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

TABLE OF CONTENTS

Nebraska Emergency Medical Services
Protocols

First Responder, Basic, EMT Intermediate, Paramedic
Introduction

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:

<u>To allow for regional or local variations, and needs, the provider may follow locally established and physician medical director approved communications polices and procedures.</u>

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)

8. Criteria for use of bag-valve-mask (BVM):
   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 CO_2

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 on going 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 – BSI	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 Do not delay AED for CPR	Un-witnessed Cardiac Arrest
AED/CPR	Attach AED – Push Analyze ** SEE AED Protocol***	Perform 2 minutes of 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

CPR	Un-witnessed Arrest Perform 5 cycles (2 Minutes) CPR Witnessed Arrest go directly to Confirm Cardiac Rhythm	
Confirm	Cardiac Rhythm	
Shock	Biphasic 120J to 200J	Monophasic 360J
CPR	Perform 5 cycles (2 Minutes) CPR immediately after shock	
Rhythm	Stop CPR Check Rhythm	
Shock	Biphasic Maintain or Increase Jules	Monophasic 360J
CPR	Perform 5 cycles (2 Minutes) CPR immediately after shock	
Repeat	Repeat successive shocks 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 2 breaths to 30 compressions until advanced airway is placed then give 8 to 10 breaths per minute	
**Circulation	Administer chest compressions at 100 per minute Establish IV at any time with no interruption to CPR	
**Medication Consideration	Epinephrine 1mg Every 3 – 5 Minutes OR Vasopressin 40U One dose only to replace 1st or 2nd dose of Epinephrine Lidocaine 1 to 1.5mg/kg 1st dose Lidocaine 0.5 to 0.75mg/kg 2nd dose MAX 3 doses or 3mg/kg Amiodarone 300mg 1st dose Amiodarone 150mg 2nd dose	

Paramedic

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

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
Medication	Epinephrine 1mg Every 3 – 5 Minutes OR Vasopressin 40U <u>One dose only</u> to replace 1st or 2nd dose of Epinephrine
Intervention Sequence	Drug Evaluate for Change Repeat
Medication Considerations	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

If IV access is delayed or can not be obtained Epi and Atropine may be given via the ET tube

If the patient's cardiac rhythm changes see appropriate protocol for that rhythm.

If patient develops a pulse see the Post Cardiac Arrest protocol.

Paramedic

Consider	Consider Causes of PEA Acidosis Consider Sodium Bicarbonate Tricyclic Overdose Consider Sodium Bicarbonate Calcium Channel Blocker Overdose Consider Calcium Chloride
Medication Doses	Sodium Bicarbonate 1mEq/Kg IVP Calcium Chloride 500 to 1000mg Slow IVP

Adult AED Protocol

ALL LEVELS

Confirm	Patient is Pulseless		
AED/CPR	Witnessed Cardiac Arrest Do not delay AED for CPR		Un-witnessed Cardiac Arrest Perform 2 minutes of CPR
	Attach AED Pads and Turn ON		
Analyze	Push Analyze Button		
Follow Voice Prompt	Push to Shock	OR	No Shock Advised Check Pulse for no more than 10 seconds
CPR	Perform 2 minutes of CPR		Perfom 2 minutes of CPR
Analyze	Push Analyze Button		Push Analyze Button
Follow Voice Prompt	Push to Shock	OR	No Shock Advised Check Pulse for no more than 10 seconds
CPR	Perform 2 minutes of CPR		Perform 2 minutes of CPR
Analyze	Push Analyze Button		Push Analyze Button
Follow Voice Prompt	Push to Shock	OR	No Shock Advised
CPR	Perform 2 minutes of CPR		Continue CPR Check Pulse every 2 minutes Package for Transport Transport if EMT or Higher Level
Analyze	Push Analyze Button		Push Analyze Button every 4 minutes
CPR	Perform 2 minutes of CPR		Check Pulse every 2 minutes
Follow Voice Prompt	Push to Shock	OR	Push Analyze Button every 4 minutes
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. C – 40

