



**Nebraska**  
**Board of Emergency Medical Services**  
**Approved**  
**EMS Model Protocols**  
**Basic and Advanced Life Support**  
**All Provider Levels**  
**2012 Edition**

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# Nebraska EMS Model Protocols

## Preface

### **PROTOCOL DESIGN AND DIRECTIONS FOR USE**

Individual Protocols are divided based on the level of the out-of-hospital emergency care provider (OOHECP) licensure. Start at the top of each page and proceed as far down the page as your individual licensed level and special PMD approvals allow.

**Each OOHECP is expected to know his/her own scope of practice and if applicable special Physician Medical Director (PMD) authorized additional skills.**

#### **ALL LEVELS**

- Items That Apply to ALL LEVELS
- Generally This Refers to the Routine Assessment and Care Protocol

#### **EMR**

- EMR Without Additional PMD Approval Stop at This Section
- Other Levels Consider These Items and Continue

#### **EMR Options if Approved**

- EMR With Additional PMD Approval Stop at This Section
  - **Reminder the PMD May NOT have Authorized Every Optional Skill/Treatment**
- Other Levels Consider These Items and Continue

#### **EMT**

- EMT Without Additional PMD Approval Stop at This Section
  - **Reminder the PMD May NOT have Authorized Every Optional Skill/Treatment**
- Other Levels Consider These Items and Continue

#### **EMT Options if Approved**

- EMT With Additional PMD Approval Stop at This Section
  - **Reminder the PMD May NOT have Authorized Every Optional Skill/Treatment**
- Other Levels Consider These Items and Continue

#### **AEMT**

- AEMT Stop at This Section
- Other Levels Consider These Items and Continue

#### **EMT-I**

- EMT-I Stop at This Section
- Other Levels Consider These Items and Continue

#### **Paramedic**

- Paramedic Continue Through All Considerations Including These Items

#### **Use of Multiple Protocols May Be Required:**

- The OOHECP may have to use several protocols to meet the needs of the patient.

# Nebraska EMS Model Protocols

## Preface

### **Acknowledgements**

The Nebraska Board of Emergency Medical Services acknowledges the dedication and extends our gratitude to the hundreds of out-of-hospital emergency care professionals for their service to the citizens of the Great State of Nebraska.

Furthermore the Board extends our appreciation to the Physician Medical Directors who provide the leadership necessary for effective and efficient care of the out-of-hospital patient throughout our Great State.

### **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.

### **Scope of Protocols**

These protocols are applicable to Nebraska Licensed Emergency Medical Services functioning with Emergency Medical Responders (EMR), Emergency Medical Technicians (EMT), Emergency Medical Technician-Intermediates (EMT-I), Advanced Emergency Medical Technician (AEMT), and Paramedics.

### **Physician Medical Director Approval and Authority**

For these protocols to be valid they must be approved by service's Physician Medical Director (PMD). Certain special skills as listed in these protocols require additional authorization. The ***Physician Medical Director Authorization*** document lists the approved protocols, additional skills, and other PMD approved documents which must be signed by the PMD.

The Physician Medical Director retains authority over the medical aspects of the EMS Service and the OOHECP.

### **Authorization to Function as an Out-of-Hospital Care Provider**

To function as an OOHECP under these protocols an individual must;

- Be a member or employee of a Nebraska Licensed Emergency Medical Service; and
- Have a valid Nebraska EMR, EMT, AEMT, EMT-I, Paramedic, Practical Nurse, Registered Nurse, Physician's Assistant, or Physician license; and
- Have the Authorization of the Physician Medical Director (PMD)

The PMD must authorize the additional skills for the individual OOHECP *and* the Service (See the ***Physician Medical Director Authorization*** document).

### **Advanced Level Providers Functioning with a Basic Life Support Service**

The licensed AEMT, EMT-I, or Paramedic when functioning as a member or employee of a licensed Basic Life Support Service may only perform the skills and treatments listed within these protocols and listed in the Practices and Procedures section of Title 172 NAC 11 for the Emergency Medical Technician.

Practical and Registered Nurses when functioning as a member or employee of a licensed Basic Life Support Service may only perform the skills and treatments listed under the EMR and EMT sections within these protocols and listed in the Practices and Procedures section of Title 172 NAC 11 for the Emergency Medical Technician. Exception nurses functioning under patient specific orders may, during a hospital to hospital transfer, function within the scope of practice of their nursing license.

