 49	1
	NO PULSE	0
<b>Glasgow Coma Scale</b>	13 – 15	4
	9 – 12	3
	6 – 8	2
	4 – 5	1
	3	0
Total From Each Category:		

Adult/Child Glasgow Coma Scale		
<b>Eye Opening</b>	Spontaneous	4
	To Voice	3
	To Pain	2
	None	1
<b>Best Verbal Response</b>	Oriented	5
	Confused	4
	Inappropriate Words	3
	Incomprehensible Words	2
	None	1
<b>Best Motor Response</b>	Obeys Commands	6
	Localizes Pain	5
	Withdraws From Pain	4
	Flexion (Towards Body)	3
	Extension (Away From Body)	2
	None	1
Total From Each Category:		

Infant/Toddler Glasgow Coma Scale		
<b>Eye Opening</b>	Spontaneous	4
	To Voice	3
	To Pain	2
	None	1
<b>Best Verbal Response</b>	Smiles, Interacts	5
	Consolable	4
	Cries to Pain	3
	Moans to Pain	2
	None	1
<b>Best Motor Response</b>	Normal Movement	6
	Localizes Pain	5
	Withdraws From Pain	4
	Flexion (Towards Body)	3
	Extension (Away From Body)	2
	None	1
Total From Each Category:		

# ALS BLS Protocol

## Trauma: Spinal Cord Injury Suspected

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### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. Maintain airway - consider assisting ventilations and/or using oral/nasal/advanced airway as needed using jaw thrust
3. Manual **C-spine stabilization** while placing the patient in **full spinal immobilization**
4. Perform a detailed neurologic assessment and report findings to the transporting providers
5. Observe closely for signs of shock and treat accordingly, see Hypotension & Shock protocol

### EMT - Basic

6. Repeat neurologic assessment and re-assess frequently
7. If paralysis is present, notify the receiving facility ASAP
8. Keep patient warm and provide supporting care
9. Closely monitor respiratory status

### EMT - Intermediate

10. Establish **large-bore IV** access NS TKO and maintain systolic BP  $\geq$  100 mmHg.

### EMT - Paramedic

11. **Dopamine 2-10 mcg/kg/min IV/IO** titrated to maintain adequate perfusion

# ALS BLS Protocol

## Universal Patient Care

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### ALL LICENSED HEALTHCARE PROVIDERS

1. **Confirm scene safety prior to EMS entry**
  - a. Contact law enforcement, fire, or HAZMAT as needed
  - b. Do not expose self or crew to the scene until it has been secured and is safe to enter
2. Don the appropriate body substance isolation (gloves, gown, eye protection, respiratory protection, etc.)
3. Perform a primary survey
  - a. Airway & C-spine precautions
    - i. Manually maintain airway via head tilt-chin left, jaw thrust, or jaw lift
    - ii. Consider oral/nasal/advanced airway as needed
    - iii. Oral/nasal suction as needed
    - iv. Manually maintain c-spine immobilization and transfer to a long spine board using inline spinal immobilization if indicated
  - b. Breathing
    - i. Consider assisting ventilations as needed
    - ii. Apply Oxygen using the appropriate rate/device based on patient condition (if qualified provider)
    - iii. Perform a detailed lung sound assessment (if qualified provider)
    - iv. Note respiratory rate/dept, work of breathing, skin color, capillary refill, patient position, SpO2, etc.
  - c. Circulation
    - i. Note rate and quality
    - ii. Obtain venous access (if qualified provider)
    - iii. Apply AED when required
  - d. Disability (neurologic examination)
    - i. Assess pupils and pupillary response
    - ii. Assess Glasgow Coma Scale/Revised Trauma Score
    - iii. Assess blood glucose (if qualified provider)
    - iv. Note respiratory rate and patterns
    - v. Assess CMS in all extremities
    - vi. Perform the Cincinnati Stroke Scale
    - vii. Attempt to mitigate hypothermia/hyperthermia
  - e. Expose the patient for detailed assessment
4. Perform a detailed assessment
  - a. Vital signs (pulse, respirations, blood pressure, SpO2, LOC, blood glucose (if qualified provider), and etc.)
  - b. Perform a detailed head-to-toe physical examination
  - c. Review patient's medical history, allergies, and medications
5. Monitor
  - a. ABCs
  - b. Consider applying cardiac monitor
  - c. Consider continuous SpO2 monitoring
  - d. Consider continuous waveform ETCO2 monitoring.
  - e. Consider evaluating temperature.
6. Refer to the appropriate protocol(s) based on patient assessment and history
7. Contact medical control as indicated by the specific protocol(s) or if a question or complication arises

### Emergency Medical Responder (EMR)

1. Follow Universal Patient Care Protocol
2. **If bleeding is postpartum, refer to the Childbirth protocol**
3. Apply **Oxygen** using the appropriate rate/device based on patient condition
4. If Systolic BP  $\leq$  90 mmHg, see Hypotension & Shock protocol
  - a. Request ALS Backup
  - b. Elevate the patient's legs
5. Keep the patient warm
6. Consider the possibility of pregnancy and establish when the last menstrual period was, how many times the patient has been pregnant (Gravida), and how many live births she has delivered (Para)
7. If the possibility of assault exists maintain chain of evidence, preserve clothing, and (if possible) have a female caregiver in the patient care area.
8. Preserve any tissue fragments

### EMT - Basic

9. Apply **Oxygen** using the appropriate rate/device based on patient condition

### EMT - Intermediate

10. Establish IV access NS TKO (preferably large-bore)
  - a. If bleeding is significant, consider second IV – Do not delay transport for IV access

### EMT - Paramedic

11. For severe bleeding, consider **Pitocin 20 units** in 1L NS using 60gtt set. Begin infusion at 20-30 drops/minute