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 – BSI	SAFETY FIRST
Level of Conscious	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 weather 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 – BSI	SAFETY FIRST
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 verses 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

Consider	Lidocaine 1mg/kg Bolus
If Dysrhythmia resolves	Lidocaine Infusion 1-4mg/min
Consider	Amiodarone 150mg Over 10 Minutes

Ventricular Tachycardia

	Stable	Unstable
EMT Intermediate 99		
Consider	12lead ECG	
Consider	Lidocaine 1mg/kg	Synchronized Cardioversion Premedicate if Possible Diazepam 2 to 5mg
If Dysrhythmia Resolves	Lidocaine Infusion 1-4mg/min	Lidocaine 1mg/kg Bolus Followed by Lidocaine Infusion 1-4mg/min
Consider	Amiodarone 150mg Over 10 Minutes	

Paramedic

Consider	Procainamide 20mg/min until resolved Or Magnesium Sulfate 1-2g (If Polymorphic)	Alternate Pre-medications Midazolam 2 to 4mg or Lorazepam 2 to 4 mg
Consider	Infusion of Anti-Arhythmic Agent that Controlled the Dysrhythmia	

Advanced Cardiac Dysrhythmia Continued

Atrial Tachycardias

PSVT, Atrial Fib, Atrial Flutter

	Stable	Unstable
EMT Intermediate 99		
A-Fib A Flutter		
Consider	Confirm Rhythm	Synchronized Cardioversion Pre-medicate if Possible Diazepam 2 to 5mg
PSVT		
Consider	Adenosine Rapid IVP 6mg then 12mg	Synchronized Cardioversion Pre-medicate if Possible Diazepam 2 to 4 mg
Paramedic		
A-Fib A Flutter		
Consider	12 Lead	Alternate Pre-medications Midazolam 2 to 4mg or Lorazepam 2 to 4mg
PSVT		
Consider	12 Lead	
Consider	Verapamil 2.5-5mg or Diltiazem 0.25mg/kg	Alternate Pre-medications Midazolam 2 to 4mg or Lorazepam 2 to 4mg

Must confirm that A-Fib A-Flutter is new onset before cardoversion

Bradycardia

	Stable	Unstable
EMT-Intermediate 99		
Consider		Atropine .5-1mg [1]
Consider	Have Pacer Standing By	Transcutaneous Pacing[2] Premedicate if Possible Diazepam 2 to 4 mg
Paramedic		
Consider	12 Lead	
Consider	If Second or Third Degree Block Attach Pacer Pads	Alternate Pre-medications Midazolam 2 to 4mg or or Lorazepam 2 to 4mg
Consider		Dopamine 5 -20mcg/kg/min or Epinephrine 2-10mcg/min or Isoproterenol 2-10mcg/min

1. Atropine is not effective in Second Degree Type II and new Third Degree Heart Blocks. Atropine is not effective for denervated transplanted hearts
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

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 EMEREGENCIES

Acute Allergic Reaction / Anaphylaxis

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

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) 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)
Consider	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)
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
Consider	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

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

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

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 – 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
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

Assess	Perform Comprehensive Assessment
Consider	12 Lead
Consider	CPAP
Dysrhythmia	*See Cardiac Dysrhythmia Protocol
Consider	Rapid Sequence Intubation (RSI) *See RSI Protocol

Respiratory Infection

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

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	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 – 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

Epiglottitis may cause the patient airway to become occluded completely if the patient is agitated.

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

Epiglottitis may cause the patient airway to become occluded completely if the patient is agitated.

