NEBRASKA

EMERGENCY MEDICAL SERVICES

MODEL PROTOCOLS

SERVICE NAME

With the approval of the Physician Medical Director, the service has adopted the following protocols

________________________________________  __________________________________________
Date Approved                                      Date Reviewed

________________________________________  __________________________________________
Physician Medical Director                     Agency Head
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<td>Hypothermia</td>
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<tr>
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Introduction - II
### Acute Traumatic Emergencies

- General Trauma Management
- Trauma System
- Head/Facial Injuries
- Soft Tissue Neck Injuries
- Chest Injuries
- Abdominal/Pelvic Injuries
- Extremity Injuries
- Ingested Poisons
- Specific Agents/Toxins
- Toxic Inhalation
- Burns
- Snake Bite

### Pediatrics

- Cardiopulmonary Arrest
  - Pediatric AED
  - Pediatric Cardiac Arrest Algorithm V-Fib
  - Pediatric Cardiac Arrest Algorithm Asystole/PEA
- Pediatric Post Cardiac Arrest – Return of Pulse
- Pediatric General Cardiac Dysrhythmia
- Pediatric Advanced Cardiac Dysrhythmia
- Pediatric Difficulty Breathing
  - Asthma
  - Laryngotracheobronchitis (Croup), Epiglottitis
  - Acute Allergic Reaction / Anaphylaxis
- Pediatric Upper Airway Obstruction
- Pediatric Seizures

### Appendix

- Bronchodilator Protocol
- Pain Management Protocol
- Hospital to Hospital Transfers Protocol
- Anti-Emetic Protocol
- Rapid Sequence Intubation Protocol
Purpose: The purpose of these protocols is to assure safe and effective intervention during the out-of-hospital phase of patient care. In consideration of the unique resources, needs, population, and geography of EMS in Nebraska, individual medical directors may choose to enhance or omit portions of these protocols in accordance with current medical practice and standards. Medical directors are responsible to ensure the EMS personnel using these protocols have the training and skills required, and perform quality assurance activities to assure these protocols are used appropriately. It is the hope of the Nebraska Health and Human Services, Board of Emergency Medical Services, that these protocols will serve as a standard throughout Nebraska’s system. Ongoing review and update of these protocols is necessary to keep pace with interventions known to be effective in out-of-hospital care.

Authority: Out-of-hospital (OOH) emergency care provider personnel may only deliver emergency medical care as a member of a licensed emergency medical service. The emergency medical service must have a physician medical director who is responsible for the practice of the OOH emergency care provider personnel. All treatments and procedures performed by each OOH emergency care provider must be authorized by their service’s physician medical director.

Protocols shall be approved, signed, and dated by the individual service’s physician medical director prior to implementation.

Directions for Use:
All emergency care providers should start at the top of the page and proceed as far down the page as your level of certification and training permits.

Always conduct a scene size-up and observe body substance isolation precautions and only then perform the patient assessment and obtain the necessary information on all patients.

You may need to use more than one treatment protocol for any single patient, (known diabetic who has been in a motor vehicle crash).

The OOH emergency care provider must assess each patient and apply the correct treatment based on that assessment. All the treatment/interventions may not be required simply because the patient presents with a particular problem. Treatment must be applied based on the patient’s condition and the provider’s assessment. The provider is encouraged to contact medical control for advice if question(s) about treatment arise.
GENERAL OPERATIONS

I. Scene Size-Up:
As you approach the scene, assure safety for yourself, your fellow responders and the patient. Establish and follow an Incident Command.

II. BSI (Body Substance Isolation):
Prior to patient assessment, it is protocol policy to practice body substance isolation when caring for ALL patients. This includes washing hands after each patient care incident. Hands shall be washed even if gloves were worn or waterless soap was used. Note: This is comparable to Universal Precautions in a hospital setting.

This policy also applies to immediate disposal of needles and sharps in disposable, impervious containers. The practice of not recapping needles is highly encouraged.

III. Trauma Patients:
Once a trauma patient has been identified, follow the trauma system decision protocol for the identification of time critical injuries, the method of transport and the trauma facility resources necessary for treatment of those injuries.

IV. Use of Restraints
A. Indications:
   A patient who needs to be transported for medical care and who appears to be an imminent danger to himself.

B. Protocol:
   1. Check restraints as soon as applied and every 10 minutes thereafter to ensure no injury to extremities.
   2. Once restrained, the patient is never to be left alone.
   3. Written and verbal reports must completely document the necessity for the use of physical restraints.
   4. Record condition of limbs before applying restraints and recheck and record condition on arrival at hospital.
   5. Prevent asphyxia
      a. Do not restrain patient prone (face down)
      b. Do not restrain patient sandwiched between backboards, scoop stretchers, or other immobilization devices
      c. Check and monitor any straps across the chest. Straps should secure the patient without restricting chest expansion.
      d. Patient will not be “Hog Tied” (hands restrained behind back, feet restrained together and the two restrained attached together)
V. Transport Codes:
Category Green – Minimal or no apparent disease or injury. Patient transported for examination
Category Yellow – Obvious illness or injury, not serious but needs medical attention
Category Red – Apparent serious injury or illness needing immediate medical attention
CPR in progress
Category Black – Dead patient
Trauma Center Candidate – Should be used in conjunction with Code 3, and means the patient may be diverted directly to the trauma center that is appropriate for that area or region.

VI. Physician on Scene
When a physician is present on the scene and desires to direct the run, the EMT should:
A. Inform the physician that if the physician directs the run, the physician must accompany the patient to the hospital. This must be documented on the patient care report.

B. Inform the physician at the onset of the run that Out-of-Hospital personnel have strict legal guidelines and established protocols and they may not exceed those guidelines or protocols.

C. Inform the physician that any procedure outside the legal guidelines for that level of care must be carried out by the physician.

D. Out-of-hospital personnel have the right and obligation at any time there is gross deviation from the accepted protocol to contact the receiving hospital for further instruction. The physician on the scene should be informed that contact with the hospital is being made. If possible, it may be advisable to have the receiving hospital physician speak directly to the physician at the scene.

VII. “Do Not Resuscitate” (DNR) Orders or Requests and identification of “CPR Only”:
A DNR is a written order by a physician that a patient should not be resuscitated or have CPR performed. A DNR must be signed by a physician, dated, and have the patient’s name. An out-of-hospital emergency care provider can honor a DNR. The out-of-hospital emergency care provider must be identified in the patient care report.

Requests for Do Not Resuscitate or perform CPR:
An OOH emergency care provider can honor an effective Living Will or Health Care Power of Attorney. This applies only to adults. OOH emergency care providers can presume the validity of either of these documents if signed in Nebraska. Documents from other states in compliance with that state’s laws are also valid in Nebraska.

Observation of an original or a photocopy of a living will or health care power of attorney must be documented in the patient care report. An OOH emergency care provider shall not honor a living will if there is no information or evidence that a physician has determined the patient is in a terminal condition or in a persistent vegetative state. If there is information or evidence that a physician has determined the patient is in a terminal condition or in a persistent vegetative state, this information should be documented in the patient care report.
The patient care report must contain information that the patient is an adult (is 19 or older or has been married).

An OOH emergency care provider can refuse to honor an effective Living Will or Health Care Power of Attorney decision if the decision is contrary to a formally adopted policy of the provider that is based on religious beliefs or sincerely held ethical or moral convictions. If a service providing out-of-hospital emergency care has such a policy approved by the Physician Medical Director, individual providers with such religious beliefs or ethical or moral convictions employed by or volunteering for that service may refuse to honor an effective Living Will or Health Care Power of Attorney. To the extent reasonably possible, the community in which this organization provides out-of-hospital emergency care shall be informed of the organization’s formal policy. The appropriate person holding the Living Will or Health Care Power of Attorney, at the scene of the emergency, shall also be informed of the policy.

Discontinuing CPR:
Once CPR has been initiated, it can be discontinued when any one of the following occurs:
1) A “no code” or DNR order is confirmed
2) The patient has been transported to a health care facility and a physician at the facility determines that CPR is futile or should be stopped
3) A physician on scene or medical control for the service, based on information from members of the service on scene, determines that CPR is futile or should be stopped,
4) An out-of-hospital emergency care provider is following termination of CPR physician medical director approved protocols.

VIII. Refusal of Care
A. Adults
An adult is an individual 19 years old or older or who is or has been married (NEB REV STAT §43-2101). A competent adult can refuse medical services and/or transportation to a health care facility.
   1. A legal guardian can consent to or refuse medical services and/or transportation to a health care facility for an incompetent adult.
   2. A person appointed as a health Care Power of Attorney can consent or refuse consent for medical services and/or transportation to a health care facility for the incompetent adult named in the power of attorney.

B. Minors
A minor is an individual under 19 years of age that has never been married. A parent or legal guardian can consent or refuse consent on behalf of a minor, for medical services and/or transportation to a health care facility.

C. Documentation
All consents or refusals of consents for medical treatment and/or transportation must be documented in the patient care report. When possible these should be signed and dated by the patient or other individual authorized to give or refuse consent. All refusals to sign a consent or refusal of consent must be documented in the patient care report or other appropriate record(s).
IX. Transport/Intercepts:
A. Patients should be transported as soon as possible to an appropriate medical facility. Generally, on-scene times for trauma patients should not exceed ten (10) minutes. Immediate transport with treatment en route is required for patients with significant trauma, unstable airways, or a patient with signs and symptoms of a Cerebrovascular accident (CVA).

B. First Responder use, while encouraged, should not be used to replace EMT level and above providers whose training level is required for long term treatment and transport of patients.

C. Tiered response, with an appropriate service is encouraged if assistance or level of care needs exist and can be met in a timely manner.

X. Communications:
To allow for regional or local variations, and needs, the provider may follow locally established and physician medical director approved communications polices and procedures.

Contact medical control as soon as feasible in accordance with local guidelines for on-scene or en route orders. For seriously injured or critically ill patients, give a brief initial report from the scene when possible with more detailed information given to medical control while en route.

1. When communicating with medical control or the receiving facility, a verbal report may include these essential elements:
   a. Identify unit (If ALS staffed identify by “[town] medic ____”. If BLS staffed, identify by “[town] ambulance ____”.)
   b. Patient’s age, gender
   c. Patient’s chief complaint
   d. Brief pertinent history of present illness or mechanism of injury (MOI)
   e. Major past illnesses
   f. Mental status
   g. Baseline vital signs
   h. Pertinent findings of the physical exam
   i. Emergency medical care given
   j. Patient response to treatment
   k. Estimated time of arrival (ETA)

2. Advise the receiving facility of changes occurring in patient’s status en route.

3. Complete patient care report and provide a copy before leaving the receiving facility to assure continuity of patient care.
XI. **After the Call:**

A. Notify dispatch when back in service. Clean, restock, and check over vehicle and equipment for next assignment.

B. Consider having a Critical Incident Stress Debriefing (CISD) anytime rescuers and health care providers have been involved in a major incident, or one that produces adverse reaction.

C. Remember the importance of patient confidentiality.
GENERAL PRINCIPLE

Airway and Oxygen

A. An intact airway and adequate oxygenation is essential for all patients with medical or traumatic illnesses. Throughout this treatment protocol it is assumed that the Out-of-Hospital emergency care provider will maintain a patent airway and provide appropriate supplemental oxygenation.

1. Adequate ventilations are defined as:
   a. rate of 10-30
   b. absence of shallow or labored effort
   c. clear lung sounds
   d. no or very little signs of distress

2. Inadequate ventilations are defined as:
   a. rate <10 or >30
   b. a rate between 10-30 in the presence of:
      shallow/labored respirations
      OR
      wheezes, wet sounds (crackles [rales] or bubbles)
      OR
      blue, gray or mottled skin

B. Establish and maintain a secure airway/ventilation

1. If ventilating adequately: nasal O2, 2-6 L/min. or Non-Rebreather Mask (NRB mask) at 10-15 L/min

2. Maintain patent upper airway with jaw thrust, nasopharyngeal and/or oropharyngeal airway

3. If not ventilating adequately: Assist with BVM and 100% O2.

4. If vital signs have not improved after initial oxygen, re-evaluate oxygen delivery and adjust accordingly.

5. If pulse oximetry is used, adjust oxygen delivery devices to an oxygen saturation of 90% or above (goal is 100%) if possible.

6. In case of cervical compromise, consider alternative techniques including use of lighted stylet, multi-lumen airway, or trauma ET intubation.

7. Rapid Sequence Intubation (RSI), Needle cricothyrotomy, and surgical cricothyrotomy are advanced alternative techniques for airway management that require specialized training and authorization by the service program medical director. (See Appendix 1)
   a. inadequate ventilation
   b. rate <10 or >30; <20 in a pediatric patient with altered mental status
   c. able to say only short phases/words before running out of breath
   d. unconscious person with pale, cyanotic or gray color
   e. irregular respirations
   f. grunting in the pediatric patient

9. Criteria for use of advanced airway management skills (multilumen airway, lighted stylet, LMA, oro or nasotracheal tube intubation)
   a. unconscious patient who is apneic
   b. patient who is unresponsive to painful stimuli
   c. patient with no gag reflex or does not cough
   d. inability of the patient to protect his/her own airway

10. Criteria for confirmation of endotracheal tube placement
   a. watch tube pass through the vocal cords
   b. free air return from an Esophageal Detector Device (EDD)
   c. bilateral lung sounds
   d. no epigastric sounds
   e. positive return of end tidal CO₂

Patient Assessment

A. First Responders conduct a SIMPLE assessment as appropriate for the patient’s condition. A Simple assessment includes assessing the presence or absence and quality of the ABC’s, a determination of the patient’s mental status, and a SAMPLE history. (As detailed in the DOT First Responder Curriculum)

B. EMT-Basics, EMT Options, and EMT Intermediate 85s, conduct a BASIC assessment as appropriate for the patient’s condition. A Basic assessment includes performing an initial assessment, focused assessment, detailed assessment, and ongoing assessment. (As detailed in the DOT EMT-Basic Curriculum) This assessment includes pulse oximetry.

C. EMT Intermediate 99s, conduct an Advanced Physical Assessment as appropriate for the patient’s condition. This assessment includes the Basic assessment as well a detailed assessment of lung sounds, abdomen, and the extremities. (As detailed in the 1999 DOT EMT- Intermediate Curriculum)

D. Paramedics conduct a Comprehensive assessment as appropriate for the patient’s condition. This assessment includes the Basic, Advanced Physical Assessments as well as a comprehensive assessment of body systems. (As detailed in the DOT EMT-Paramedic Curriculum)
IV Therapy

A. If an advanced level intervention for an unstable patient requires IV access, the IV should be started as soon as feasible. For trauma patients, IV’s should be started en route to the hospital, except when there is an unavoidable delay (long extrication, etc.).