Mid-level practitioners and Physician members of a licensed Basic Life Support Service may function within the scope of practice of his/her license with PMD Approval

The Additional skills for the Emergency Medical Technician as listed in Title 172 NAC 11 may be performed by the advance level providers **ONLY** when these additional skills and the individual provider has prior Physician Medical Director approval.

# Nebraska EMS Model Protocols

## Preface

### **Responsibility of the Licensed Emergency Medical Service**

The EMS service is responsible to have certain PMD approved documents and review these documents with its employees/members. The EMS service may not knowingly allow for unauthorized practice and/or authorize practices and procedures which require PMD approval. The licensed EMS services are expected to comply with Nebraska Rules and Regulations.

### **Responsibility of the Licensed Out of Hospital Emergency Care Providers and Other Licensed Professionals**

The individual licensed OOHECP or other licensed healthcare professionals fulfilling the role of the OOHECP are responsible to maintain knowledge of these protocols and to function within them. Further the OOHECP may not exceed his/her Practice and Procedures as authorized by the EMS Services PMD and the Nebraska Rules and Regulations.

### **Professionalism and Ethics**

Regardless whether the OOHECP is paid or volunteers his/her time, the practice of emergency care is a profession. Our patients have a reasonable expectation to have these services provided in an ethical and professional manner. The guiding document of professionalism and ethics for the OOHECP of ALL LEVELS is the EMT Code of Ethics as approved by the National Association of EMTs.

### **Mandatory Reporting Requirements**

The OOHECP and the Service are expected to comply with mandatory reporting of misdemeanor and felony convictions, limits on practice, disciplinary actions and unprofessional conduct. The full text of the Mandatory Reporting requirement is located in Title 172 NAC 5 – MANDATORY REPORTING BY HEALTH CARE PROFESSIONALS, FACILITIES, PEER REVIEW ORGANIZATIONS, PROFESSIONAL ASSOCIATIONS, and INSURERS. A Summary Table of Mandatory Reporting requirements and the full text of title 172 NAC 5 are available at the Nebraska Health and Human Services Web Site

### **Confidentiality**

The patient has a reasonable expectation that his/her patient information will be kept in confidence. The OOHECP is expected to comply with the EMS Practice Act and the Rules and Regulations.

### **Excerpt from the Nebraska Emergency Medical Services Practice Act**

**38-1225. Patient data; confidentiality; immunity.** (1) No patient data received or recorded by an emergency medical service or an out-of-hospital emergency care provider shall be divulged, made public, or released by an emergency medical service or an out-of-hospital emergency care provider, except that patient data may be released for purposes of treatment, payment, and other health care operations as defined and permitted under the federal Health Insurance Portability and Accountability Act of 1996, as such act existed on January 1, 2007, or as otherwise permitted by law. Such data shall be provided to the department for public health purposes pursuant to rules and regulations of the department. For purposes of this section, patient data means any data received or recorded as part of the records maintenance requirements of the Emergency Medical Services Practice Act

### **Protocol Access**

Each EMS service will make available a copy of these protocols at the service's base of operations **AND** a copy in the response unit.

The protocols will either be hard paper copy or an electronic/digital copy.

# **General Principals**



## Nebraska EMS Model Protocols

### General Principals **INFECTION CONTROL**

#### **Universal Precautions Standard**

In many calls the OOHECP will not have sufficient information about the patient and therefore is to follow a universal precautions standard with the use of body substance isolation (BSI) for all patient contact in which exposure to blood and/or body fluids may occur. For situations where an airborne pathogen (disease) is suspected the OOHECP should employ a N95 mask or higher form of respiratory protection

#### **Infection Control PPE**

Personal Protective Equipment (PPE) items used to provide protection for the OOHECP should be readily available.

#### **Hand Washing**

After patient contact even if BSI was used each out-of-hospital care provider should thoroughly wash his/her hands. In the absence of soap and water an alcohol based gel or foam hand sanitizer should be used.

#### **Service Infection Control Plan**

The services PMD Approved Infection Control/ Sanitation Plan should be consulted for further guidance on infection control.

### **SAFETY**

#### **Vehicle Operations**

The Emergency Vehicle Operator is to operate the emergency vehicle with *Due Regard for The Safety of Others* in all driving situations. Not every call for EMS nor does every patient require the use of lights and/or sirens during response and/or transport.