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

ACUTE MEDICAL EMERGENCIES
Upper Airway Obstruction

First Responder

Scene Safety – BSI	SAFETY FIRST	
Level of Consciousness	Alert, Verbal, Pain, or Unresponsive	
Airway	Attempt to Relieve Obstruction Using AHA Guidelines for Obstructed Airway	
	Obstruction not Cleared	**Obstruction Cleared**
Continue	Attempts to relieve Obstruction	
Breathing	↓	Administer Oxygen Consider Assisting Ventilations with BVM
Circulation	↓	Vital Signs, Skin Color/Temp
Assess	↓	Conduct a Simple Patient Assessment
EMT		
Transport	Emergent Continue Attempts to Relieve Obstruction	Non-emergent Transport if Patient Stable
Assess	↓	Conduct Basic Patient Assessment
Consider	ALS Intercept	ALS Intercept
EMT Options/ EMT Intermediate 85		
Airway	Attempt to Visualize Obstruction with Laryngoscope and Remove with McGill Forceps. IF TRAINED	Consider Advance Airway if Patient LOC Remains Decreased and No Gag Reflex
IV	Establish Peripheral IV Access Do Not Delay Transport	Establish Peripheral IV Access
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	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/Temp
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 – 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 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 – 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

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 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

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	SAFETY FIRST
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 <u>Only</u> 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 I99s 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	<u>Prolapsed Cord:</u> 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 <u>Breech Delivery and Unable to Deliver Head</u>: 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 <u>Arm or Leg Presentation</u>: 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 <u>If Significant Hemorrhage</u>: 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

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
Position	Move Patient onto LEFT Side

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	Diazepam 5-10mg IV for Seizures

Paramedic

Assess	Perform Comprehensive Assessment
Consider	Administer Magnesium Sulfate 2 - 6gm, Diluted to 25%, Slow IVP Over 3-5 Minutes, May Repeat Once After 5 Minutes.
Consider	Lorazepam 2-4mg or Midazolam 2-4mg As An Alternate to Diazepam for Seizures

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**

ACUTE TRAUMATIC EMERGENCIES

General Trauma Management– Priorities for Treatment

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 consider 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 reflex 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 flood
    c. Consider application of tourniquet immediately in extremity amputations and/or near amputations

Tourniquet Application Site
Expose 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 then1 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

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 it 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. Extreme(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 Conscious	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 Monitor	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. O^2 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

Extremity 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
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, <u>Suspected Fractures:</u> 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 <u>Pain Management</u> Protocol

Paramedic

Assess	Perform Comprehensive Assessment
Consider	Pain Management *See <u>Pain Management</u> Protocol

Ingested Poisons

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 – 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	Diazpam 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 theEMT-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 – BSI	SAFETY FIRST PATIENT SHOULD BE REMOVED FROM HAZARD AREA BY TRAINED RESCUERS AND IF REQUIRED DECONTAIMINATED
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***

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 Burns	Cover Burn Area with Dry Bandages or Sheets 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

Scene Safety-BSI	SAFETY FIRST
Level of Conscious	Alert, Verbal, Pain, or Unresponsive
Airway	Monitor Airway
Breathing	Administer Oxygen
Circulation	Vital Signs
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

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

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

Confirm	Patient is Pulseless		
Begin CPR	Do Two minutes of CPR		
AED	Turn On AED Attach Pediatric AED Pads or Activate Pediatric Mode **MUST USE A PEDATRIC APPROVED AED UNLES PHYSICIAN MEDICAL DIRECTOR APPROVES THE USE OF ADULT AED FOR PEDIATRIC PATIENTS**		
Analyze	Push Analyze Button		
Follow Voice Prompt	Push to Shock	OR	No Shock Advised Check Pulse for no more than 10 seconds
CPR	Perform 2 minutes of CPR		Do 2 minute of CPR
Analyze	Push Analyze Button		Push Analyze Button
Follow Voice Prompt	Push to Shock	OR	No Shock Advised Check Pulse for no more than 10 seconds
CPR	Perform 2 minutes of CPR		Do 2 minutes of CPR
Analyze	Push Analyze Button		Push Analyze Button
Follow Voice Prompt	Push to Shock	OR	No Shock Advised
CPR	Perform 2 minutes of CPR		Check Pulse every 2 minutes Package for Transport Transport if EMT or Higher Level
Analyze	Push Analyze Button		Push Analyze Button every 4 minutes
CPR	Perform 2 minutes of CPR		Check Pulse every 2 minutes
Follow Voice Prompt	Push to Shock	OR	Push Analyze Button every 4 minutes
Repeat	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 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

Confirm	Cardiac Rhythm	
Airway	Establish Airway Endotracheal Intubation Preferred	
Breathing	Ventilation with Bag Valve Mask attached to O2	
Circulation	Chest Compressions and Establish Peripheral IV Access or IO Access	
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 Sequence	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 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 – BSI	SAFETY FIRST
Level of Conscious	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 – BSI	SAFETY FIRST
Level of Conscious	Alert, Verbal, Painful, or Unresponsive
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 verses an electric therapy can be performed.