B. IV Insertions
   1. All IVs are to be peripheral sites for all levels except as noted below
   2. Paramedics for unstable critical patients may insert an IV in an external jugular vein
   3. IO insertion is allowed for unstable adult and pediatric patients

C. Venous access can be achieved using either:
   1. Saline lock – used on patients who have stable vital signs and do not require volume replacement
   2. IV of Normal Saline (0.9% Sodium Chloride) or Lactated Ringers for IV fluid administration

D. IV fluid administration is at the following rates:
   1. TKO – slow drip for patients that may need IV medication or fluid bolus
   2. Fluid Challenge – rapid 250-500 ml fluid bolus (Pediatric: 20 ml/kg)
   3. Maintain IV flow rate as ordered by physician/standing order

E. Pre-existing Venous Access Devices (VAD) may be used in emergency situations

F. IV Drip Sets
   1. Minidrip (Microdrip) means IV administration set that delivers 60 gtts/ml
   2. Maxidrip (Macrodrip) means IV administration set that delivers 10, 15, or 20 gtts/ml

Administration of Blood and Blood Products

A. Blood and Blood Products may be administered by Paramedics under locally governed procedures and with the service’s Physician Medical Directors approval.
Mucosal Atomization Device (MAD)

A. Delivery of certain medications via MAD is allowable within the scope of practice for the EMT-I 99 and Paramedic

B. Protocols that indicate the use of the listed medications may by given either by IV, IO or MAD

C. Medications Allowed by MAD
   1. Naloxone-Narcan (EMT-I 99 and Paramedic)
   2. Morphine (EMT-I 99 and Paramedic)
   3. Midazolam-Versed (Paramedic Only)
   4. Fentanyl (Paramedic Only)
   5. Glucagon (EMT-I 99 and Paramedic)

D. Administer no more than 1cc total volume per nostril at a time, allow for absorption prior to 2nd administration.

Patient Condition

A. Unstable Patient – The patient as a whole must be assessed and no single parameter defines if the patient is unstable. Listed are guidelines for determining an unstable patient.
   1. Adult
      a. Level of Consciousness – decreased or decreasing
      b. Blood Pressure <90 in the adult patient
      c. Chest pain
      d. Dyspnea
      e. Signs and symptoms of uncompensated shock
      f. Patient does not respond to treatment(s) and continues to worsen

   2. Pediatric
      a. Level of Consciousness – Decreased for the age of the patient, a lethargic, limp young child or infant should be considered unstable
      b. Cool, clammy, pale skin
      c. Signs of dehydration
         1. decreased urine output
         2. increased pulse rate for age group
         3. dry mucus membranes
         4. sunken eyes/fontanelle
      d. Signs and symptoms of shock progressing rapidly
      e. Signs and symptoms of uncompensated shock
      f. Patient does not respond to treatment(s) and continues to worsen

B. Stable Patient – As with the unstable patient the patient as a whole must be assessed. Listed are guidelines for determining a stable patient
   1. Adult and Pediatric
      a. Awake alert
      b. Blood pressure – normal range
      c. Skin – normal
      d. Patient responds to treatments and improves
Transport

A. Non Emergent – patient transport without the use of emergency lights and siren. Most patients can be transported non-emergent to the hospital
   a. Patient is stable
   b. Weather/road/traffic conditions prevent safe emergent driving
   c. Use of lights/siren would agitate a patient or exacerbate the patient condition. Examples:
      i. Chest Pain may be made worse
      ii. Seizures may be induced
      iii. Airway occlusion may be cause in the epiglottitis patient

B. Emergent Transport – patient transported with the use of lights and siren as needed
   a. The Patient is unstable
ADULT CARDIOVASCULAR EMERGENCIES

Cardiopulmonary Arrest

First Responder

Scene Safety – SAFETY FIRST

- Level of Consciousness: Confirm Unresponsiveness
- Airway: Establish an Airway
- Breathing: Ventilate with Bag Valve Mask Attached to O2 OR Pocket Mask
- Circulation: Confirm Patient Pulseless
  - Witnessed Cardiac Arrest
  - Un-witnessed Cardiac Arrest
    - Do not delay AED for CPR
  - AED/CPR: Attach AED – Push Analyze
    - ** SEE AED Protocol***
  - Prepare: Package for Transport

EMT

- Airway: Insert an Oral Airway
- Transport: Emergent
- Consider: ALS Intercept

EMT Options/ EMT Intermediate 85

- Airway: Insert Medical Director Approved Advanced Airway Device
  (Multi-lumen Airway, LMA, ET)
- IV: Establish Peripheral IV Access

EMT Intermediate 99

- Cardiac Monitor/ Defib: Attach Monitor/Defib Unit Interpret Rhythm
- ACLS: Follow Appropriate Adult Cardiac Arrest Algorithm

Paramedic

- ACLS: Follow Appropriate Adult Cardiac Arrest Algorithm

Note: If the patient regains a pulse see the Adult Post Cardiac Arrest – Return of Pulse protocol

# Adult Cardiac Arrest Algorithm

## V-Fib/Pulseless V-Tach

**EMT-Intermediate 99**  
<table>
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<tr>
<th>Action</th>
<th>Instructions</th>
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<tbody>
<tr>
<td>CPR Un-witnessed Arrest</td>
<td>Perform 5 cycles (2 Minutes) CPR</td>
</tr>
<tr>
<td>Witnessed Arrest</td>
<td>go directly to Confirm Cardiac Rhythm</td>
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<tr>
<td>Confirm Cardiac Rhythm</td>
<td></td>
</tr>
<tr>
<td>Shock Biphasic</td>
<td>Monophasic</td>
</tr>
<tr>
<td>120J to 200J</td>
<td>360J</td>
</tr>
<tr>
<td>CPR</td>
<td>Perform 5 cycles (2 Minutes) CPR immediately after shock</td>
</tr>
<tr>
<td>Rhythm Stop CPR Check Rhythm</td>
<td></td>
</tr>
<tr>
<td>Shock Biphasic</td>
<td>Monophasic</td>
</tr>
<tr>
<td>Maintain or Increase Jules</td>
<td>360J</td>
</tr>
<tr>
<td>CPR</td>
<td>Perform 5 cycles (2 Minutes) CPR immediately after shock</td>
</tr>
<tr>
<td>Repeat Repeat successive shocks with minimal interruption to CPR</td>
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</tr>
<tr>
<td><strong>Airway</strong> Establish an Airway with an Advanced Airway Device at any time with minimal interruption to CPR</td>
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<tr>
<td><strong>Breathing</strong> Ventilation with Bag Valve Device Give 2 breaths to 30 compressions until advanced airway is placed then give 8 to 10 breaths per minute</td>
<td></td>
</tr>
<tr>
<td><strong>Circulation</strong> Administer chest compressions at 100 per minute Establish IV at any time with no interruption to CPR</td>
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<tr>
<td><strong>Medication</strong> Epinephrine 1mg Every 3 – 5 Minutes OR Vasopressin 40U One dose only to replace 1st or 2nd dose of Epinephrine</td>
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<tr>
<td>Consideration Lidocaine 1 to 1.5mg/kg 1st dose</td>
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<tr>
<td>Lidocaine 0.5 to 0.75mg/kg 2nd dose</td>
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<td>MAX 3 doses or 3mg/kg</td>
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<tr>
<td>Amiodarone 300mg 1st dose</td>
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<tr>
<td>Amiodarone 150mg 2nd dose</td>
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**Paramedic**  

| **Medication** Magnesium 1 to 2g for torsades de pointes | Consideration |

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C - 20
**Adult Cardiac Arrest Algorithm**

**Asystole/PEA**

**EMT-Intermediate 99**
- **Confirm** Cardiac Rhythm
- **Airway** Establish an Airway with an Advanced Airway Device
  - Endotracheal Intubation Preferred
- **Breathing** Ventilation with Bag Valve Mask Attached to \(O_2\)
- **Circulation** Chest Compression and Establish Peripheral IV Access
  - If IV access is delayed or can not be obtained Epinephrine and Atropine may be given via the ET tube
- **Medication** Epinephrine 1mg Every 3 – 5 Minutes
  - OR
  - Vasopressin 40U One dose only to replace 1st or 2nd dose of Epinephrine
- **Intervention Sequence**
  - Drug Evaluate for Change
  - Repeat Medication
  - Atropine 1mg
  - If Rate Slow
  - Repeat Atropine Every 3-5 Minutes to Max Dose 3mg/kg
- **Consider**
  - Consider Causes of PEA
  - Hypovolemia Consider Fluid Boluses
  - Tension Pneumothorax Consider Needle Decompression
  - Hypothermia Consider Warming Patient

**Paramedic**
- **Consider**
  - Consider Causes of PEA
  - Acidosis Consider Sodium Bicarbonate
  - Tricyclic Overdose Consider Sodium Bicarbonate
  - Calcium Channel Blocker Overdose Consider Calcium Chloride
- **Medication**
  - Sodium Bicarbonate 1mEq/Kg IVP
  - Calcium Chloride 500 to 1000mg Slow IVP
# Adult AED Protocol

## ALL LEVELS

<table>
<thead>
<tr>
<th>Confirm</th>
<th>Patient is Pulseless</th>
</tr>
</thead>
<tbody>
<tr>
<td>AED/CPR</td>
<td>Witnessed Cardiac Arrest</td>
</tr>
<tr>
<td>Do not delay AED for CPR</td>
<td>Perform 2 minutes of CPR</td>
</tr>
</tbody>
</table>

Attach AED Pads and Turn ON

### Analyze

<table>
<thead>
<tr>
<th>Follow Voice Prompt</th>
<th>Push Analyze Button</th>
</tr>
</thead>
<tbody>
<tr>
<td>Push to Shock</td>
<td>OR</td>
</tr>
<tr>
<td>Perform 2 minutes of CPR</td>
<td></td>
</tr>
<tr>
<td>Push Analyze Button</td>
<td></td>
</tr>
</tbody>
</table>

### CPR

<table>
<thead>
<tr>
<th>Follow Voice Prompt</th>
<th>Push to Shock</th>
<th>OR</th>
<th>No Shock Advised</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check Pulse for no more than 10 seconds</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Perform 2 minutes of CPR |
| Push Analyze Button |

### Analyze

<table>
<thead>
<tr>
<th>Follow Voice Prompt</th>
<th>Push to Shock</th>
<th>OR</th>
<th>No Shock Advised</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check Pulse every 2 minutes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Package for Transport |
| Transport if EMT or Higher Level |

### CPR

<table>
<thead>
<tr>
<th>Follow Voice Prompt</th>
<th>Push to Shock</th>
<th>OR</th>
<th>No Shock Advised</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check Pulse every 2 minutes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Package for Transport |
| Transport if EMT or Higher Level |

### Analyze

| Push Analyze Button every 4 minutes |
| Push Analyze Button |

### CPR

| Push Analyze Button every 4 minutes |
| Push Analyze Button |

### Repeat

CPR, Analyze, and Shock 3 More Times

### Pulse Check

Check Pulse if None Package for Transport

Transport if EMT or Higher Level

### Analyze/Shock

Each 4 Minutes Push Analyze if Shock Advised

Shock Up to Three Times and then Continue Transport

### Considerations:

If the “No Shock Advised” prompt is heard after three consecutive analyze steps continue CPR and package for transport and for EMT and higher level begin transport.

If No shock advised and patient has return of pulse see Post Cardiac Arrest – Return of Pulse protocol.
Post Cardiac Arrest – Return of Pulse

With public access to AEDs the OOH care provider may respond to a person who has been successfully defibrillated OR the OOH provider may successfully defibrillate a cardiac arrest victim.

First Responder
Scene Safety – SAFETY FIRST
Level of Consciousness Confirm Unresponsiveness
Airway Establish an Airway
Breathing Assist Ventilations with Bag Valve Mask
Circulation Confirm Pulse Present, Recheck Often
Assess Conduct Simple Patient Assessment

EMT
Airway Insert Oral Airway
Assess Perform Basic Patient Assessment
Consider ALS Intercept

EMT Options / EMT Intermediate 85
Airway Insert Medical Director Approved Advanced Airway Device if Indicated (Multi-lumen Airway, LMA, ET)
IV Establish Peripheral IV Access
Consider 250cc Fluid Bolus

EMT Intermediate 99
Assess Perform Advanced Assessment
Cardiac Monitor Determine Cardiac Rhythm
Consider Lidocaine 1mg/kg bolus if rate >60 and presence of ventricular ectopy
Lidocaine infusion 1 – 4 mg/min
Dysrhythmia Treat with Appropriate Advanced Cardiac Dysrhythmia Protocol

Paramedic
Assess Perform Comprehensive Assessment
Consider 12 Lead EKG
Dysrhythmia Treat with Appropriate Advanced Cardiac Dysrhythmia Protocol
Consider Dopamine Infusion 5 to 20 mcg/kg/min for Hypotension
Discontinue CPR

Situations may occur where CPR has been initiated on an obviously deceased patient prior to the arrival of out-of-hospital emergency care providers.

All certification levels

If the following criteria have been met, the out-of-hospital emergency care providers may discontinue CPR or may choose not to initiate CPR:

No pulse; AND
No spontaneous respirations; AND
Pupils fixed and dilated; AND
One or more of the following:
   A. Rigor mortis;
   B. Decapitation;
   C. Decomposition;
   D. Dependent lividity;
   E. Traumatic cardiopulmonary arrest with injuries incompatible with life (i.e. massive blood loss, displacement of brain tissue);
   F. Valid DNR form; or
   G. Physician authorization;
5. Determination of the patient’s cardiac rhythm is not required

NOTE:

Patients in whom hypothermia may be a significant component of their arrested state should receive resuscitative efforts until body core temperature is >35 degrees centigrade.
General Cardiac Dysrhythmia

Dysrhythmia-An abnormal heart rate and/or rhythm

The First Responder, EMT, EMT with Option, and EMT-I 85 will only detect by evaluation of the pulse whether the pulse is fast, slow, or normal rate and if it is regular or irregular. EMT-I 99 and Paramedic will interpret the Cardiac Monitor strip to determine the type of cardiac rhythm.

First Responder
Scene Safety – SAFETY FIRST
BSI
Level of Conscious
Alert, Verbal, Painful, or Unresponsive
Airway
Monitor Airway
Breathing
Administer Oxygen
Circulation
Assess Pulse Rate, Rhythm, and Quality Vital Signs
Assess
Conduct Simple Patient Assessment
Prepare
Prepare Patient for Transport

EMT
Assess
Perform a Basic Assessment
Determine
Patient Stable or Unstable
Transport
Non-emergent Transport Unless Patient Unstable
Consider
ALS Intercept

EMT Options / EMT Intermediate 85
IV
Establish Peripheral IV Access

EMT Intermediate 99
Assess
Perform Advanced Assessment
Cardiac Monitor
Determine Cardiac Rhythm
ACLS
Follow Appropriate Advanced Cardiac Dysrhythmia Protocol

Paramedic
Consider
12 Lead ECG
Assess
Perform Comprehensive Assessment
ACLS
Follow Appropriate Advanced Cardiac Dysrhythmia Protocol
Advanced Cardiac Dysrhythmia

This Protocol applies to EMT-I 99 and Paramedics and assumes the General Cardiac Dysrhythmia protocol has been followed

The EMT – I99 and Paramedic must determine if the patient is stable or unstable

For the stable patient tolerating the cardiac rhythm; May require monitoring and supportive care without a medication or electrical intervention.

For the unstable patient the EMT-I 99 or Paramedic; May have to consider a more aggressive treatment plan based on the patient condition and how rapidly a medication may be delivered versus an electric therapy can be performed.

The Paramedic may choose a medication intervention from either the EMT-I 99 or the Paramedic sections.