#### **Safety and Scene Size Up**

Every call should be assessed for potential safety hazards beginning from the moment the call is received and continually assessed until the end of the call.

Each responder should take actions that minimize his/her risks of injury. Utilization of personal protective equipment such as reflective vests, specialized rescue apparel, flotation devices and other equipment should be considered based on the incident type and the potential hazards.

When confronted with a hazardous and/or violent scene, the OOHECP should avoid entry into the scene and call for the appropriate resources.

### **INCIDENT COMMAND AND PRIMARY CARE PROVIDER**

For each incident the service is expected to activate an Incident Command System (ICS) that is compliant with the National Incident Management System (NIMS).

For each patient encounter a Primary Care Provider will be indicated on the Patient Care Report (PCR)

### **COMMUNICATIONS AND DOCUMENTATION**

To allow for regional or local variations, the provider may follow a locally established two-way electronic communications policy/procedure. General guidelines for radio communication include;

- Avoid the use of 10 codes or other codes
  - Contact the dispatch agency and advise
    - The call was received
    - When at the incident location
    - When at the Hospital (if applicable)
  - Contact the destination hospital and advise
    - Patient's Age and Gender
    - History of the Situation – Mechanism of Injury
    - Treatments Provided
    - ETA to Destination Hospital
- |                                      |
|--------------------------------------|
| The response unit is in route        |
| When leaving the incident            |
| When Unit/responders back in service |
- |   |
|---|
| Patient's chief complaint                 |
| Level of Consciousness and Vital Signs    |
| Special Teams Requests (i.e. Trauma Team) |

## Nebraska EMS Model Protocols General Principals

### **General Guidelines for Face to Face Patient Report**

To allow for regional or local variations, and needs, the provider may follow locally adopted face to face report policy/procedure. In absence of a local policy or procedure when transferring care at the destination facility; or to a transport service; or when tiering with another service the OOHECP should give a face to face verbal report to a representative of the receiving entity. This verbal report should include the:

Patient's name	Complaint(s)	Mechanism of injury/nature of illness
Pertinent medical history	Medications	Allergies
Events leading the injury/illness	Treatments	Treatment given by EMS
Results of treatments		

At the conclusion of the report check for understand and ask if there are any questions.

### **Documentation**

A Patient Care Report (PCR) will be completed for each patient transport, refusal, cancelled call or standby. The PCR will include at least the minimum data required by rule and regulation. Additionally, the PCR will be completed by the method, within the time frame, and submitted to the Department of Health and Human Services as defined in the Rules and Regulations.

## **CONSENT**

### **General Consent Guidelines**

Whenever possible the OOHECP should obtain at least verbal consent prior to treatment. The very nature of emergency medical care means that at times verbal consent will not be possible and implied consent concept must be employed. Services are to have a consent form available and providers are to obtain a signature from the patient or a patient representative whenever possible. If a signature cannot be obtained, documentation should reflect the reason why.

### **Minor Defined**

An adult is an individual 19 years old or older or who is or has been married (Neb. Rev. Stat. §43-2101). Consent or refusal cannot be signed by a minor.

- A minor is an individual age 18 or under UNLESS the individual is married.
- A minor can be emancipated and given the rights of an adult.

### **Suicide Attempts or Threats to Harm Self**

When the OOHECP is presented with a patient that has attempted or threatened suicide, the provider should contact law enforcement and request emergency protective custody.

## **GUIDELINES FOR REFUSAL**

Any competent adult may refuse care and/or transportation. Also the patient may allow transport but refuse a specific medical procedure;

- To determine if the patient is competent the OOHECP will;
  - Determine the patient is oriented to person, place, events and approximate time
  - Determine the patient has not, in relation to the current situation, attempted or threatened to commit suicide or harm themselves
  - A legal guardian or health care power of attorney may consent to or refuse care and/or transportation for an adult or minor patient.

The OOHECP must document refusal of care and/or transport. This documentation is to include;

- All patient data elements to complete the patient care report
- Patient assessment including vital signs and any care the patient allowed
- A signature from the patient or the patients representative acknowledging the refusal of care and/or transport

If the patient refuses to allow vital signs, treatment or provide information the patient care report should have a statement explaining what elements the patient refused.

The OOHECP should reassure the patient that EMS can be called back should the patient wish to seek medical attention at a later time.