Bradycardia with signs and symptoms of poor perfusion

EMT-Intermediate 99

Assess/ Reassess	Reassess Airway and Ventilations 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	Reassess Airway and Ventilations Secure airway and assist ventilations
Consider	Synchronized Cardioversion .5-1J/Kg Premedicate if Possible Diazepam .25mg/Kg
Consider	Second Synchronized Cardioversion at 2J/Kg
Consider	Lidocaine 1mg/Kg bolus may repeat each subsequent dose half first dose to 3mg/Kg
Consider	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	Sinus Tachycardia
Consider	Synchronized Cardioversion Premedicate if Possible Diazepam 0.25mg/Kg OR
Consider	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 uticaria, wheezing and /or contact with a known allergen

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
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	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

Scene Safety – BSI	SAFETY FIRST	
Level of Conscious	Alert, Verbal, Pain, or Unresponsive	
Airway	Attempt to Relieve Obstruction Using AHA Guideline for Obstructed Airway for Pediatric Patients	
	Obstruction not Cleared	**Obstruction Cleared**
Continue	Attempts to Relieve Obstruction	
Breathing	↓	Administer Oxygen Consider Assisting Ventilations with BVM
Circulation	↓	Vital Signs, Skin Color/Temp
Assess	↓	Conduct a Simple Patient Assessment
	↓	↓

EMT

Transport	Emergent Continue Attempts to Relieve Obstruction	Non-emergent Transport if Patient Stable
	↓	↓
Assess	↓	Conduct Basic Patient Assessment
Consider	ALS Intercept	ALS Intercept
	↓	↓

EMT Options/ EMT Intermediate 85

Airway	Attempt to Visualize Obstruction with Laryngoscope and Remove with McGill Forceps. IF TRAINED	Consider Advance Airway if Patient LOC Remains Decreased and No Gag Reflex
		↓
IV	Establish Peripheral IV Access **Do Not Delay Transport**	Establish Peripheral IV Access
	↓	↓

EMT-Intermediate 99

Consider	IO Access In Lieu of IV Access	
Assess	↓	Perform Advanced Physical Assessment
		↓
Cardiac Monitor	↓	Attach Cardiac Monitor, Interpret ECG
		↓

Paramedic

Assess		Perform Comprehensive Assessment
Consider	Cricothyrotomy needle or surgical	

Pediatric Seizures

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
IV	Establish Peripheral IV Access

EMT-Intermediate 99

Assess	Perform Advanced Physical Assessment
Consider	Possible Causes of Seizure
Consider	Diazepam 0.25mg/Kg IV to Max of 5mg for Recurrent or Prolonged Seizures
Consider	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
Cardiac Monitor	Attach Cardiac Monitor, Interpret ECG

Paramedic

Assess	Perform Comprehensive Assessment
Alternate Medication	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:

Generic Name	Trade Name	Nebulizer dose
Albuterol	Proventil, Ventolin	2.5mg in 3cc NS
Ipratropium	Atrovent	0.5mg (500mcg) in 2 to 3 cc NS
Albuter0l/Ipratropium	Combivent, DuoNeb	3mg Albuterol 0.5mg Ipratropium in 3cc NS
Metaproterenol	Alupent	0.2-0.3 cc of 5% solution

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

Medication Option	Adult Dose	Pediatric Dose
Morphine	2-5mg	0.1 -0.2mg/Kg
Fentanyl	25 – 100 mcg	1 –4 mcg/Kg
Meperidine *	50 – 100 mg	1mg/Kg
Ketorolac	30mg IV 60mg IM	0.5 –1 mg/Kg to 30mg max IV

*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 to 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 – BSI	SAFETY FIRST
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.