Ventricular Ectopy
PVC’s, Couplets, Bi and Trigeminy
Heart Rate Above 60

**EMT Intermediate 99 - Paramedic**

<table>
<thead>
<tr>
<th>Consider</th>
<th>Lidocaine 1mg/kg Bolus</th>
</tr>
</thead>
<tbody>
<tr>
<td>If Dysrhythmia resolves</td>
<td>Lidocaine Infusion 1-4mg/min</td>
</tr>
<tr>
<td>Consider</td>
<td>Amiodarone 150mg Over 10 Minutes</td>
</tr>
</tbody>
</table>

**Ventricular Tachycardia**

**EMT Intermediate 99**

<table>
<thead>
<tr>
<th>Consider</th>
<th>12lead ECG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consider</td>
<td>Lidocaine 1mg/kg</td>
</tr>
<tr>
<td>If Dysrhythmia Resolves</td>
<td>Lidocaine Infusion 1-4mg/min</td>
</tr>
<tr>
<td>Consider</td>
<td>Amiodarone 150mg Over 10 Minutes</td>
</tr>
</tbody>
</table>

**Paramedic**

<table>
<thead>
<tr>
<th>Consider</th>
<th>Procainamide 20mg/min until resolved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Or</td>
<td>Magnesium Sulfate 1-2g (If Polymorphic)</td>
</tr>
<tr>
<td>Consider</td>
<td>Infusion of Anti-Arhythmic Agent that Controlled the Dysrhythmia</td>
</tr>
</tbody>
</table>

Synchronized Cardioversion
Premedicate if Possible
Diazepam 2 to 5mg

Lidocaine 1mg/kg Bolus Followed by Lidocaine Infusion 1-4mg/min

Alternate Pre-medications
Midazolam 2 to 4mg or Lorazepam 2 to 4 mg
# Advanced Cardiac Dysrhythmia Continued

**Atrial Tachycardias**
PSVT, Atrial Fib, Atrial Flutter

## EMT Intermediate 99

<table>
<thead>
<tr>
<th>Condition</th>
<th>EMT Intermediate 99</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stable</strong></td>
<td><strong>Unstable</strong></td>
</tr>
<tr>
<td>A-Fib A Flutter</td>
<td>Confirm</td>
</tr>
<tr>
<td>Consider</td>
<td>Synchronized Cardioversion</td>
</tr>
<tr>
<td></td>
<td>Pre-medicate if Possible</td>
</tr>
<tr>
<td></td>
<td>Diazepam 2 to 5mg</td>
</tr>
<tr>
<td>PSVT</td>
<td>Adenosine Rapid IVP</td>
</tr>
<tr>
<td>Consider</td>
<td>6mg then 12mg</td>
</tr>
<tr>
<td></td>
<td>Synchronized Cardioversion</td>
</tr>
<tr>
<td></td>
<td>Pre-medicate if Possible</td>
</tr>
<tr>
<td></td>
<td>Diazepam 2 to 4 mg</td>
</tr>
</tbody>
</table>

## Paramedic

<table>
<thead>
<tr>
<th>Condition</th>
<th>Paramedic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A-Fib A Flutter</strong></td>
<td><strong>12 Lead</strong></td>
</tr>
<tr>
<td>Consider</td>
<td>Alternate Pre-medications</td>
</tr>
<tr>
<td></td>
<td>Midazolam 2 to 4mg</td>
</tr>
<tr>
<td></td>
<td>or</td>
</tr>
<tr>
<td></td>
<td>Lorazepam 2 to 4mg</td>
</tr>
<tr>
<td>PSVT</td>
<td>12 Lead</td>
</tr>
<tr>
<td>Consider</td>
<td>Verapamil 2.5-5mg</td>
</tr>
<tr>
<td>Consider</td>
<td>or</td>
</tr>
<tr>
<td></td>
<td>Diltiazem 0.25mg/kg</td>
</tr>
<tr>
<td></td>
<td>Alternate Pre-medications</td>
</tr>
<tr>
<td></td>
<td>Midazolam 2 to 4mg</td>
</tr>
<tr>
<td></td>
<td>or</td>
</tr>
<tr>
<td></td>
<td>Lorazepam 2 to 4mg</td>
</tr>
</tbody>
</table>

## Bradycardia

<table>
<thead>
<tr>
<th>Condition</th>
<th>Paramedic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stable</strong></td>
<td><strong>Unstable</strong></td>
</tr>
<tr>
<td>EMT-Intermediate 99</td>
<td>Atropine 0.5-1 mg</td>
</tr>
<tr>
<td>Consider</td>
<td></td>
</tr>
<tr>
<td>Consider</td>
<td>Have Pacer</td>
</tr>
<tr>
<td>Standing By</td>
<td>Transcutaneous Pacing</td>
</tr>
<tr>
<td>Consider</td>
<td>Pre-medicate if Possible</td>
</tr>
<tr>
<td>Consider</td>
<td>Diazepam 2 to 4 mg</td>
</tr>
<tr>
<td><strong>Paramedic</strong></td>
<td><strong>12 Lead</strong></td>
</tr>
<tr>
<td>Consider</td>
<td>If Second or</td>
</tr>
<tr>
<td>Third Degree Block</td>
<td>Alternate Pre-medications</td>
</tr>
<tr>
<td>Attach Pacer Pads</td>
<td>Midazolam 2 to 4 mg or</td>
</tr>
<tr>
<td></td>
<td>Lorazepam 2 to 4 mg</td>
</tr>
<tr>
<td>Consider</td>
<td>Dopamine 5 -20mcg/kg/min or</td>
</tr>
<tr>
<td></td>
<td>Epinephrine 2-10mcg/min or</td>
</tr>
<tr>
<td></td>
<td>Isoproterenol 2-10mcg/min</td>
</tr>
</tbody>
</table>

1. Atropine is not effective in Second Degree Type II and new Third Degree Heart Blocks.
2. Do not delay pacing for IV or pre-medication if patient is deteriorating.
**Chest Pain**

**First Responder**
- **Scene Safety – BSI**
  - SAFETY FIRST
- **Level of Conscious**
  - Alert, Verbal, Pain, or Unresponsive
- **Airway**
  - Monitor Airway
- **Breathing**
  - Administer Oxygen
- **Circulation**
  - Vital Signs, Skin Color/Temp
- **Assess**
  - Conduct Simple Patient Assessment
- **Consider**
  - Aspirin – Two to Four – 81mg (Baby Aspirin) Chewed and Swallowed

**EMT**
- **Assess**
  - Conduct Basic Patient Assessment
- **Consider**
  - May Assist Patient with Taking his/her Own Nitroglycerin .4mg Tablet or Spray Sublingually
  - May Repeat up to Three Times if BP Remains >100 Systolic
- **Transport**
  - Non-emergent Transport unless patient becomes unstable
- **Consider**
  - ALS Intercept

**EMT Options/ EMT Intermediate 85**
- **IV**
  - Establish Peripheral IV Access

**EMT-Intermediate 99**
- **Assess**
  - Perform Advanced Physical Assessment
- **Cardiac Monitor**
  - Attach Cardiac Monitor, Interpret ECG
- **Consider**
  - Nitroglycerin – One 0.4mg Tablet or Spray Sublingually
  - Repeat Every 5 Minutes if Chest Pain Continues AND BP Remains >100 Systolic
- **Consider**
  - Morphine 2 to 5 mg IV
  - May Repeat PRN until Pain Relieved AND Blood Pressure Remains >100 systolic
- **Dysrhythmia**
  - *SEE Cardiac Dysrhythmia Protocol*

**Paramedic**
- **Assess**
  - Perform Comprehensive Assessment
- **Consider**
  - 12 Lead
- **Dysrhythmia**
  - *See Cardiac Dysrhythmia Protocol*
- **Alternate**
  - If allergic to Morphine may use Fentanyl 25 mcg to 100 mcg IV
Nebraska Model Protocols

Cardiogenic Shock
Dyspnea in the presence of diminished lung sounds, wheezes, rales, or frothy sputum
with a BP that is hypotensive

First Responder
Scene Safety –
BSI SAFETY FIRST

Level of
Conscious Alert, Verbal, Pain, or Unresponsive
Airway Monitor Airway
Breathing Administer Oxygen
Consider Assisting Ventilations
Circulation Vital Signs, Skin Color/Temp
Assess Conduct a Simple Patient Assessment

EMT
Assess Conduct Basic Patient Assessment
Transport Emergent Transport
Consider ALS Intercept

EMT Options/ EMT Intermediate 85
IV Establish Peripheral IV Access

EMT-Intermediate 99
Assess Perform Advanced Physical Assessment
Cardiac Monitor Attach Cardiac Monitor, Interpret ECG
Consider Bronchodilator Medication by Nebulizer
*See Bronchodilator Protocol
Dysrhythmia *See Cardiac Dysrhythmia Protocol

Paramedic
Assess Perform Comprehensive Assessment
Dysrhythmia *See Cardiac Dysrhythmia Protocol
Consider Dopamine 5 to 20mcg/kg/min infusion
Consider Rapid Sequence Intubation (RSI)
*See RSI Protocol
**ADULT RESPIRATORY EMERGENCIES**

**Acute Allergic Reaction / Anaphylaxis**  
Difficulty Breathing in the presence of urticaria, wheezing and/or contact with a known allergen

**First Responder**

Scene Safety – SAFETY FIRST

- Level of Consciousness: Alert, Verbal, Pain, or Unresponsive
- Airway: Monitor Airway
- Breathing: Administer Oxygen, Consider Assisting Ventilations with BVM
- Circulation: Vital Signs, Skin Color/Temp

Assess: Conduct a Simple Patient Assessment

**First Responder AND EMT**

Consider Epinephrine Auto Injector (EPI PEN)  
Only if the OOH Provider has been Trained and Approved by the Service’s Medical Director Guidelines; Patient able to speak one-two word phrases  
- Low/falling oxygen saturations even with O2 administration  
- Diminished to absent lung sounds  
- Decreasing LOC  
- Retractions  
- Pale or cyanotic skin

**EMT**

Assess: Conduct Basic Patient Assessment

Consider:  
- Assist Patient with His/Her Metered Dose Inhaler (MDI)  
- Albuterol 2.5mg in 3cc given by Nebulizer Device

Transport: Emergent Transport Unless Patient is Stable

Consider: ALS Intercept

**EMT Options/ EMT Intermediate 85**

IV: Establish Peripheral IV Access titrate to blood pressure

Continued next page
Acute Allergic Reaction / Anaphylaxis
Continued

EMT-Intermediate 99

Assess
Perform Advanced Physical Assessment

Consider
Bronchodilator Medication by Nebulizer
***See Bronchodilator Protocol

Consider
Diphenhydramine (Benadryl), 25 – 50 mg Slow IVP over 1-3 Minutes

Consider
Epinephrine 1:1000 0.3-0.5mg SubQ
May Repeat Every 5 Minutes if Severe Respiratory Symptoms are Not Resolved
or
Epinephrine 1:10,000 0.1-0.2mg IV For BP < 70 Systolic
May Repeat Every 5 Minutes if Severe Respiratory Symptoms are Not Resolved

Cardiac Monitor
Attach Cardiac Monitor, Interpret ECG

Paramedic

Assess
Perform Comprehensive Assessment

Consider
Solu-Medrol 125mg IVP

Consider
Dopamine for BP < 70 Systolic
5 to 20mcg/kg/min Infusion

Consider
Rapid Sequence Intubation (RSI)
*See RSI Protocol
**Asthma**

**Difficulty Breathing in the presence of wheezing with a history of asthma or irritant exposure**

**First Responder**
- Scene Safety – BSI
  - SAFETY FIRST
- Level of Conscious
  - Alert, Verbal, Pain, or Unresponsive
- Airway
  - Monitor Airway
- Breathing
  - Administer Oxygen - Consider Assisting Ventilations with BVM
- Circulation
  - Vital Signs, Skin Color/Temp
- Assess
  - Conduct a Simple Patient Assessment

**First Responder AND EMT**
- Consider
  - Epinephrine Auto Injector (EPI PEN) if Impending Respiratory Collapse
  - Only if the OOH Provider has been Trained and Approved by the Service’s Medical Director Guidelines; Patient able to speak one-two word phrases
  - Low/falling oxygen saturations even with O2 administration
  - Diminished to absent lung sounds
  - Decreasing LOC
  - Retractions
  - Pale or cyanotic skin

**EMT**
- Assess
  - Conduct Basic Patient Assessment
- Consider
  - Assist Patient with His/Her Metered Dose Inhaler (MDI)
  - Albuterol 2.5mg in 3cc given by Nebulizer Device
  - Non –Emergent Transport Unless Patient is Unstable
- Consider
  - ALS Intercept

**EMT Options/ EMT Intermediate 85**
- IV
  - Establish Peripheral IV Access

**EMT-Intermediate 99**
- Assess
  - Perform Advanced Physical Assessment
- Consider
  - Bronchodilator Medication by nebulizer
    - *See Bronchodilator Protocol*
  - Epinephrine 1:1,000 0.3-0.5mg SubQ
- Cardiac
  - Monitor
    - Attach Cardiac Monitor, Interpret ECG

**Paramedic**
- Assess
  - Perform Comprehensive Assessment
- Consider
  - Magnesium Sulfate 2 grams IV infusion over 20 min
- Consider
  - Rapid Sequence Intubation (RSI) *See RSI Protocol*
Nebraska Model Protocols

COPD
Emphysema or Chronic Bronchitis
Difficulty Breathing in the presence of wheezing and/or rhonchi and history of COPD

First Responder
Scene Safety – SAFETY FIRST
BSI Level of Consciousness Alert, Verbal, Pain, or Unresponsive
Airway Monitor Airway
Breathing Administer Oxygen - Consider Assisting Ventilations with BVM
Circulation Vital Signs, Skin Color/Temp
Assess Conduct a Simple Patient Assessment

EMT
Assess Conduct Basic Patient Assessment
Consider Assist Patient with His/Her Metered Dose Inhaler (MDI)
Consider Albuterol 2.5mg in 3cc via Nebulizer Device
Transport Non –Emergent Transport Unless Patient is Unstable
Consider ALS Intercept

EMT Options/ EMT Intermediate 85
IV Establish Peripheral IV Access

EMT-Intermediate 99
Assess Perform Advanced Physical Assessment
Consider Bronchodilator Medication by nebulizer
*See Bronchodilator Protocol
Consider Epinephrine 1:1,000 0.3-0.5mg SubQ
Cardiac Monitor Attach Cardiac Monitor, Interpret ECG

Paramedic
Assess Perform Comprehensive Assessment
Consider CPAP
Consider Rapid Sequence Intubation (RSI)
*See RSI Protocol
**Pulmonary Edema**
Dyspnea in the presence of diminished lung sounds, wheezes, rales, or frothy sputum with a BP that is hypertensive or within normal limits.

**First Responder**
- Scene Safety – SAFETY FIRST
- Level of Conscious: Alert, Verbal, Pain, or Unresponsive
- Airway: Monitor Airway
- Breathing: Administer Oxygen
- Consider: Assisting Ventilations
- Circulation: Vital Signs, Skin Color/Temperature
- Assess: Conduct a Simple Patient Assessment

**EMT**
- Assess: Conduct Basic Patient Assessment
- Consider: Albuterol 2.5mg in 3cc via Nebulizer Device
- Transport: Non-emergent Transport Unless Patient Becomes Unstable
- Consider: ALS Intercept

**EMT Options/EMT Intermediate 85**
- IV: Establish Peripheral IV Access

**EMT-Intermediate 99**
- Assess: Perform Advanced Physical Assessment
- Cardiac Monitor: Attach Cardiac Monitor, Interpret ECG
- Consider: Nitroglycerin – One 0.4mg Tablet or Spray Sublingually if BP >100 Systolic
- Consider: Furosemide 40-80mg IV
- Consider: Administer Morphine 2 – 4 mg IV
- Consider: Bronchodilator Medication by Nebulizer
  *See Bronchodilator Protocol

**Dysrhythmia**
*See Cardiac Dysrhythmia Protocol

Continued on next page
### Paramedic

<table>
<thead>
<tr>
<th>Assess</th>
<th>Perform Comprehensive Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consider</td>
<td>12 Lead</td>
</tr>
<tr>
<td>Consider</td>
<td>CPAP</td>
</tr>
<tr>
<td><strong>Dysrhythmia</strong></td>
<td><em>See Cardiac Dysrhythmia Protocol</em></td>
</tr>
<tr>
<td>Consider</td>
<td>Rapid Sequence Intubation (RSI)</td>
</tr>
<tr>
<td></td>
<td><em>See RSI Protocol</em></td>
</tr>
</tbody>
</table>

R - 41
**Respiratory Infection**

**Difficulty Breathing in the presence of or suspected presence of Respiratory Infection**

**First Responder**

- Scene Safety – SAFETY FIRST
- Level of Consciousness: Alert, Verbal, Pain, or Unresponsive
- Airway: Monitor Airway
- Breathing: Administer Oxygen
- Circulation: Vital Signs, Skin Color/Temp
- Assess: Conduct a Simple Patient Assessment

**EMT**

- Assess: Conduct Basic Patient Assessment
- Consider: Assist patient with His/Her Metered Dose Inhaler (MDI)
- Consider: Albuterol 2.5mg in 3cc given by Nebulizer Device
- Transport: Non-Emergent Transport Unless Patient is Unstable
- Consider: ALS Intercept

**EMT Options/ EMT Intermediate 85**

- IV: Establish Peripheral IV Access

**EMT-Intermediate 99**

- Assess: Perform Advanced Physical Assessment
- Consider: Bronchodilator Medication by nebulizer
  *See Bronchodilator Protocol

**Paramedic**

- Assess: Perform Comprehensive Assessment

***Note: Clean unit and equipment with an appropriate disinfectant after call***
**Adult Epiglottitis**  
Difficulty breathing in the presence of stridor.