## Nebraska EMS Model Protocols

### General Principals

#### **DO NOT RESUSCITATE (DNR)**

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.

When confronted with a patient with a DNR and the patient has no pulse, agonal breathing or no respirations the OOHECP may honor the DNR and not initiate resuscitation efforts.

When confronted with a patient with a DNR and the patient is nearing death the OOHECP may provide comfort care including supplemental oxygen and pain management. The patient may be transported at the request of the patient, patient's family, patient's physician or medical control.

When confronted with a patient with a DNR and the patient is NOT nearing death the OOHECP may provide the care as directed within these protocols.

#### **ADVANCED DIRECTIVES**

Advanced directives are documents that state the patient's wishes should certain events occur. These documents may be in the form of a "Living Will". Some of these documents maybe of such a length and complexity that the OOHECP may not be able to determine the wishes of the patient for the situation encountered. In these cases resuscitation efforts should be initiated unless the sign(s) of obvious death are present. If possible the document should be transported with the patient to the hospital.

#### **FAMILY OBJECTIONS TO DNR – ADVANCED DIRECTIVES**

In situation where the family objects to a DNR order or an Advanced Directive the OOHECP should initiate resuscitation efforts unless sign(s) of obvious death are present.

#### **OOHECP ETHICAL OBJECTION**

Any OOHECP with an ethical objection to following a DNR or Advanced Directive must inform his/her service prior to responding to these types of situations. These individuals should avoid response to these types of calls whenever possible.

#### **MEDICAL DIRECTION AND PHYSICIAN ORDERS**

##### **Medical Direction Orders**

The OOHECP may consult with on line medical direction and follow the orders given via this method. HOWEVER the OOHECP may only provide treatment within the practices and procedures for their level of licensure and the service's level of licensure.

##### **Patient Physician Orders**

The OOHECP may consult on line with the patient's physician and follow the orders given via this method. HOWEVER the OOHECP may only provide treatment within the practices and procedures for their level of licensure and the service's level of licensure. The patient care record will state the name of the physician and the orders given.

##### **Physician on Scene**

The OOHECP may follow the orders of a physician on scene. HOWEVER the OOHECP may only provide treatment within the practices and procedures for their level of licensure and the service's level of licensure. The patient care record will state the name of the physician and the orders given.

#### **CONCEALED HANDGUN**

The Nebraska Concealed Handgun Permit Act allows certain individuals to obtain a permit to carry a concealed handgun. The rules and regulations necessary to carry out the act are listed in Title 272 Chapter 21.

The OOHECP's best action when confronted with a situation in which a patient has a concealed weapon is to have law enforcement take possession of the weapon. When this is not possible the weapon should be secured until it can be turned over to law enforcement.

Nebraska EMS Model Protocols  
General Principals  
**REPORTING CRIMES AND CRIME SCENES**

**Mandatory Reporting Certain Suspected Crimes**

The OOHECP is directed under the law to report or cause a report to be made to law enforcement the following;

Abuse and neglect of a child	Refer to <u>Neb. Rev. Stat. § 28-711</u>
Abuse and neglect of a vulnerable adult	Refer to <u>Neb. Rev. Stat. § 28-378</u>
Injuries as a result of a crime	Refer to <u>Neb. Rev. Stat. § 28-902</u>

**Crime Scenes**

The OOHECP will likely care for victim(s) of a crime and therefore should attempt to preserve evidence as best as possible while providing for patient care. Good documentation of the scene and patient's injuries will also be of benefit in these cases.

**COMPLETION OF THE CALL AND PREPARATION FOR NEXT CALL**

After the call, the OOHECP should clean and disinfect equipment and the ambulance. The ambulance should be restocked and prepared for the next call.

Providers should consider the call and if needed call for CISM debriefing.

# Adult Routine Assessment and Care



Nebraska EMS Model Protocols  
Adult Routine Assessment and Care  
**ROUTINE ASSESSMENT AND CARE**

This Protocol applies to every patient contact and is the base from which other treatment protocols build upon.