Anti 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

Medication choices

Medication	**Dose**
Anzemet	12.5mg IV
Compazine (prochlorperazine)	5-10mg IV
Phenergan (promethazine)	12.5-25 IV
Zofran (ondansetron)	4-8mg IV

Rapid Sequence Intubation

For Paramedic level providers only

Criteria for Rapid Sequence Intubation

GCS of ≤ 8 — Patient unable to protect his/her own airway

Respiratory failure/impending failure — Head injuries with decreased LOC/ combativeness s/s of increased ICP

Consideration before attempting RSI:

Benefit vs Risk of procedure — Difficulty of intubation

Backup Airway Plan if Intubation Fails

Steps	Details
Preoxygenate	1. Preoxygenate with 100% oxygen by mask. If ventilatory assistance is necessary, ventilate gently, applying cricoid pressure.
Premedicate	2. Premedicate as appropriate; then WAIT 3 MINUTES after drug administration. • 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 • Atropine: 0.01 mg/kg IV push for children or adolescents (minimum dose of 0.1 mg recommend) • Lidocaine: 1.0 to 1.5 mg/kg IV over 30 to 60 seconds • Defasciculating agent (optional, see Table 2)
Sedate then Paralyze	3. Induce sedation with one of these agents: diazepam, thiopental, fentanyl, ketamine, etomidate, versed, or methohexital. (See Table 1) 4. Give succinylcholine 1.5 mg/kg IV push (use 2.0 mg/kg for infants and small children). 5. Assess for apnea, jaw relaxation, decreased resistance to bag-mask ventilations (patient sufficient relaxed to proceed with intubation). 6. Apply cricoid pressure.
Placement: performance	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.
Placement: primary confirmation	9. Perform primary confirmation of TT placement: • By direct visualization of TT passing through vocal cords • By chest rise/fall with each ventilation (bilateral) • By 5-point auscultation: anterior chest L and R, midaxillary line L and R, and over the epigastrium (Listen for air entering the stomach when BM is squeezed and by tube condensation.)
Placement: secondary confirmation	10. Perform secondary confirmation of TT placement: • Use a bulb aspiration device(esophageal detector device [EDD]) • If the EDD indicates that the TT is in the trachea, leave in place monitor 02 sat • Monitor end-tidal CO2
Placement: prevent dislodgement	11. Secure TT with commercial holder (preferred) • Alternatively, secure with an adhesive tape/cloth cord technique. • In out-of-hospital setting with the prospect of patient ventilation during movement, immobilize cervical spine with cervical collar or backboard or both.
Maintain Sedation/ Paralytic	12. Administer maintenance dose of paralytic agent 13. Administer sedative if transport time longer then duration of sedative agent 14. Consider pain management agent (Morphine, or Fentanyl)

Rapid Sequence Intubation

Table 1
Sedative and Induction Agents

Sedative	Dosage IV Push	Onset	Duration
Etomidate	0.2 to 0.6 mg/kg	60 seconds	3 to 5 minutes
Fentanyl	Induction: 2 to 10 mcg/kg Sedation (titrate): 2 to 4 mcg/kg	60 seconds	30 to 60 minutes
Ketamine	2.0 mg/kg	30 to 60 seconds	15 minutes
Midazolam (Versed)	Induction: 0.02 to 0.04 mg/kg Sedation (titrate): 0.02 to 0.04 mg/kg	2 minutes	1 to 2 hours
Thiopental	3 to 5 mg/kg	20 to 40 seconds	5 to 10 minutes
Diazepam	5-10 mg	60-90 seconds	60 to 180 minutes
Methohexital (Brevital)	1-1.5 mg/kg	60 sec	5 to 7 minutes

Table 2
Neuromuscular Blocking Agents

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

RSI = Rapid Sequence Intubation
M = Maintenance dose