**First Responder**

Scene Safety – SAFETY FIRST

- Level of Consciousness: Alert, Verbal, Pain, or Unresponsive
- Airway: Monitor Airway
- Breathing: Administer Oxygen
- Circulation: Vital Signs, Skin Color/Temperature
- Assess: Conduct a Simple Patient Assessment

**EMT**

- Assess: Conduct Basic Patient Assessment
- Airway: DO NOT INSERT ORAL OR NASAL AIRWAY
- Transport: Non-Emergent Transport Unless Patient is Unstable
- Consider: ALS Intercept

**EMT Options/EMT Intermediate 85**

- IV: Establish Peripheral IV Access
  - EXTREME CAUTION MUST BE EXERCISED

**EMT-Intermediate 99**

- Assess: Perform Advanced Physical Assessment
- Cardiac Monitor: Attach Cardiac Monitor, Interpret ECG

**Paramedic**

- Assess: Perform Comprehensive Assessment
- Consider: Cricothyrotomy Needle or Surgical For Occluded Airway

Epiglottitis may cause the patient airway to become occluded completely if the patient is agitated.
### ACUTE MEDICAL EMERGENCIES
#### Upper Airway Obstruction

**First Responder**
- Scene Safety – SAFETY FIRST
- **Level of Consciousness** Alert, Verbal, Pain, or Unresponsive
- **Airway** Attempt to Relieve Obstruction Using AHA Guidelines for Obstructed Airway

<table>
<thead>
<tr>
<th>Obstruction not Cleared</th>
<th>Obstruction Cleared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continue Attempts to relieve Obstruction</td>
<td>Administer Oxygen</td>
</tr>
<tr>
<td>Breathing</td>
<td>Consider Assisting Ventilations with BVM</td>
</tr>
<tr>
<td>Circulation</td>
<td>Vital Signs, Skin Color/Temp</td>
</tr>
<tr>
<td>Assess</td>
<td>Conduct a Simple Patient Assessment</td>
</tr>
</tbody>
</table>

**EMT**
- Transport Emergent
- Continue Attempts to Relieve Obstruction
- **Assess** Conduct Basic Patient Assessment
- **Consider** ALS Intercept

**EMT Options/ EMT Intermediate 85**
- **Airway** Attempt to Visualize Obstruction with Laryngoscope and Remove with McGill Forceps, IF TRAINED
- **IV** Establish Peripheral IV Access
  - Do Not Delay Transport

**EMT-Intermediate 99**
- **Assess** Consider Advance Airway if Patient LOC Remains Decreased and No Gag Reflex
- **Cardiac Monitor** Perform Advanced Physical Assessment
  - Attach Cardiac Monitor, Interpret ECG

**Paramedic**
- **Assess** Perform Comprehensive Assessment
- **Consider** Cricothyrotomy needle or surgical
  - Rapid Sequence Intubation (RSI)
  - *See RSI Protocol*
Non-Traumatic Altered or Decreased Level of Consciousness
Diabetes Mellitus – Hypoglycemia
Altered Mental Status with History of Diabetes Mellitus (Hypoglycemia)

First Responder
Scene Safety –
BSI SAFETY FIRST
Level of Conscious Alert, Verbal, Pain, or Unresponsive
Airway Monitor Airway
Breathing Administer Oxygen
Circulation Vital Signs, Skin Color/Temperature
Assess Conduct a Simple Patient Assessment

EMT
Assess Conduct Basic Patient Assessment
Consider Oral glucose ONLY if Patient can maintain their Airway
Transport Non-Emergent Transport Unless Patient is Unstable
Consider ALS Intercept

EMT Options/ EMT Intermediate 85
Glucometer Obtain Glucose Reading (Reading >200 *See Hyperglycemia Protocol)
IV Establish Peripheral IV Access

EMT-Intermediate 99
Assess Perform Advanced Physical Assessment
Consider Dextrose 50% 25g IVP
Consider If Unable to Obtain IV Glucagon, 0.5-1.0 mg IM or Subcutaneously

Paramedic
Assess Perform Comprehensive Assessment
Consider Thiamine 100mg IV Prior to Dextrose 50%
Hyperglycemia
Hyperglycemia with or without known history of Diabetes Mellitus

First Responder
Scene Safety –
BSI SAFETY FIRST

Level of Conscious Alert, Verbal, Pain, or Unresponsive
Airway Monitor Airway
Breathing Administer Oxygen
Circulation Vital Signs, Skin Color/Temp
Assess Conduct a Simple Patient Assessment

EMT
Assess Conduct Basic Patient Assessment
Transport Non –Emergent Transport Unless Patient is Unstable
Consider ALS Intercept

EMT Options/ EMT Intermediate 85
Glucometer Obtain Glucose Reading
Consider Medical Director Approved Advanced Airway Device if Indicated (Multi-lumen Airway, LMA, ET)
IV Establish Peripheral IV Access Run Wide Open, Monitor for Fluid Overload
Consider 2nd IV in Presence of Profound Dehydration

EMT-Intermediate 99
Assess Perform Advanced Physical Assessment
Cardiac
Monitor Attach Cardiac Monitor, Interpret ECG
Consider Naloxone 0.4mg to 2mg if Suspected Drug Overdose

Paramedic
Assess Perform Comprehensive Assessment
Consider Rapid Sequence Intubation (RSI)
*See RSI Protocol
Altered Mental Status
Altered Mental Status in the Absence of Exposure and No History of Diabetes Mellitus

First Responder
Scene Safety –
BSI SAFETY FIRST

Level of Conscious Alert, Verbal, Pain, or Unresponsive
Airway Monitor Airway
Breathing Administer Oxygen
Circulation Vital Signs, Skin Color/Temp
Assess Conduct a Simple Patient Assessment

EMT
Assess Conduct Basic Patient Assessment
Transport Emergent Unless Patient LOC Improves with Glucose
Consider ALS Intercept

EMT Options/ EMT Intermediate 85
Glucometer Obtain Glucose Reading (Reading >200 *See Hyperglycemia Protocol)
Consider Oral Glucose if Indicated by Glucometer reading of <80
          AND if Patient can maintain their Airway
Consider Inserting Medical Director Approved Advanced Airway Device
          (Multi-lumen Airway, LMA, ET)
IV Establish Peripheral IV Access

EMT-Intermediate 99
Assess Perform Advanced Physical Assessment
Consider Dextrose 50% 25g IVP if Indicated by Glucometer Reading <80
Consider Glucagon, 0.5-1.0 mg IM or Subcutaneously
          If Unable to Obtain IV AND Indicated by Glucometer Reading
Consider Naloxone 0.4mg to 2mg IV if Drug Overdose is Suspected

Paramedic
Assess Perform Comprehensive Assessment
Consider Thiamine 100mg IV Prior to Dextrose 50%
Consider Rapid Sequence Intubation (RSI) *See RSI Protocol
Cerebrovascular Accident (CVA)

First Responder
Scene Safety – SAFETY FIRST

Level of Consciousness
Alert, Verbal, Pain, or Unresponsive

Airway
Monitor Airway

Breathing
Administer Oxygen

Circulation
Vital Signs, Skin Color/Temp

Assess
Conduct a Simple Patient Assessment

EMT
Assess
Conduct Basic Patient Assessment

Transport
Non emergent Unless Patient is Unstable

Consider
ALS Intercept

EMT Options/ EMT Intermediate 85
Consider
Inserting Medical Director Approved Advanced Airway Device if Indicated
(Multi-lumen Airway, LMA, ET)

Glucometer
IF LOC Decreased, Obtain Glucose Reading and
Use other Appropriate Protocol if Abnormal

IV
Establish Peripheral IV Access

EMT-Intermediate 99
Assess
Perform Advanced Physical Assessment

Cardiac Monitor
Attach Cardiac Monitor, Interpret ECG

Dysrhythmia
*See Cardiac Dysrhythmia Protocol

Paramedic
Assess
Perform Comprehensive Assessment

Dysrhythmia
*See Cardiac Dysrhythmia Protocol

Consider
Rapid Sequence Intubation (RSI)
*See RSI Protocol
Seizure Disorder

First Responder
Scene Safety – BSI
SAFETY FIRST

Level of Conscious
Alert, Verbal, Pain, or Unresponsive

Airway Monitor Airway

Breathing Administer Oxygen

Circulation Vital Signs, Skin Color/Temp

Assess Conduct a Simple Patient Assessment

Prepare Package Patient for Transport

EMT
Assess Conduct Basic Patient Assessment

Transport Non –Emergent Transport Unless Seizures Continue

Consider ALS Intercept

EMT Options/ EMT Intermediate 85
Glucometer Obtain Glucose Reading and Use Other Appropriate Protocol if Abnormal

IV Establish Peripheral IV Access

EMT-Intermediate99
Assess Perform Advanced Physical Assessment

Consider Possible Causes of Seizure

Consider Diazepam 5-10mg IV for Recurrent or Prolonged Seizures

Consider Cardiac Monitoring

Paramedic
Assess Perform Comprehensive Assessment

Alternate Medication May Consider Lorazepam 2-4mg
or Midazolam 2-4mg as an alternate to Diazepam
Hypothermia
Lowered skin Temperature with Altered Mental Status

First Responder
Scene Safety – BSI
SAFETY FIRST

Level of Conscious
Confirm Unresponsiveness

Airway
Establish an Airway

Breathing
Administer Warmed Oxygen if Possible
If Not Breathing or Respiratory Compromised Ventilate with Bag Valve Mask Attached to O2 or Pocket Mask

Circulation
Confirm Pulse
Begin CPR if pulseless
*See AED Protocol

Avoid
Rough Handling/Movement

Warm
Remove Wet Clothing
Remove Patient from Cold
Warm Body Core – Heat packs to Groin and Axillary Areas

Prepare
Package for Transport

EMT
Airway
Insert an Oral Airway if Indicated

Temp
Obtain Body Temperature

Consider
ALS Intercept

EMT Options / EMT Intermediate 85
Glucometer
Obtain Glucose Reading use Other Appropriate Protocol if Abnormal

Airway
Insert Medical Director Approved Advanced Airway Device If Indicated (Multi-lumen Airway, LMA, ET)

IV
Establish Peripheral IV Access
**WARM IV FLUID**

EMT Intermediate 99
Assess
Perform Advanced Physical Assessment

Cardiac Monitor
Attach Cardiac Monitor, Interpret ECG

ACLS
Follow Appropriate Cardiac Arrest Algorithm
*NOTE ACLS Medications Should be avoided until Patient Warmed above 86 F

Paramedic
Assess
Perform Comprehensive Assessment

ACLS
Follow Appropriate Cardiac Arrest Algorithm
*NOTE ACLS Medications Should be avoided until Patient Warmed above 86 F
Hyperthermia
Elevated skin Temperature with altered Mental Status

First Responder
Scene Safety – BSI SAFETY FIRST
Level of Conscious Alert, Verbal, Pain, or Unresponsive
Airway Monitor Airway
Breathing Administer Oxygen
Circulation Vital Signs, Skin Color/Temp
Assess Conduct a Simple Patient Assessment
Cool Remove Layers of Clothes, Place Patient in Cool Environment, Wrap Patient in Moist Sheets
Prepare Package Patient for Transport

EMT
Assess Conduct Basic Patient Assessment
Airway Insert an Oral Airway if Indicated
Transport Non –Emergent Transport Unless Patient is Unstable
Consider ALS Intercept

EMT Options/ EMT Intermediate 85
Glucometer Obtain glucose reading use other appropriate protocol if abnormal
Airway Insert Medical Director Approved Advanced Airway Device if Indicated (Multi-lumen Airway, LMA, ET)
IV Establish Peripheral IV Access

EMT-Intermediate 99
Assess Perform Advanced Physical Assessment
Cardiac Monitor Attach Cardiac Monitor, Interpret ECG
Consider Diazepam 5-10mg IV For Seizures
Dysrhythmia *See Cardiac Dysrhythmia Protocol

Paramedic
Assess Perform Comprehensive Assessment
Consider Lorazepam 2-4mg or Midazolam 2-4mg As An Alternate to Diazepam For Seizures
Dysrhythmia *See Cardiac Dysrhythmia Protocol
Non-Traumatic Abdominal Pain

First Responder
Scene Safety –
BSI SAFETY FIRST

Level of Conscious Alert, Verbal, Pain, or Unresponsive
Airway Monitor Airway
Breathing Administer Oxygen
Circulation Vital Signs, Skin Color/Temp
Assess Conduct a Simple Patient Assessment

EMT
Assess Conduct Basic Patient Assessment
Consider Cause of abdominal pain
Transport Non –Emergent Transport Unless Patient is Unstable
Consider ALS Intercept

EMT Options/ EMT Intermediate 85
IV Establish Peripheral IV Access

EMT-Intermediate 99
Assess Perform Advanced Physical Assessment
Consider Pain Management *See Pain Management Protocol
Consider Cardiac Monitoring

Paramedic
Assess Perform Comprehensive Assessment
Consider Pain Management **See Pain Management Protocol
Upper and Lower Gastrointestinal Bleeding
Coffee ground emesis, Tarry black stools, with or without abdominal pain

**First Responder**

- **Scene Safety** – SAFETY FIRST
  - Level of Consciousness: Alert, Verbal, Pain, or Unresponsive
  - Airway: Monitor Airway
  - Breathing: Administer Oxygen
  - Circulation: Vital Signs, Skin Color/Temp
  - Assess: Conduct a Simple Patient Assessment

**EMT**

- Assess: Conduct Basic Patient Assessment
- Transport: Non-Emergent Transport Unless Patient is Unstable
- Consider: ALS Intercept

**EMT Options/ EMT Intermediate 85**

- IV: Establish Peripheral IVs Titrate to BP
  - Consider 2nd IV for Additional Fluid Challenge

**EMT-Intermediate 99**

- Assess: Perform Advanced Physical Assessment
- Consider: Pain Management **See Pain Management Protocol**
  - Consider: Cardiac monitoring

**Paramedic**

- Assess: Perform Comprehensive Assessment
- Consider: Pain Management **See Pain Management Protocol**
Hypotension in the Absence of Trauma

Hypovolemic Shock
Shock present when pulse greater than 120 and systolic BP less than 100 mmHg in a previously normotensive patient; OR systolic drops 40-50 mmHg in a previously hypertensive patient, especially if accompanied by pale, clammy skin, decreased level of consciousness, and poor capillary refill.

First Responder

Scene Safety –
BSI SAFETY FIRST

Level of Consciousness Alert, Verbal, Pain, or Unresponsive
Airway Monitor Airway
Breathing Administer Oxygen
Circulation Vital Signs, Skin Color/Temp
Assess Conduct a Simple Patient Assessment

EMT
Assess Conduct Basic Patient Assessment
Transport Non–Emergent Transport Unless Patient is Unstable
Consider ALS Intercept

EMT Options/ EMT Intermediate 85
IV Establish Peripheral IV Access, Titrate to BP
Consider 2nd IV for Additional Fluid Challenge

EMT-Intermediate 99
Assess Perform Advanced Physical Assessment
Consider Cardiac Monitoring

Paramedic
Assess Perform Comprehensive Assessment
OBSTETRICS and GYNECOLOGIC EMERGENCIES

Imminent Delivery with History of Pregnancy, a Palpable Uterus and Contractions

First Responder
Scene Safety – BSI
- SAFETY FIRST

Level of Conscious
Alert, Verbal, Pain, or Unresponsive

Airway
Monitor Airway

Breathing
Administer Oxygen

Circulation
Vital Signs, Skin Color/Temp

Assess
Conduct a Simple Patient Assessment

Prepare
Mother for Delivery if Crowning

Delivery
Use OB Kit and Deliver Infant
*See Newborn Care Protocol

Post Partum Care
Allow placenta to deliver naturally. Massage top of uterus, put baby to breast. Bring all tissue passed to the hospital. DO NOT forcibly extract any tissue. Place OB Pad
*See Newborn Care Protocol

Monitor
Mother for severe postpartum bleeding
Control Post Partum Bleeding by Massaging the Top of Uterus, and Put Baby to Breast
Do Not Pack Anything in the Vagina

EMT
Assess
Conduct Basic Patient Assessment

Transport
Non –Emergent Transport

Consider
ALS Intercept

EMT Options/ EMT Intermediate 85
IV
Establish Peripheral IV Access

EMT-Intermediate 99
Assess
Perform Advanced Physical Assessment

Paramedic
Assess
Perform Comprehensive Assessment
Newborn Care

First Responder

Scene Safety – BSI

Deliver

Support Head as it Passes from Birth Canal

Airway

Once the Head is Delivered, Suction Mouth Then Nose with Bulb Syringe

EXAM Face/Head for Meconium Stained Fluid

Suction Mouth, Pharynx, Nose until Clear

Cord

After the Delivery Keeping Baby at Level of Perineum, and Once Cord Stops Pulsating

Double Clamp Cord, 6-12 inches from Baby and Cut between Clamps

Dry/Warm

Once Fully Delivered, Dry and Wrap the Newborn

Breathing

Administer Blow by Oxygen

Spontaneous Respirations Absent or <30, Slap or Flick the Soles of the Infant’s Feet or Rub the Newborn’s Back