**Scene Size Up**

- Assess Scene Safety – Use Standard/Universal Precautions – Determine # of Patients – Consider Additional Resources
- Determine Nature of Illness/ Mechanism of Trauma

**Primary Assessment, Identify and Treat Immediate Life Threats**

- If Mechanism of Trauma Indicates – Consider Manually Stabilizing C-Spine
- Form a General Impression
- Determine Level of Consciousness – Utilize AVPU Scale
- If Adult Patient Presents in Cardiac Arrest Start Compressions Unless Obvious Signs of Death are Present
- Assess Airway
  - Foreign Body Airway Obstruction – Clear Obstruction
  - Decreased Level of Consciousness (LOC) and Patient Can Not Maintain Own Airway (No Gag Reflex)
    - Trauma Suspected – Utilize Jaw Thrust Method to Open Airway
    - Medical Patients – Utilize Head Tilt, Chin Left Method to Open Airway
    - ALL LEVELS
      - Consider Oral Airway
    - EMT With Approval, AEMT, EMT-I and Paramedic – May Consider Advanced Non-Visualized Airway
    - EMT-I and Paramedic – May Consider Intubation
  - Decreased LOC and Patient Has Decreased Ability to Maintain Own Airway (Gag Reflex Intact)
    - ALL LEVELS
      - Monitor Closely – Consider One of Simple Airway Maneuvers Above
    - EMT and Above – May Consider Nasal Airway
    - Paramedic – May Consider RSI
  - Suction Oral Airway as Needed
  - Patient Can Maintain Own Airway and No Suction Needed – No Immediate Intervention
- Assess Breathing
  - Absent or Agonal – Begin Ventilations with BVM attached to Oxygen (Alternate May use Mouth to Mask)
  - Assess Quality of Breathing And Lung Sounds
    - Respiratory Rate 10 or Under OR 30 and Above
      - Consider Assisted Ventilations with BVM attached to Oxygen
    - Signs/Symptoms of Severe Respiratory Distress – Impending Respiratory Arrest
      - Consider Oxygen by Non-Rebreather Mask
      - Consider Assisted Ventilations with BVM attached to Oxygen
    - Signs/Symptoms of Moderate Respiratory Difficulty
      - Consider Oxygen by Non-Rebreather Mask
    - Signs/Symptoms of Mild Respiratory Difficulty
      - Consider Oxygen by Nasal Cannula
    - No Signs/Symptoms of Respiratory Difficulty
      - Consider Oxygen Appropriate to Nature of Illness/ Mechanism of Trauma
  - Special Note on Oxygen Administration
    - EMT, AEMT, EMT-I and Paramedic
      - Hyper Oxygenation Should be Avoided for Cardiac and Suspected CVA Patients
      - Utilize Oxygen Saturation and Adjust Oxygen Device and Flow to Maintain Saturation Between 94% and 99% BUT NOT HIGHER

## Nebraska EMS Model Protocols Adult Routine Assessment and Care

- Assess Circulation
  - Absent Pulse – Begin CPR – Follow [Cardiac Arrest Protocols](#)
  - Assess For Bleeding
    - Control External Bleeding with Direct Pressure, Pressure Bandage, Pressure Points and/or Tourniquet
  - Assess Quality of Pulse
    - Weak – Rapid Pulse – Consider Treating for Shock
    - Weak Slow Pulse
      - Assess Airway and Breathing Again and Treat As Appropriate
      - Assess for Possible Cause
    - Irregular pulse
      - Assess for Possible Cause
    - Strength, Rate, And Rhythm Normal – No Immediate Intervention
- Assess Disability – Quick Neuro Exam
  - Obtain Glasgow Coma Scale
  - Utilize a Non-Invasive Stroke Scale to Rule Out Possible Stroke
  - Check Peripheral Circulation, Movement, and Sensory

### Obtain Patient History

- Obtain a Chief Complaint
- Obtain SAMPLE History
- Consider Use of OPQRST Pneumonic
- Obtain Pertinent Negatives

### Vital Signs

- **EMR**
  - Pulse
  - Respiratory Rate
  - Manual Blood Pressure
  - Temperature
- **EMT, AEMT, EMT-I, Paramedic**
  - Pulse
  - Respiratory Rate
  - Manual and Automatic Blood Pressure
  - Pulse Oximetry Reading
  - Non-Invasive CO Reading
  - Temperature

### Additional Monitoring as Appropriate to Patient's Illness/Injury

- EMT-I
  - EtCO<sub>2</sub> including Capnography
  - Cardiac Monitoring Lead I,II, and III
- Paramedic
  - All Non-Invasive Monitoring Devices
  - Device to Monitor Airway/Ventilation Pressures
  - Invasive Monitoring if Already Established