No Change in 5 Seconds

Begin BVM Respirations

Continue to Warm and Stimulate

Circulation

Pulse Rate < 100

BVM Respirations

Pulse 60 to 80 and Not Rapidly Increasing

Begin Chest Compressions

Pulse < 60

Begin Chest Compressions

Assess

Assess Patient Each 5 Seconds for Changes

Discontinue Chest Compression if Pulse Increases to 100 or Greater AND Maintains

Discontinue BVM ventilations. Once Spontaneous Breathing is >30 and Maintains

EMT

Assess

Conduct Basic Patient Assessment

Transport

Non –Emergent Transport if Stable

Consider

ALS Intercept

EMT Options/ EMT Intermediate 85

Consider

Endotracheal Intubation Only

If Meconium is present and newborn is not vigorous

Intubate Suction through ET, Repeat until Clear, Intubate with Clean Tube

EMT-Intermediate 99

Assess

Perform Advanced Physical Assessment

Consider

IV Access

Paramedic

Assess

Perform Comprehensive Assessment

Newborns benefit from rapid assessment and treatment of the ABC’s and warming/stimulation. Rarely, advanced providers will need medication therapy. EMT 199s and Paramedic see the Pediatric Cardiac Arrest and Dysrhythmia protocols for further guidance.
Birth Complications
Arm or Leg Presentation, Prolapsed Cord, Significant Hemorrhage

First Responder

Scene Safety – BSI
SAFETY FIRST

Level of Conscious
Alert, Verbal, Pain, or Unresponsive

Airway
Monitor Airway

Breathing
Administer Oxygen

Circulation
Vital Signs, Skin Color/Temp

Assess
Conduct a Simple Patient Assessment

Complications
Prolapsed Cord:
Place Patient on Back and Elevate the Hips OR Consider Elbow/Knee Position
Place Sterile-Gloved Index and Middle Fingers into the Vagina,
Push Infant Up to Relieve Pressure on Cord
Check Cord for Pulse.
Coach Mother to Breath Through Contractions and NOT to Push/Bear Down

Breech Delivery and Unable to Deliver Head:
Place Gloved Hand in the Vagina with Palm Towards Baby’s Face
Form a V on Either Side of the Baby’s Nose/ Mouth to Form Air Passage to Nose/ Mouth
Coach Mother to Breath Through Contractions and NOT to Push/Bear Down

Arm or Leg Presentation:
Place Patient on Back and Elevate the Hips OR Consider Elbow/Knee Position
Coach Mother to Breath Through Contractions and NOT to Push/Bear Down

If Significant Hemorrhage:
Place External Dressings, Monitor Bleeding and Elevate Hips
Coach Mother to Breath Through Contraction and NOT to Push/Bear Down

EMT

Assess
Conduct Basic Patient Assessment

Transport
Consider Emergent Transport

Consider
ALS Intercept

EMT Options/ EMT Intermediate 85

IV
Establish peripheral IV access

EMT Intermediate 99

Assess
Perform Advanced Physical Assessment

Paramedic

Assess
Perform Comprehensive Assessment
### Hypertensive Disorders of Pregnancy

**Toxemia of Pregnancy/Pre-Eclampsia/Eclampsia**

<table>
<thead>
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<th><strong>First Responder</strong></th>
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<tbody>
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<td><strong>Scene Safety</strong></td>
<td>SAFETY FIRST</td>
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<tr>
<td><strong>BSI</strong></td>
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<tr>
<td><strong>Level of</strong></td>
<td>Alert, Verbal, Pain, or Unresponsive</td>
</tr>
<tr>
<td><strong>Conscious</strong></td>
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</tr>
<tr>
<td><strong>Airway</strong></td>
<td>Monitor Airway</td>
</tr>
<tr>
<td><strong>Breathing</strong></td>
<td>Administer Oxygen</td>
</tr>
<tr>
<td><strong>Circulation</strong></td>
<td>Vital Signs</td>
</tr>
<tr>
<td><strong>Assess</strong></td>
<td>Conduct a Simple Patient Assessment</td>
</tr>
<tr>
<td><strong>Position</strong></td>
<td>Move Patient onto LEFT Side</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>EMT</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>Assess</strong></td>
<td>Conduct Basic Patient Assessment</td>
</tr>
<tr>
<td><strong>Transport</strong></td>
<td>Non-Emergent Unless Patient Becomes Unstable</td>
</tr>
<tr>
<td><strong>Consider</strong></td>
<td>ALS Intercept</td>
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<thead>
<tr>
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<tbody>
<tr>
<td><strong>IV</strong></td>
<td>Establish Peripheral IV Access</td>
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<th><strong>EMT- Intermediates 99</strong></th>
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<tr>
<td><strong>Assess</strong></td>
<td>Perform Advanced Physical Assessment</td>
</tr>
<tr>
<td><strong>Consider</strong></td>
<td>Diazepam 5-10mg IV for Seizures</td>
</tr>
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<th><strong>Paramedic</strong></th>
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<tr>
<td><strong>Assess</strong></td>
<td>Perform Comprehensive Assessment</td>
</tr>
<tr>
<td><strong>Consider</strong></td>
<td>Administer Magnesium Sulfate 2 - 6gm, Diluted to 25%, Slow IVP Over 3-5 Minutes, May Repeat Once After 5 Minutes.</td>
</tr>
<tr>
<td><strong>Consider</strong></td>
<td>Lorazepam 2-4mg</td>
</tr>
<tr>
<td><strong>or</strong></td>
<td>Midazolam 2-4mg</td>
</tr>
<tr>
<td><strong>As An Alternate to Diazepam for Seizures</strong></td>
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</tbody>
</table>

OB - 40
Vaginal Bleeding with or without Gynecological Pain

**First Responder**
- Scene Safety-
- BSI: SAFETY FIRST
- Level of Conscious: Alert, Verbal, Pain, or Unresponsive
- Airway: Monitor Airway
- Breathing: Administer Oxygen
- Circulation: Vital Signs
- Assess: Conduct a Simple Patient Assessment

**EMT**
- Assess: Conduct Basic Patient Assessment
- Transport: Non-emergent Unless Patient Becomes Unstable
- Consider: ALS Intercept

**EMT Options/ EMT Intermediate 85**
- IV: Establish Peripheral IV Access

**EMT- Intermediates 99**
- Assess: Perform Advanced Physical Assessment
- Consider: Pain Management **See Pain Management Protocol**

**Paramedic**
- Assess: Perform Comprehensive Assessment
- Consider: Pain Management **See pain Management Protocol**
1. Body Substance Isolation and Scene Safety

2. Airway Management, Oxygen Administration, Vital Signs

3. Control the cervical spine. Assume cervical spine injury is present in any patient who has sustained trauma with:
   a. Neurological deficit
   b. Neck pain or tenderness with palpation
   c. Altered mental status
   d. Presence of a distracting injury
   e. Any condition which may mask c-spine discomfort (i.e. recreational drug use, ETOH)
   f. Any significant mechanism of injury

4. Remove all motor vehicle helmets to avoid airway management problems according to American College of Surgeons guidelines.

5. Football helmets should not be removed when shoulder pads are in place. Remove either both helmet and pads or allow both to remain in place, consider removing face guard from helmet to allow for airway access.

6. Control hemorrhage through
   a. Direct pressure
   b. Elevate effected extremity
   c. Pressure dressing
   d. Pressure points
   e. Tourniquet (as a last resort), record time placed

7. Treat hypovolemic shock: Assume shock present when pulse greater than 120 and/or systolic BP less than 100 in a previously normotensive patient, especially if accompanied by pale clammy skin, decreased level of consciousness, and capillary refill > 2 sec.

8. Fractures/Dislocations – General Principles
   a. Check and record peripheral pulses and neurological status before and after manipulating or splinting fractures.
   b. Apply gentle in-line traction to fractures with the exception of dislocations or fractures involving joints (especially the elbow).
   c. May straighten severely injured angulated fractures of extremities with exception of those involving knee or elbow (except if neurovascular bundle already compromised).
   d. May use traction splint with open or closed femur fractures.
   e. Immobilize fractures, including joint above and below site of fracture. DO NOT use inflatable splints for fractures of the humerus or the femur.
      The PASG may be used to stabilize any fractures of the pelvis or lower extremities

9. DO NOT remove any impaled object unless obstructing airway

10. Pain Management should be considered once any life threatening injuries are treated AND vital sign indicate the patient is stable enough to tolerate the medication.

11. Consider 2 large bore IVs for all significant trauma. All IVs are to be titrated to vital signs
Amendment

The *General Trauma Management – Priorities for Treatment* is amended to reflect current best practices in hemorrhage control.

For All Levels of Out of Hospital Care Providers

1. Hemorrhage Control - Open Wounds to Neck
   a. Apply Direct pressure without compromising airway
   b. Seal wound with occlusive dressing
2. Hemorrhage Control - Open Wounds to Chest
   a. Seal suspected or actual sucking chest wound(s) with occlusive dressing
   b. Apply Direct pressure without compromising breathing
3. Hemorrhage Control - Open Wounds to the extremities
   a. Apply direct pressure and/or pressure dressing
   b. If bleeding continues
      i. Apply tourniquet
      ii. Tighten tourniquet enough to stop arterial blood flow
   c. Consider application of tourniquet immediately in extremity amputations and/or near amputations

Tourniquet Application Site
Exposed the entire extremity
Apply the tourniquet proximal (above the wound)
Tighten the tourniquet device to stop hemorrhage

Acceptable Tourniquets
Cravat using the “Spanish Windlass” technique
Commercially available non-elastic tourniquets with a band width of greater than 1 inch
Commercially available pneumatic devices designed for pre-hospital use
Blood Pressure cuff

Tourniquet Reevaluation
Do not cover the tourniquet
Reassess hemorrhage control and tighten tourniquet as needed

Documentation and Report to Destination Facility
The transporting care provider will
   verbally report the tourniquet application
time applied
Patient Care report will have tourniquet application noted including application time

Unacceptable Tourniquets
Cord, rope, string
Bands 1 inch or less in width
Elastic bands regardless of width
Nebraska Model Protocols

Trauma System

1. Evaluate dispatch information, the scene, mechanism of injury, patient presentation, distance to trauma center
   a. Consider Helicopter Air Ambulance Standby (helicopter stays at its base on alert)
      i. Reports of Penetrating and/or Significant Blunt Trauma to head, neck or torso
      ii. Reports of entrapment
      iii. Reports of burns and/or toxic inhalation injury
      iv. Reports of decreased or loss of consciousness
      v. Distance/time from the scene to a designated trauma center exceeds 30 minutes
      vi. Reports of a multiple patient incident
   b. Consider Helicopter Air Ambulance response if
      i. Patient condition indicates shock
      ii. Confirmation of Penetrating and/or Significant Blunt Trauma to head, neck or torso
      iii. Confirmation of amputated extremities above fingers/toes, and/or multiple long bone fractures
      iv. Confirmation of burns >20% BSA or face/airway burns
      v. Confirmation of a toxic inhalation injury with dyspnea
      vi. Confirmation of entrapment with extrication/rescue needed
      vii. Confirmation of decreased or loss of consciousness
      viii. Confirmation of a multiple patient incident
      ix. Location of the incident may allow the helicopter to make it first on a scene or at the same time as ground ambulance.
   c. Additional Considerations in the request for Helicopter Air Ambulance
      i. Your geographical distance from the Helicopter Air Ambulance, the local hospital (local trauma center), and regional trauma center.
      ii. Time will be saved in delivering patient to a Trauma Center
      iii. ALS level of care being delivered to the patient more timely
      iv. Do not delay transport, consider an intercept with the helicopter if that can be done safely
      v. Helicopter Air Ambulance may divert to prearranged landing zone or a local hospital
   d. Consider ALS ground intercept be dispatched
      i. Patient condition indicates shock
      ii. Reports or confirmation of Penetrating and/or Significant Blunt Trauma to head, neck or torso
      iii. Reports or confirmation of amputated extremities above fingers/toes, and/or multiple long bone fractures
      iv. Reports or confirmation of burns
      v. Reports or confirmation of toxic inhalation injury
      vi. Reports or confirmation of entrapment with extrication/rescue needed
      vii. Reports or confirmation of decreased or loss of consciousness
      viii. Reports or confirmation of a multiple patient incident
      ix. Injuries that may require pain management
      x. ALS may arrive sooner by ground then by Air Ambulance
      xi. Helicopter Air Ambulance unavailable or for other reason is not an option for this call

2. Notify Medical Control of Trauma Patient and possibility of trauma center candidate as early as possible
3. Consider Trauma System Activation and consult with medical control;
   a. Vitals and LOC
      i. Heart Rate >130
      ii. Systolic BP <85
      iii. Respiratory rate <10 or >29
      iv. GCS <13
   b. Anatomy of Injury
      i. Penetrating Trauma to head, neck, torso, groin
      ii. Combinations of burns >20% or face/airway burns
      iii. Amputation above wrist/ankle
      iv. Spinal Cord Injury
      v. Flail Chest
      vi. Two or more proximal long bone injuries
   c. Biomechanics of injury
      i. Ejected from Vehicle
      ii. Auto vs Pedestrian/Bicycle >5 mph
      iii. Motorcycle/ ATV crash
      iv. Pedestrian thrown or run over
   d. Other Risk Factors
      i. Provider impression
      ii. Extremity(s)
         1. age (<2 >60)
         2. environment (heat/cold)
         3. Health/Illness (Pregnancy, COPD, CHF, Diabetes)
         4. Haz/Mat
      iii. High Energy Transfer
         1. Rollover
         2. Fall >10 feet
         3. Extrications > 20 minutes
      iv. Burn Injury
         1. 2nd and 3rd degree burns of face, hands, feet, perineum
         2. significant electrical burns
         3. inhalation injury

4. Procedure
   a. Consult with medical control
   b. Advise patient condition and injuries
   c. Request Trauma System Activation
   d. Medical Direction approves trauma system activation
      i. Transport patient to closest designated trauma center OR Local hospital for immediate stabilization.
   e. If not already done consider ALS ground intercept or Helicopter Air Ambulance transport

5. Follow your Trauma Regions guidelines for transport of patient to the most appropriate facility and for more guidance on trauma system in your area.