### Secondary Assessment

- Prepare for Patient Transport
- Expose Patient as Needed
- Medical – **Systematic Assessment of Major Body Systems**
- Trauma – **Systematic Assessment for Injuries**

### Reassessment

- Repeat Assessment of Patient Based On Condition
- Monitor Vital Signs
- Identify Changes in Patient Condition – Adjust Treatment As Needed

Nebraska EMS Model Protocols  
Adult Routine Assessment and Care  
**SCALES AND SCORES**

**Glasgow Coma Score**

Criteria	Adult/Child	Score	Infant
<b>Eye Opening</b>	Spontaneous	4	Spontaneous
	To Verbal	3	To Verbal
	To Pain	2	To Pain
	No Response	1	No Response
<b>Best Verbal Response</b>	Oriented	5	Coos, Babbles
	Disoriented/Confused	4	Irritable Cry
	Inappropriate Words	3	Cries Only to Pain
	Incomprehensible Moans/groans	2	Moans to Pain
	No Response	1	No Response
<b>Best Motor Response</b>	Obeys Commands	6	Spontaneous
	Localizes Pain	5	Withdraws from Touch
	Withdraws from Pain	4	Withdraws from Pain
	Abnormal Flexion	3	Abnormal Flexion
	Abnormal Extension	2	Abnormal Extension
	No Response	1	No Response

**Cincinnati Stroke Scale**

Assessment	Considered Positive	<b>If any single assessment elements is positive there is a 72% chance the patient is having a stroke</b>
<b>Facial Droop</b> – Ask patient to smile/frown – Observe for both sides of face working equally	Face appears unequal or patient's smile/frown has one side unequal to the other	
<b>Arm Drift</b> – Ask patient to close eyes and hold both arms out straight in front of them for 10 seconds – Observe for arm drift	One arm flaccid or one arm drifts down before the other	
<b>Speech</b> – Have patient say “A rolling stone gathers no moss” or “The sky is blue in Cincinnati” – Listen for speech abnormalities	Patient unable to speak or patient's speech slurred or patient answers with inappropriate words	

**LA Stroke Scale**

Criteria	Yes	Unknown	No
Age < 45			
No History of Seizures			
Symptom < 24 Hours			
Not Wheelchair-bound or Bedridden at baseline			
Glucose between 60 – 400			
<b>Assess symmetry in facial movement, hand grip, arm strength</b>		<b>Right</b>	<b>Left</b>
Facial smile/grimace	Normal	Droop	Droop
Grip	Normal	Weak – None	Weak – None
Arm Strength	Normal	Drifts – Falls	Drifts – Falls
Based on Exam Patient has Only Unilateral (one sided) Weakness	Yes	No	