The goal of the TRAUMA SYSTEM is to get the injured patient to the most appropriate facility by the most appropriate means in a timely manner. EMS needs to consult with Medical Control if any patient meets trauma system guidelines so the patient is transported to the most appropriate facility. In some cases the patient may bypass a local hospital or stop only to be stabilized by the local hospital then transferred on to a regional trauma center.
Head / Facial Injuries

**First Responder**

Scene Safety - BSI

- SAFETY FIRST

- Level of Consciousness: Alert, Verbal, Pain, or Unresponsive

- Airway: Monitor Airway

- Breathing: Administer Oxygen. Consider assisting ventilations with BVM

- Circulation: Vital Signs, Control External bleeding

- Eye Trauma: Chemical exposure – Continuously Flush Eye

- Penetrating Object: Leave in Place, Stabilize with Dressings, Patch Both Eyes

- Loss of Tissue: Keep Moist and Transport with Patient

- Assess: Conduct a Simple Patient Assessment

**EMT**

- Assess: Conduct Basic Patient Assessment

- Airway: If No Gag Reflex, Insert Oral Airway

- DO NOT USE NASAL AIRWAY

- Transport: Non-emergent Unless Patient Becomes Unstable

- Consider: ALS Intercept

**EMT Options/ EMT Intermediate 85**

- Airway: If No Gag reflex, Insert Medical Director Approved Advanced Airway Device

- Multi-lumen Airway use with Caution if Facial Fractures Suspected

- IV: Establish Peripheral IV Access

**EMT- Intermediates 99**

- Assess: Perform Advanced Physical Assessment

- Cardiac: Determine Cardiac Rhythm

- Airway: Oral Intubation Only DO NOT NASAL INTUBATE

**Paramedic**

- Assess: Perform Comprehensive Assessment

- Monitor: O2 Saturation and End Tidal CO2

- Consider: Emergency Cricothyrotomy if Oral Intubation Cannot be Performed

- Consider: Rapid Sequence Intubation (RSI)

  - *See RSI Protocol

**Brain Trauma Guidelines**

- Maintain:
  - a. O2 Sat > 90%
  - b. Systolic BP >90
  - c. EtCO$_2$ 30 to 35mmHg
Soft Tissue Neck Injuries

First Responder
Scene Safety- BSI
SAFETY FIRST

Level of Conscious
Alert, Verbal, Pain, or Unresponsive

Airway Monitor Airway

Breathing Administer Oxygen

Circulation Vital Signs, Control External Bleeding with Occlusive Dressing

Assess Conduct a Simple Patient Assessment

EMT
Assess Conduct Basic Patient Assessment

Airway If No Gag Reflex, Insert Oral Airway
If Gag Reflex May Use Nasal Airway if No Head Injury Suspected AND Patient has Decreased LOC

Transport Non-emergent Unless Patient Becomes Unstable

Consider ALS Intercept

EMT Options/ EMT Intermediate 85
Airway If No Gag reflex, Insert Medical Director Approved Advanced Airway Device (Multi-lumen Airway, LMA, ET)

IV Establish Peripheral IV Access

EMT- Intermediates 99
Assess Perform Advanced Physical Assessment

Paramedic
Assess Perform Comprehensive Assessment

Consider Emergency Cricothyrotomy if Oral Intubation Cannot be Performed

Consider Rapid Sequence Intubation (RSI)
*See RSI Protocol
Chest Injuries

First Responder

Scene Safety-BSI SAFETY FIRST

Level of Conscious Alert, Verbal, Pain, or Unresponsive

Airway Monitor Airway

Breathing Administer Oxygen
  Seal Sucking Chest Wounds with Occlusive Dressing
  Remove Occlusive Dressing if Patient’s Breathing Deteriorates

Circulation Vital Signs,
Assess Conduct a Simple Patient Assessment

EMT

Assess Conduct Basic Patient Assessment

Airway If No Gag reflex, Insert Oral Airway
  If Gag Reflex may use Nasal Airway if No Head Injury Suspected
  AND Patient has Decreased LOC

Transport Non-emergent Unless Patient Becomes Unstable
Consider ALS Intercept

EMT Options/ EMT Intermediate 85

Airway If No Gag reflex, Insert Medical Director Approved Advanced Airway Device
  (Multi-lumen Airway, LMA, ET)

IV Establish Peripheral IV Access

EMT- Intermediates 99

Assess Perform Advanced Physical Assessment

Cardiac Monitor Attach Cardiac Monitor, Interpret ECG

Consider Needle Decompression for Tension Pneumothorax

Paramedic

Assess Perform Comprehensive Assessment

Consider Rapid Sequence Intubation (RSI)
  *See RSI Protocol
Abdominal /Pelvic Injuries

**First Responder**

Scene Safety-BSI   SAFETY FIRST

Level of Conscious  Alert, Verbal, Pain, or Unresponsive
Airway   Monitor Airway
Breathing   Administer Oxygen
Circulation   Vital Signs
Control External Bleeding
Seal Abdominal Eviscerations with Occlusive Dressing
DO NOT REPLACE/REINSERT ABDOMINAL CONTENTS

Assess   Conduct a Simple Patient Assessment

**EMT**

Assess   Conduct Basic Patient Assessment
Consider   Splint Unstable Pelvis
Transport   Non-emergent Unless Patient Becomes Unstable
Consider   ALS Intercept

**EMT Options/ EMT Intermediate 85**

IV   Establish Peripheral IV Access

**EMT- Intermediates 99**

Assess   Perform Advanced Physical Assessment
Consider   Cardiac Monitoring

**Paramedic**

Assess   Perform Comprehensive Assessment
**First Responder**

Scene Safety-BSI  
SAFETY FIRST

- **Level of Conscious**  
  Alert, Verbal, Pain, or Unresponsive

- **Airway**  
  Monitor Airway

- **Breathing**  
  Administer Oxygen

- **Circulation**  
  Vital Signs
  Control External Bleeding

- **Assess**  
  Conduct a Simple Patient Assessment

- **Splint**  
  Splint Extremity Deformities
  Assess Pulse Distal to Injury Prior To and After Splint is Applied

- **Ice/elevate**  
  Apply Ice Pack and If Possible Elevate the Extremity

**EMT**

- **Assess**  
  Conduct Basic Patient Assessment

- **Monitor**  
  Pulse distal to injury,
  Suspected Fractures:
  If Pulse Absent Follow Listed Steps, Stopping at the Step which Pulse Returns;
  1st Loosen Splint Recheck Pulse
  2nd Gently Reposition Limb/Straighten
  3rd Apply Gentle Traction to Limb
  4th Contact Medical Control

  Suspected Dislocations:
  If Pulse Absent Contact Medical Control

- **Transport**  
  Non-emergent Unless Patient Becomes Unstable OR Patient has No Pulse Distal to Injury

- **Consider**  
  ALS Intercept

**EMT Options/ EMT Intermediate 85**

- **IV**  
  Establish Peripheral IV Access

**EMT- Intermediates 99**

- **Assess**  
  Perform Advanced Physical Assessment

- **Consider**  
  Pain Management *See Pain Management Protocol

**Paramedic**

- **Assess**  
  Perform Comprehensive Assessment

- **Consider**  
  Pain Management *See Pain Management Protocol
Ingested Poisons

**First Responder**
- **Scene Safety** – SAFETY FIRST
- **Level of Conscious** Alert, Verbal, Pain, or Unresponsive
- **Airway** Monitor Airway
- **Breathing** Administer Oxygen
- **Circulation** Vital Signs, Skin Color/Temp

Assess Conduct a Simple Patient Assessment – Gain Information About the Ingested Poison Product/Medication Name, Amount Ingested, Time of Ingestion
Contact Poison Control Center According to Local Procedure

**EMT**
Assess Conduct Basic Patient Assessment
Consider Oral Activated Charcoal if Patient Can Maintain His/Her Own Airway
Transport Non Emergent Unless Patient Unstable
Consider ALS Intercept

**EMT Options/ EMT Intermediate 85**
Consider Inserting Medical Director Approved Advanced Airway Device (Multi-lumen Airway, LMA, ET)
Consider Obtain Glucose Reading, And if Indicated Oral Glucose AND if Patient’s Airway can be Maintained
IV Establish Peripheral IV Access

**EMT-Intermediate 99**
Assess Perform Advanced Physical Assessment
Suspected If Poison is Identified or a High Suspicion *See Specific Agent/Toxin Protocols
Consider Dextrose 50% 25g IVP If Indicated by Glucometer Reading
Consider Naloxone 0.4-2mg IV If Narcotic Drug Overdose is Suspected
Cardiac Monitor Attach Cardiac Monitor, Interpret ECG
Dysrhythmia *See Cardiac Dysrhythmia Protocol

**Paramedic**
Assess Perform Comprehensive Assessment
Dysrhythmia *See Cardiac Dysrhythmia Protocol
Specific Agents/Toxins

**Known or High Suspicion of Narcotic Overdose**

This protocol is for the EMT-I 99 and Paramedic

**Basic Life Support**

BLS Measures as Outlined in the Ingested Poisons Protocol

**EMT-Intermediate 99**

- **Assess**
  - Perform Advanced Physical Assessment

- **Airway**
  - If Airway can be Managed with Manual Maneuvers and Suction delay
  - Advanced Airway until Naloxone is Given.

- **Cardiac Monitor**
  - Attach Cardiac Monitor, Interpret ECG

- **Consider**
  - Naloxone 0.4mg to 2mg IV

- **Dysrhythmia**
  - *See Cardiac Dysrhythmia Protocol

- **Assess**
  - If Patient Condition does not Improve Consider Other Possible Causes

- **Prepare**
  - The Patient May Have to be Restrained Once the Effects of the Narcotic is Reversed

**Paramedic**

- **Assess**
  - Perform Comprehensive Assessment

- **Dysrhythmia**
  - *See Cardiac Dysrhythmia Protocol

***Narcotic overdoses may require additional doses of Naloxone to maintain the patient’s vital signs and LOC. The patient must be closely monitored.***
Specific Agents/Toxins
Known Tricyclic Anti-Depressant Overdose

This protocol is for the EMT-I 99 and Paramedic

Basic Life Support
BLS Measures as Outlined in the *Ingested Poisons* Protocol

EMT-Intermediate 99
Assess: Perform Advanced Physical Assessment
Consider: Inserting Medical Director Approved Advanced Airway Device
          (Multi-lumen Airway, LMA, ET)

Cardiac
Monitor: Attach Cardiac Monitor, Interpret ECG

Dysrhythmia: *See Cardiac Dysrhythmia Protocol

Consider: 500 cc Fluid Challenge
For Hypotension

Paramedic
Assess: Perform Comprehensive Assessment

Dysrhythmia: *See Cardiac Dysrhythmia Protocol

Consider: Sodium Bicarbonate
1mEq/kg, slow IVP
Specific Agents/Toxins
Known or High Suspicion of Organophosphate OR Nerves Agent Exposure

This protocol is for the EMT-I 99 and Paramedic

Basic Life Support
The patient must be removed from the hazard area and decontaminated by trained rescuers
BLS measures as outlined in the Ingested Poisons Protocol

EMT-Intermediate 99
Assess Perform Advanced Physical Assessment

Consider Inserting Medical Director Approved Advanced Airway Device
(Multi-lumen Airway, LMA, ET)

Cardiac
Monitor Attach Cardiac Monitor, Interpret ECG

Dysrhythmia *See Cardiac Dysrhythmia Protocol

Consider
Atropine 2mg IV
Every 5 Minutes Until Symptoms Relieved

Consider
Diazepam 5-10mg for Seizures

Paramedic
Assess Perform Comprehensive Assessment

Dysrhythmia *See Cardiac Dysrhythmia Protocol

Alternate Medication
May Consider Lorazepam 2-4mg
or
Midazolam 2-4mg as an alternate to Diazepam
Specific Agents/Toxins
Known Calcium Channel Blocker Overdose

This protocol is for the EMT-I 99 and Paramedic

Basic Life Support
BLS measures as outlined in the Ingested Poisons Protocol

EMT-Intermediate 99
Assess Perform Advanced Physical Assessment

Consider Inserting Medical Director Approved Advanced Airway Device (Multi-lumen Airway, LMA, ET)

Cardiac Monitor Attach Cardiac Monitor, Interpret ECG

Dysrhythmia *See Cardiac Dysrhythmia Protocol

Paramedic
Assess Perform Comprehensive Assessment

Consider Calcium Chloride 500 – 1000mg Slow IV

Dysrhythmia *See Cardiac Dysrhythmia Protocol
Toxic Inhalation

First Responder

Scene Safety – SAFETY FIRST
BSI
PATIENT SHOULD BE REMOVED FROM HAZARD AREA BY TRAINED RESCUERS AND IF REQUIRED DECONTAMINATED

Level of Conscious
Alert, Verbal, Pain, or Unresponsive
Airway
Monitor Airway
Breathing
Administer Oxygen
Consider
Assisting Ventilations with BVM
Circulation
Vital Signs, Skin Color/Temp
Assess
Conduct a Simple Patient Assessment

EMT
Assess
Conduct Basic Patient Assessment
Consider
Assisting Patient with His/Her Metered Dose Inhaler
Consider
Albuterol 2.5mg in 3cc given by Nebulizer Device
Transport
Non –Emergent Transport Unless Patient is Unstable
Consider
ALS Intercept

EMT Options/ EMT Intermediate 85
IV
Establish Peripheral IV Access

EMT-Intermediate 99
Assess
Perform Advanced Physical Assessment
Consider
Bronchodilator Medication by Nebulizer
*See Bronchodilator Protocol
Cardiac
Monitor
Attach Cardiac Monitor, Interpret ECG

Paramedic
Assess
Perform Comprehensive Assessment
Consider
Rapid Sequence Intubation (RSI)
***See RSI Protocol***
Nebraska Model Protocols
01/22/2007
Revised 2/26/2010

Burns

First Responder

Scene Safety - BSI

SAFETY FIRST

Stop
Burning Process,
Remove Heat Source if Possible
Cool Burning Material Adhering to the Patient

Level of Conscious
Alert, Verbal, Pain, or Unresponsive

Airway
Monitor Airway

Breathing
Administer Oxygen

Circulation
Vital Signs

Assess
Conduct a Simple Patient Assessment

Prevent
Hypothermia

Remove
Jewelry or Other Restrictive Items From or Near Burn Area
Burned Clothing, Cut Around Clothing Adhering to the Skin

Estimate
Body Surface Area (BSA) Burned

Dress
Cover Burn Area with Dry Bandages or Sheets
Burns
If BSA <10% May Cool Burn Area
PREVENT HYPOTHERMIA

EMT

Assess
Conduct Basic Patient Assessment

Transport
Emergent for Burns to Face/Airway
Emergent for >30 Minutes Transport Time with No ALS and Burns >10%BSA

Consider
ALS Intercept or ALS Helicopter transport for any burns to face/airway

EMT Options/ EMT Intermediate 85

IV
Establish Peripheral IV Access

EMT- Intermediates 99

Assess
Perform Advanced Physical Assessment

Consider
Pain Management *See Pain Management Protocol

Paramedic

Assess
Perform Comprehensive Assessment

Consider
Pain Management *See Pain Management Protocol

Consider
Rapid Sequence Intubation (RSI) for Facial/Airway burns
***See RSI Protocol
# Snake Bite

## First Responder

<table>
<thead>
<tr>
<th>Category</th>
<th>Instructions</th>
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</thead>
<tbody>
<tr>
<td>Scene Safety-BSI</td>
<td>SAFETY FIRST</td>
</tr>
<tr>
<td>Level of Conscious</td>
<td>Alert, Verbal, Pain, or Unresponsive</td>
</tr>
<tr>
<td>Airway</td>
<td>Monitor Airway</td>
</tr>
<tr>
<td>Breathing</td>
<td>Administer Oxygen</td>
</tr>
<tr>
<td>Circulation</td>
<td>Vital Signs</td>
</tr>
</tbody>
</table>
| Calm       | Calm Patient, Keep Patient still
Keep Extremity BELOW the Level of the Heart                                                                 |
| Rinse      | The Bite Site DO NOT RUB or SCRUB
DO NOT APPLY ICE, DO NOT CUT/INCISE BITE                                                                   |
| Apply      | Restrictive Band 1 Inch above the Bite.
The Pulse Should be Palpable Distal to the Band                                                          |
| Assess     | Conduct a Simple Patient Assessment                                                                      |
| Identify   | Investigate the Scene to Determine the Type of Snake
Consider Contacting a Veterinarian or Other Expert to Identify the Type of Snake
Do Not Delay Transport Coordinate with Other Responders/Law Enforcement to Assist |

## EMT

<table>
<thead>
<tr>
<th>Category</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess</td>
<td>Conduct Basic Patient Assessment</td>
</tr>
<tr>
<td>Transport</td>
<td>Non-emergent Unless Patient Becomes Unstable</td>
</tr>
<tr>
<td>Consider</td>
<td>ALS Intercept</td>
</tr>
</tbody>
</table>

## EMT Options/ EMT Intermediate 85

<table>
<thead>
<tr>
<th>Category</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV</td>
<td>Establish Peripheral IV Access</td>
</tr>
</tbody>
</table>

## EMT- Intermediates 99

<table>
<thead>
<tr>
<th>Category</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess</td>
<td>Perform Advanced Physical Assessment</td>
</tr>
<tr>
<td>Consider</td>
<td>Pain Management *See Pain Management Protocol</td>
</tr>
</tbody>
</table>

## Paramedic

<table>
<thead>
<tr>
<th>Category</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess</td>
<td>Perform Comprehensive Assessment</td>
</tr>
<tr>
<td>Consider</td>
<td>Pain Management *See Pain Management Protocol</td>
</tr>
</tbody>
</table>
**PEDIATRICS**
Cardiopulmonary Arrest

**First Responder**
Scene Safety –
BSI
SAFETY FIRST

Level of Conscious
Confirm unresponsiveness

AED
Attach AED
For Patient Greater Then Age 1
** SEE Pediatric AED Protocol***
For Patients Older then Age 8 AND 60 Pounds
**SEE Adult AED Protocol***

Airway
Establish an Airway

Breathing
Ventilate with Bag Valve Mask Attached to O2 OR Pocket Mask

Circulation
Begin Chest Compressions if Pulseless
OR
Bradycardia (< 80 beats/min in newborn or < 60 beats/min in infants)
AND Do Not Respond to Ventilation and Oxygenation

Prepare
Package for transport

**EMT**

Airway
Insert an Oral Airway

Assess
Patient’s Weight

Transport
Emergent

Consider
ALS Intercept

**EMT Options / EMT Intermediate 85**

Airway
Insert Medical Director Approved Advanced Airway Device
(Multi-lumen Airway, LMA, ET)
Multi-lumen Airways Only for Patients 5’2” or Taller

IV
Establish Peripheral IV Access

**EMT Intermediate 99**

Consider
IO Access In Lieu of IV Access

PALS
Follow Appropriate Pediatric Cardiac Arrest Algorithm

**Paramedic**

PALS
Follow Appropriate Pediatric Cardiac Arrest Algorithm

**Note:** If the patient regains a pulse see the Pediatric Post Cardiac Arrest – Return of Pulse protocol
**Pediatric AED Protocol**

**ALL LEVELS**

<table>
<thead>
<tr>
<th>Action</th>
<th>Step</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirm</td>
<td>Patient is Pulseless</td>
</tr>
<tr>
<td>Begin CPR</td>
<td>Do Two minutes of CPR</td>
</tr>
<tr>
<td>AED</td>
<td>Turn On AED Attach Pediatric AED Pads or Activate Pediatric Mode</td>
</tr>
</tbody>
</table>

**MUST USE A PEDIATRIC APPROVED AED UNLESS PHYSICIAN MEDICAL DIRECTOR APPROVES THE USE OF ADULT AED FOR PEDIATRIC PATIENTS**

<table>
<thead>
<tr>
<th>Analyze</th>
<th>Push Analyze Button</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow Voice Prompt</td>
<td>Push to Shock OR No Shock Advised Check Pulse for no more than 10 seconds</td>
</tr>
<tr>
<td>CPR</td>
<td>Perform 2 minutes of CPR Do 2 minute of CPR</td>
</tr>
<tr>
<td>Analyze</td>
<td>Push Analyze Button</td>
</tr>
</tbody>
</table>

**Follow Voice Prompt**

<table>
<thead>
<tr>
<th>Push to Shock OR No Shock Advised Check Pulse for no more than 10 seconds</th>
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</thead>
<tbody>
<tr>
<td>Push Analyze Button</td>
</tr>
<tr>
<td>Push Analyze Button</td>
</tr>
<tr>
<td>Push Analyze Button every 4 minutes</td>
</tr>
</tbody>
</table>

**Considerations:**

- If the “No Shock Advised” prompt is heard after three consecutive analyze steps continue CPR and package for transport and for EMT and higher level begin transport.

- If No shock advised and patient has return of pulse see *Pediatric Post Cardiac Arrest – Return of Pulse* protocol.
**Pediatric Cardiac Arrest Algorithm**
*V-Fib/Pulseless VT*

**EMT-Intermediate 99**

- CPR: Un-witnessed Arrest Perform 5 cycles (2 Minutes) CPR
  - Witnessed Arrest go directly to Confirm Cardiac Rhythm
- Confirm: Cardiac Rhythm
- Shock: Biphasic and Monophasic
  - 2J/Kg
- CPR: Perform CPR immediately after shock
- Rhythm: Stop CPR Check Rhythm
- CPR: Resume CPR while Defibrillator Charges
- Shock: Biphasic and Monophasic
  - 4J/Kg
- CPR: Perform CPR immediately after shock
- Repeat: Repeat successive shocks at 4J/kg with minimal interruption to CPR

**Airway**
- Establish an Airway with an Advanced Airway Device at any time with minimal interruption to CPR

**Breathing**
- Ventilation with Bag Valve Device Give 1 breaths to 15 compressions until advanced airway is placed then give 8 to 10 breaths per minute

**Circulation**
- Administer chest compressions at 100 per minute
- Establish IV or IO at any time with no interruption to CPR

**Medication Consideration**
- Epinephrine 0.01mg/Kg Every 3 – 5 Minutes
- Lidocaine 1mg/kg 1st dose
- Amiodarone 5mg/Kg 1st dose

**Paramedic**

**Medication Consideration**
- Magnesium 25 – 50 mg/kg to max of 2 grams for torsades de pointes
**Pediatric Cardiac Arrest Algorithm**  
**Asystole/PEA**

**EMT-Intermediate 99**

<table>
<thead>
<tr>
<th>Confirm</th>
<th>Cardiac Rhythm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airway</td>
<td>Establish Airway Endotracheal Intubation Preferred</td>
</tr>
<tr>
<td>Breathing</td>
<td>Ventilation with Bag Valve Mask attached to O2</td>
</tr>
<tr>
<td>Circulation</td>
<td>Chest Compressions and Establish Peripheral IV Access or IO Access</td>
</tr>
</tbody>
</table>
| Medication               | Epinephrine 0.01mg/Kg (1:10,000) IV/IO Every 3-5 Minutes  
                          | Or Epinephrine 0.1mg/Kg (1:1,000) ET  
                          | Every 3-5 Minutes |
| Intervention             | Drug Evaluate for change Repeat |
| Consider                 | Consider Causes  
                          | Hypovolemia Consider Fluid Boluses 20cc/Kg  
                          | Tension Pneumothorax Consider Needle Decompression  
                          | Hypothermia Consider Warming Patient |

**Paramedic**

| Consider                  | Consider causes  
                          | Acidosis Consider Sodium Bicarbonate  
                          | Tricyclic Overdose Consider Sodium Bicarbonate  
                          | Calcium Channel Blocker Consider Calcium Chloride  
                          | Overdose Consider Calcium Chloride |

| Medication Doses          | Sodium Bicarbonate 8.4% 1mEq/Kg (4.2% in Neonates)  
                          | Calcium Chloride 20 to 25 mg/Kg |
Pediatric Post Cardiac Arrest – Return of Pulse

With access to AEDs the OOH care provider may respond to a person who has been successfully defibrillated OR the OOH provider may successfully defibrillate/resuscitate a cardiac arrest victim.

First Responder
Scene Safety – SAFETY FIRST
Level of Consciousness Confirm Unresponsiveness
Airway Establish an Airway
Breathing Assist Ventilations with Bag Valve Mask
Circulation Confirm Pulse Present, Recheck Often
Assess Conduct Simple Patient Assessment

EMT
Airway Insert Oral Airway
Assess Perform Basic Patient Assessment
Transport Emergent
Consider ALS Intercept

EMT Options / EMT Intermediate 85
Airway Insert Medical Director Approved Advanced Airway Device Appropriate for Age and Size (Multi-lumen Airway, LMA, ET)
IV Establish Peripheral IV Access
Consider 20cc/kg Fluid Bolus if Hypotensive for Age

EMT Intermediate 99
Consider IO access In Lieu of IV Access
Assess Perform Advanced Assessment
Cardiac Monitor Determine Cardiac Rhythm
Dysrhythmia Treat with Appropriate Pediatric Advance Cardiac Dysrhythmia Protocol

Paramedic
Assess Perform Comprehensive Assessment
Dysrhythmia Treat with Appropriate Pediatric Advanced Cardiac Dysrhythmia Protocol
Pediatric General Cardiac Dysrhythmia

The First Responder, EMT, EMT with Option, and EMT-I 85 will only detect by evaluation of the pulse whether the pulse is fast, slow, or normal rate and if it is regular or irregular. EMT-I 99 and Paramedic will interpret the cardiac rhythm. Generally pediatric patients do not have cardiac dysrhythmia due to cardiac disease, most often the cause is and airway/ventilation problem or volume problem. The OOH provider should secure and airway and ventilate with a BVM for the pediatric patient who shows the sign and symptoms of poor perfusion.

First Responder
Scene Safety – SAFETY FIRST
Level of Alert, Verbal, Painful, or Unresponsive
Conscious
Airway Monitor Airway
Breathing Administer Oxygen
Consider Assisting Ventilations with BVM
Circulation Assess Pulse Rate, Rhythm, and Quality
Vital Signs
Begin chest compressions if heart rate <60/min in infants
Assess Conduct Simple Patient Assessment
Prepare Prepare patient for transport

EMT
Assess Perform a Basic Assessment
Transport Non-emergent Transport Unless Patient Unstable
Consider ALS Intercept

EMT Options / EMT Intermediate 85
Airway Insert Medical Director Approved Advanced Airway Device
(Multi-lumen Airway, LMA, ET)
Multi-lumen airways only for patient 5’2” or taller
IV Establish Peripheral IV Access

EMT Intermediate 99
Consider IO access in lieu of IV access
Assess Perform Advanced Assessment
Cardiac Monitor Determine Cardiac Rhythm
PALS Follow Appropriate Pediatric Advanced Cardiac Dysrhythmia Protocol

Paramedic
Assess Perform Comprehensive Assessment
PALS Follow Appropriate Pediatric Advanced Cardiac Dysrhythmia Protocol
Pediatric Advanced Cardiac Dysrhythmia

This Protocol applies to EMT-I 99 and Paramedics and assumes the General Cardiac Dysrhythmia protocol has been followed.

For the stable patient tolerating the cardiac rhythm may only require monitoring and supportive care without a medication or electrical intervention.

For the unstable patient the EMT-I 99 or Paramedic may have to consider a more aggressive treatment plan based on the patient condition and how rapidly a medication may be delivered versus an electric therapy can be performed.

Bradycardia with signs and symptoms of poor perfusion

**EMT-Intermediate 99**
- Assess/Reassess Airway and Ventilations
- Reassess Secure Airway and Assist Ventilations
- Consider Epinephrine 0.01mg/Kg IV (1:10,000) or 0.1mg/kg ET (1:1000)
- Consider Atropine 0.02mg/Kg
  - Minimum Dose 0.1mg
  - Max Dose 1mg
- Consider Transcutaneous Pacing
- Consider Pre-medicate if Possible with Diazepam 0.25mg/Kg

**Paramedic**
- Alternate Pre-medications Midazolam 0.1mg/kg IV to max of 2.5mg
  - Lorazepam 0.05 to 0.2/mg/Kg
- Consider Epinephrine Infusion 0.1-1 mcg/Kg/Min
  - OR
  - Dopamine 2 – 20 mcg/Kg/Min
Pediatric Advanced Cardiac Dysrhythmia

Continued

Ventricular Tachycardia with Pulse

EMT Intermediate 99

Assess/
Reassess
Consider
Consider
Consider

Reassess Airway and Ventilations
Secure airway and assist ventilations
Synchronized Cardioversion .5-1J/Kg
Premedicate if Possible
Diazepam .25mg/Kg
Second Synchronized Cardioversion at 2J/Kg
Lidocaine 1mg/Kg bolus may repeat each subsequent dose half first dose to 3mg/Kg
If Dysrythmia Resolves with Lidocaine begin a
Lidocaine infusion at 20 to 50 micrograms/Kg

Paramedic

Consider

Amidodrone and Procamimide may be given with extreme caution
The paramedic must consult with on line medical control prior to administering
these medications to pediatric VT with a pulse

Alternate

Pre-medications
Midazolam 0.1mg/kg iv to max of 2.5mg
Lorazepam 0.05 to 0.2/mg/Kg

PSVT with sign and symptoms of poor perfusion

EMT Intermediate 99

Rule Out
Consider
Consider

Sinus Tachycardia
Synchronized Cardioversion
Premedicate if Possible
Diazepam 0.25mg/Kg

OR

Adenosine 0.1-0.2 mg/Kg
Rapid IV push

Paramedic

Alternate
Pre-medications
Midazolam 0.1mg/Kg IV to Max of 2.5mg
Lorazepam 0.05 to 0.2/mg/Kg
Pediatric Difficulty Breathing
Asthma/Bronchiolitis
Difficulty Breathing in the presence of wheezing

First Responder
Scene Safety –
BSI SAFETY FIRST

Level of
Conscious
Alert, Verbal, Pain, or Unresponsive

Airway
Monitor Airway

Breathing
Administer Oxygen Consider Assisting Ventilations with BVM

Circulation
Vital Signs, Skin Color/Temp

Assess
Conduct a Simple Patient Assessment

First Responder and EMT
Consider Epinephrine Auto Injector Pediatric (EPI PEN Jr) for Impending Respiratory Collapse
Guidelines; Patient Able to speak in only one-two word phrases
Low/falling oxygen saturations even with O2 administration
Diminished to absent lung sounds Decreasing LOC
Retractions Pale or cyanotic skin

EMT
Assess Conduct Basic Patient Assessment

Consider Assist Patient with His/Her Metered Dose Inhaler (MDI)
Consider Albuterol 2.5mg in 3cc via Nebulizer Device
Transport Non –Emergent Transport Unless Patient is Unstable

Consider ALS Intercept

EMT Options/ EMT Intermediate 85
IV Establish Peripheral IV Access

EMT-Intermediate 99
Assess Perform Advanced Physical Assessment

Consider Bronchodilator Medication by nebulizer *See Bronchodilator Protocol

Consider IO Access In Lieu of IV Access
Do Not Delay Epi to Obtain IV/IO Access

Consider Epinephrine (1:1,000) 0.01 mg/kg SQ, Max Dose 0.3 mg.
May Repeat Every 5 to 10 Minutes

Cardiac
Monitor Attach Cardiac Monitor, Interpret ECG

Paramedic
Assess Perform Comprehensive Assessment

Consider 25 to 50mg/kg (max 2g) Magnesium Sulfate infusion over 20 min

Consider Rapid Sequence Intubation (RSI) ***See RSI Protocol***
Laryngotracheobronchitis (Croup), Epiglottitis

First Responder
Scene Safety – BSI
SAFETY FIRST

Level of Conscious Alert, Verbal, Pain, or Unresponsive

Approach In Calm Manner DO NOT Excite/Scare the Child

Airway Monitor Airway

Breathing Administer Oxygen
EXTREME CAUTION MUST BE EXERCISED
Epiglottitis may cause the patient airway to become occluded completely if the patient is agitated

Circulation Vital Signs, Skin Color/Temp

Assess Conduct a Simple Patient Assessment

EMT
Assess Conduct Basic Patient Assessment

Transport Non –Emergent Transport Unless Patient is Unstable

Consider ALS Intercept

EMT Options/ EMT Intermediate 85
IV Establish Peripheral IV Access
EXTREME CAUTION MUST BE EXERCISED
Epiglottitis may cause the patient airway to become occluded completely if the patient is agitated in the process of IV insertion

EMT-Intermediate 99
Assess Perform Advanced Physical Assessment

Consider Bronchodilator Medication by Nebulizer if Laryngotracheobronchitis (Croup) is Suspected
*See Bronchodilator Protocol

Consider IO Access In Lieu of IV Access

Cardiac Monitor Attach Cardiac Monitor, Interpret ECG

Paramedic
Assess Perform Comprehensive Assessment

Consider Cricothyrotomy Needle or Surgical for Occluded Airway
Acute Allergic Reaction / Anaphylaxis

Difficulty Breathing in the presence of urticaria, wheezing and/or contact with a known allergen

**First Responder**

Scene Safety – SAFETY FIRST

- Level of Conscious: Alert, Verbal, Pain, or Unresponsive
- Airway: Monitor Airway
- Breathing: Administer Oxygen,
- Consider: Assisting Ventilations with BVM
- Circulation: Vital Signs, Skin Color/Temp
- Assess: Conduct a Simple Patient Assessment
- Consider: Epinephrine Auto Injector Pediatric (EPI PEN Jr) if Impending Respiratory Collapse Guidelines; Patient able to speak only one-two word phrases without taking a breath
  - Low/falling oxygen saturations even with O2 administration
  - Diminished to absent lung sounds
  - Decreasing LOC
  - Retractions
  - Pale or cyanotic skin

**EMT**

- Assess: Conduct Basic Patient Assessment
- Consider: Assist Patient with His/Her Metered Dose Inhaler
- Consider: Albuterol 2.5mg in 3cc via Nebulizer Device
- Transport: Emergent Transport Unless Patient is stable
- Consider: ALS Intercept

**EMT Options/ EMT Intermediate 85**

- IV: Establish Peripheral IV Access Titrate to Blood Pressure

**EMT-Intermediate 99**

- Consider: Bronchodilator Medication by Nebulizer *See Bronchodilator Protocol
- Consider: IO Access In Lieu of IV Access
  - Do Not Delay Epi for IV/IO Access
- Consider: Diphenhydramine (Benadryl), 1 mg/kg, IM or slow IVP over 1-3 min.
  - Maximum Individual Dose 50mg.
- Consider: Epinephrine (1:1,000) 0.01 mg/kg SQ for bronchospasm, maximum dose 0.3 mg.
  - May Repeat Every 5 Minutes if Severe Respiratory Symptoms are Not Resolved

**Cardiac**

- Monitor: Attach Cardiac Monitor, Interpret ECG

**Paramedic**

- Assess: Perform Comprehensive Assessment
- Consider: Rapid Sequence Intubation (RSI) ***See RSI Protocol***
# Pediatric Upper Airway Obstruction

**First Responder**

<table>
<thead>
<tr>
<th>Scene Safety – BSI</th>
<th>SAFETY FIRST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of Conscious</td>
<td>Alert, Verbal, Pain, or Unresponsive</td>
</tr>
<tr>
<td>Airway</td>
<td>Attempt to Relieve Obstruction Using AHA Guideline for Obstructed Airway for Pediatric Patients</td>
</tr>
</tbody>
</table>

**Obstruction not Cleared**  
Continue Attempts to Relieve Obstruction

<table>
<thead>
<tr>
<th>Breathing</th>
<th>Administer Oxygen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consider Assisting Ventilations with BVM</td>
<td></td>
</tr>
</tbody>
</table>

**Obstruction Cleared**

<table>
<thead>
<tr>
<th>Circulation</th>
<th>Vital Signs, Skin Color/Temp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess</td>
<td>Conduct a Simple Patient Assessment</td>
</tr>
</tbody>
</table>

**EMT**

| Transport | Emergent  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Continue Attempts to Relieve Obstruction</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EMT Options/ EMT Intermediate 85</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airway</td>
</tr>
<tr>
<td>Consider Advance Airway if Patient LOC Remains Decreased and No Gag Reflex</td>
</tr>
<tr>
<td>IV</td>
</tr>
<tr>
<td>Establish Peripheral IV Access</td>
</tr>
</tbody>
</table>

**EMT-Intermediate 99**

<table>
<thead>
<tr>
<th>Consider</th>
<th>IO Access In Lieu of IV Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess</td>
<td>Perform Advanced Physical Assessment</td>
</tr>
<tr>
<td>Cardiac Monitor</td>
<td>Attach Cardiac Monitor, Interpret ECG</td>
</tr>
</tbody>
</table>

**Paramedic**

| Assess | Perform Comprehensive Assessment |
| Consider | Cricothyrotomy needle or surgical |
Pediatric Seizures

First Responder
Scene Safety – BSI
Level of Conscious
Airway
Breathing
Circulation
Assess
Prepare

EMT
Assess
Transport
Consider

EMT Options/ EMT Intermediate 85
Glucometer
IV

EMT-Intermediate 99
Assess
Consider
Consider
Consider
Cardiac
Monitor

Paramedic
Assess
Alternate Medication

SAFETY FIRST
Alert, Verbal, Pain, or Unresponsive
Monitor Airway
Administer Oxygen
Vital Signs, Skin Color/Temp
Conduct a Simple Patient Assessment
Package Patient for Transport
Conduct Basic Patient Assessment
Non –Emergent Transport Unless Seizures Continue
ALS Intercept
Obtain Glucose Reading
Establish Peripheral IV Access
Perform Advanced Physical Assessment
Possible Causes of Seizure
Diazepam 0.25mg/Kg IV to Max of 5mg for Recurrent or Prolonged Seizures
For Age 1 and Less Dextrose 25% 0.5 to 1gm/Kg if Glucometer Reading Indicated
For Age over 1 Dextrose 50% 0.5 to 1 gm/Kg if Glucometer Reading Indicated
Attach Cardiac Monitor, Interpret ECG
Perform Comprehensive Assessment
Midazolam 0.1mg/Kg IV to Max of 2.5mg
Lorazepam 0.05 -0.2 mg/Kg IV, IO
Appendices
Bronchodilator Protocol

EMT, EMT Options, and EMT Intermediate 85

Assist  May Assist Patient with His/Her Metered Dose Inhaler (MDI)

Should be administered as prescribed

*Note: Not All MDI’s are for emergent situations for patients suffering acute shortness of breath

Listed below are common emergent medications

Consider  Albuterol 2.5mg in 3cc by nebulizer

These levels MUST complete education and have the approval of the PMD for this medication

EMT-Intermediate 99 and Paramedic

Consider  Bronchodilator medication by nebulizer

Medication Options:

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Trade Name</th>
<th>Nebulizer dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albuterol</td>
<td>Proventil, Ventolin</td>
<td>2.5mg in 3cc NS</td>
</tr>
<tr>
<td>Ipratropium</td>
<td>Atrovent</td>
<td>0.5mg (500mcg) in 2 to 3 cc NS</td>
</tr>
<tr>
<td>Albuterol/Ipratropium</td>
<td>Combivent, DuoNeb</td>
<td>3mg Albuterol 0.5mg Ipratropium in 3cc NS</td>
</tr>
<tr>
<td>Metaproterenol</td>
<td>Alupent</td>
<td>0.2-0.3 cc of 5% solution</td>
</tr>
</tbody>
</table>
Pain Management

1st Responder, EMT

Position
Unless Otherwise Contraindicated Because of Trauma Place Patient in Position of Comfort

Splint
Apply Splint to Extremity Deformities
Apply Ice and Elevate to Reduce Pain

EMT Options/ EMT Intermediate 85

IV
Establish IV Access

EMT-Intermediate 99

Consider
Morphine 2-5 mg IV or IM [Pediatric Dose 0.1-0.2 mg/kg]
May Repeat in 2mg Doses Until Pain Control or 10mg Total and BP Remains >100 Systolic
May consider Morphine via Mucosal Atomization Device (MAD) same dose as for IV
Administer no more than 1cc of total volume per nostril.

Paramedic

Consider
The Listed Medications for Pain Control/Management

<table>
<thead>
<tr>
<th>Medication Option</th>
<th>Adult Dose</th>
<th>Pediatric Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine</td>
<td>2-5mg</td>
<td>0.1-0.2mg/Kg</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>25 – 100 mcg</td>
<td>1-4 mcg/Kg</td>
</tr>
<tr>
<td>Meperidine *</td>
<td>50 – 100 mg</td>
<td>1mg/Kg</td>
</tr>
<tr>
<td>Ketorolac</td>
<td>30mg IV</td>
<td>0.5 – 1 mg/Kg to 30mg max IV</td>
</tr>
</tbody>
</table>

*Note: All the above medication EXCEPT Ketorlac may be given via the Mucosal Atomization Device (MAD) the dose for the MAD is the same as for IV. Administer no more than 1cc volume per nostril.

* Note: When considering Meperidine also consider the use of an anti-emetic such as Phenergan

* Note: For advanced providers the listed medications with the exception of Ketorlac are control substances and all medication administrations and wastes of unused medications must be documented per local policy.
Hospital to Hospital Transfer Protocol

EMT
Scene Safety – SAFETY FIRST
BSI
Assess Conduct Basic Patient Assessment
Oxygen Continue oxygen therapy with Nasal Cannula or Non-Rebreather Mask
Report Contact Patient’s Nurse for a Patient Report
Transport Non –Emergent Transport Unless Patient is Unstable
Consider ALS Intercept if Patient Becomes Unstable

EMT Options/ EMT Intermediate 85
Airway If Advanced Airway Placed Confirm Correct Placement
IV Monitor Established IV of an Isotonic Solution at the Transporting Facility’s Ordered Rate

EMT-Intermediate 99
Assess Perform Advanced Physical Assessment
Cardiac Monitor Cardiac Monitoring for All Cardiac Patients and All Unstable Patients
Medications The EMT-I 99 May Only Administer the Medications As listed In the Rules and Regulations Practices and Procedures for the EMT Intermediate. (Title 172 NAC 11)
Infusions The EMT-I 99 May Only Establish/Maintain an Infusion of Lidocaine No Other Infusions of Medications are Allowed by this Protocol.

Paramedic
Assess Perform Comprehensive Assessment
Medications The Paramedic may with a Physician Order From Either the Transferring or Receiving Facility Administer Medication(s) by Any Ordered Route.
Infusions The Paramedic may with a Physician Order from Either the Transferring or Receiving Facility Maintain, Adjust, or Initiate an Ordered Infusion.
Blood The Paramedic may with a Physician Order from Either the Transferring or Receiving Facility and prior approval from the services medical director Maintain, Adjust, or Initiate Blood and Blood Products following local blood administration procedures.

***Follow appropriate protocol for a specific problem if the patient condition changes or new sign/symptoms are recognized by the provider. On line medical control should be consulted and advised if patient becomes unstable.
Ante Emetic Protocol
For Paramedic level providers only

Guidelines for Anti Emetic treatment:
- Nausea/Vomiting from Trauma/Pain
- Nausea/Vomiting due to Medication Side Effect
- Nausea/Vomiting from an Acute Cardiac or Medical Event
- Nausea/Vomiting due to Ambulance Transport

Assess and Treat the Cause of Nausea if Possible

Follow Appropriate Protocol for the Patient’s Condition

Administer One of the Medications Listed as Approved by the PMD

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anzemet</td>
<td>12.5mg IV</td>
</tr>
<tr>
<td>Compazine (prochlorperazine)</td>
<td>5-10mg IV</td>
</tr>
<tr>
<td>Phenergan (promethazine)</td>
<td>12.5-25 IV</td>
</tr>
<tr>
<td>Zofran (ondansetron)</td>
<td>4-8mg IV</td>
</tr>
</tbody>
</table>
# Rapid Sequence Intubation

For Paramedic level providers only

## Criteria for Rapid Sequence Intubation

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>GCS of $\leq 8$</td>
<td>Patient unable to protect his/her own airway</td>
</tr>
<tr>
<td>Respiratory failure/impending failure</td>
<td>Head injuries with decreased LOC/ combativeness s/s of increased ICP</td>
</tr>
<tr>
<td>Consideration before attempting RSI:</td>
<td>Difficulty of intubation</td>
</tr>
</tbody>
</table>

## Benefit vs Risk of procedure

- Backup Airway Plan if Intubation Fails

## Steps

<table>
<thead>
<tr>
<th>Steps</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preoxygenate</strong></td>
<td>1. Preoxygenate with 100% oxygen by mask. If ventilatory assistance is necessary, ventilate gently, applying cricoid pressure.</td>
</tr>
<tr>
<td><strong>Premedicate</strong></td>
<td>2. Premedicate as appropriate; then WAIT 3 MINUTES after drug administration.</td>
</tr>
<tr>
<td></td>
<td>- Sedation with Diazepam: 5 to 10 mg (pediatric dose 0.25mg/kg not to exceed 5mg) or Versed 0.02 to 0.04 mg/kg</td>
</tr>
<tr>
<td></td>
<td>- Atropine: 0.01 mg/kg IV push for children or adolescents (minimum dose of 0.1 mg recommend)</td>
</tr>
<tr>
<td></td>
<td>- Lidocaine: 1.0 to 1.5 mg/kg IV over 30 to 60 seconds</td>
</tr>
<tr>
<td></td>
<td>- Defasciculating agent (optional, see Table 2)</td>
</tr>
<tr>
<td><strong>Sedate then Paralyze</strong></td>
<td>3. Induce sedation with one of these agents: diazepam, thiopental, fentanyl, ketamine, etomidate, versed, or methohexital. (See Table 1)</td>
</tr>
<tr>
<td></td>
<td>4. Give succinylcholine 1.5 mg/kg IV push (use 2.0 mg/kg for infants and small children).</td>
</tr>
<tr>
<td></td>
<td>5. Assess for apnea, jaw relaxation, decreased resistance to bag-mask ventilations (patient sufficient relaxed to proceed with intubation).</td>
</tr>
<tr>
<td></td>
<td>6. Apply cricoid pressure.</td>
</tr>
<tr>
<td><strong>Placement: performance</strong></td>
<td>7. Perform tracheal intubation. If unable to intubate within 20 seconds, stop. Ventilate with bag-mask for 30 to 60 seconds. Use pulse oximetry as a guide. Inflate balloon cuff when TT is in place.</td>
</tr>
<tr>
<td><strong>Placement: primary confirmation</strong></td>
<td>9. Perform primary confirmation of TT placement:</td>
</tr>
<tr>
<td></td>
<td>- By direct visualization of TT passing through vocal cords</td>
</tr>
<tr>
<td></td>
<td>- By chest rise/fall with each ventilation (bilateral)</td>
</tr>
<tr>
<td></td>
<td>- By 5-point auscultation: anterior chest L and R, midaxillary line L and R, and over the epigastrium</td>
</tr>
<tr>
<td></td>
<td>(Listen for air entering the stomach when BM is squeezed and by tube condensation.)</td>
</tr>
<tr>
<td><strong>Placement: secondary confirmation</strong></td>
<td>10. Perform secondary confirmation of TT placement:</td>
</tr>
<tr>
<td></td>
<td>- Use a bulb aspiration device(esophageal detector device [EDD])</td>
</tr>
<tr>
<td></td>
<td>- If the EDD indicates that the TT is in the trachea, leave in place monitor 02 sat</td>
</tr>
<tr>
<td></td>
<td>- Monitor end-tidal CO2</td>
</tr>
<tr>
<td><strong>Placement: prevent dislodgement</strong></td>
<td>11. Secure TT with commercial holder (preferred)</td>
</tr>
<tr>
<td></td>
<td>- Alternatively, secure with an adhesive tape/cloth cord technique.</td>
</tr>
<tr>
<td></td>
<td>- In out-of-hospital setting with the prospect of patient ventilation during movement, immobilize cervical spine with cervical collar or backboard or both.</td>
</tr>
<tr>
<td><strong>Maintain Sedation/Paralytic</strong></td>
<td>12. Administer maintenance dose of paralytic agent</td>
</tr>
<tr>
<td></td>
<td>13. Administer sedative if transport time longer then duration of sedative agent</td>
</tr>
<tr>
<td></td>
<td>14. Consider pain management agent (Morphine, or Fentanyl)</td>
</tr>
</tbody>
</table>
Rapid Sequence Intubation

Table 1
Sedative and Induction Agents

<table>
<thead>
<tr>
<th>Sedative</th>
<th>Dosage IV Push</th>
<th>Onset</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Etomidate</td>
<td>0.2 to 0.6 mg/kg</td>
<td>60 seconds</td>
<td>3 to 5 minutes</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>Induction: 2 to 10 mcg/kg Sedation (titrate): 2 to 4 mcg/kg</td>
<td>60 seconds</td>
<td>30 to 60 minutes</td>
</tr>
<tr>
<td>Ketamine</td>
<td>2.0 mg/kg</td>
<td>30 to 60 seconds</td>
<td>15 minutes</td>
</tr>
<tr>
<td>Vecuronium</td>
<td>RSI: .1 mg/kg M: 0.01-.05 mg/kg</td>
<td>0.01 mg/kg</td>
<td>2.5 to 5 minutes</td>
</tr>
<tr>
<td>Pancuronium</td>
<td>RSI: 0.04 - 0.1 mg/kg M: 0.01 mg/kg</td>
<td>3 minutes</td>
<td>30 – 45 minutes</td>
</tr>
<tr>
<td>Rocuronium</td>
<td>RSI: 0.6 – 1.2 mg/kg M: 0.1 – 0.2 mg/kg</td>
<td>1 – 3 minutes</td>
<td>30 minutes</td>
</tr>
</tbody>
</table>

RSI = Rapid Sequence Intubation
M = Maintenance dose

Table 2
Neuromuscular Blocking Agents

<table>
<thead>
<tr>
<th>Agent</th>
<th>Dosage (Paralytic)</th>
<th>Dosage (defasciculating)</th>
<th>Onset</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Succinylcholine</td>
<td>RSI: 1 to 2 mg/kg</td>
<td></td>
<td>30 to 60 seconds</td>
<td>4 to 6 minutes</td>
</tr>
<tr>
<td>Vecuronium</td>
<td>RSI: .1 mg/kg M: 0.01-.05 mg/kg</td>
<td>0.01 mg/kg</td>
<td>2.5 to 5 minutes</td>
<td>25 to 40 minutes</td>
</tr>
<tr>
<td>Pancuronium</td>
<td>RSI: 0.04 - 0.1 mg/kg M: 0.01 mg/kg</td>
<td>3 minutes</td>
<td>30 – 45 minutes</td>
<td></td>
</tr>
<tr>
<td>Rocuronium</td>
<td>RSI: 0.6 – 1.2 mg/kg M: 0.1 – 0.2 mg/kg</td>
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<td>30 minutes</td>
<td></td>
</tr>
</tbody>
</table>