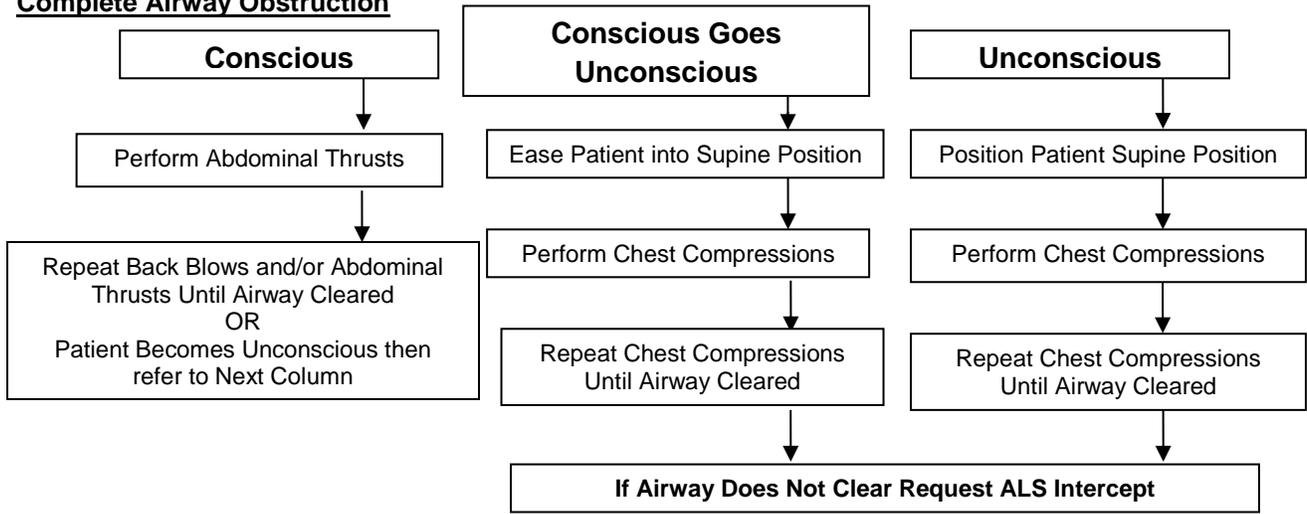
# **Adult Medical Protocols**



Nebraska EMS Model Protocols  
 Adult Medical Protocols  
**AIRWAY – CHOKING – FOREIGN BODY AIRWAY OBSTRUCTION**

**EMR and EMT**

**Complete Airway Obstruction**



**Partial Airway Obstruction**

Monitor Patient – Allow Patient to Cough, Be Alert for Complete Obstruction

**EMR Options If Approved**

- Initiate Transport

**EMT**

- Initiate Transport

**EMT Options If Approved**

- Do Not Insert Advanced Airway Unless Airway Cleared And Persistent Decreased Mental Status
- Focus on Clearing Obstructed Airway Prior to Any IV Access Attempts

**AEMT**

- Do Not Insert Advanced Airway Unless Airway Cleared And Persistent Decreased Mental Status
- Focus on Clearing Obstructed Airway Prior to Any IV Access Attempts

**EMT-I**

- Consider Direct Visualization with Laryngoscope and Removal with Forceps

**Paramedic**

- Consider Cricothyrotomy

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**AIRWAY – POST AIRWAY OBSTRUCTION**

**ALL LEVELS**

- Routine Assessment and Care

**EMR and EMT**

- Consider Oral Airway
- Consider Assisted Ventilations for Inadequate Breathing
- Consider Oxygen
- Suction as Needed
- Positioning
  - Decreased Mental Status Position on Side
  - Alert Patient Allow Patient to Assume Position of Comfort
- Be Alert For Loss of Airway Due to Swelling
- Consider ALS

**EMR Options If Approved**

- Transport Patient in Position of Comfort If Safe To Do So

**EMT**

- Consider Nasal Airway
- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Transport Patient in Position of Comfort If Safe To Do So

**EMT Options and AEMT**

- Consider Advanced Airway for Persistent Decreased Mental Status
- Consider IV Access

**EMT-I**

- Consider Advanced Airway for Persistent Decreased Mental Status
- Consider Bronchodilator for Wheezing
- Consider Cardiac Monitoring

**Paramedic**

- Consider RSI

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**ABDOMINAL PAIN**

**ALL LEVELS**

- Routine Assessment and Care

**EMR and EMT**

- Consider Oxygen
- Consider OPQRST Pneumonic for Assessment of Pain
- Additional Assessment Concerns
  - Localize Pain to Abdominal Quadrant If Possible
  - Obtain Bowel and Bladder Habits
  - Female Patients – Obtain Menstrual Cycle History
  - Female Patients – Consider Ectopic Pregnancy
- Allow Patient to Assume a Position of Comfort
- Consider ALS

**EMR Options If Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options**

- Consider Advanced Airway for Persistent Decreased LOC
- Consider IV Access

**AEMT**

- Consider 2 – 4 mg Morphine
- Consider IO Access For Shock and IV Access Can Not Be Obtained

**EMT-I**

- Consider Cardiac Monitoring

**Paramedic**

- Consider Anti-Emetic
- Consider Pain Management
- For Suspected Renal Calculus (Kidney Stones)
  - Consider 15 – 30mg Ketorolac IV in addition to Opioid Class Pain Medication

Nebraska EMS Model Protocols  
 Adult Medical Protocols  
**ALLERGIC REACTION – ANAPHYLAXIS**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Consider Oral Airway
- Consider Assisted Ventilations
- Consider Oxygen
- Assess Severity of Reaction

Mild Reaction	Moderate Reaction	Severe Reaction
Itching and/or Hives No Respiratory Symptoms	Inching and/or Hives Mild Respiratory Symptoms No Airway Compromise	Inching and/or Hives Respiratory Distress Airway Compromise Signs/Symptoms of Shock

- Consider ALS

**EMR Options if Approved**

- Consider 0.3 (Adult) Epinephrine Auto Injector For Moderate and Severe Reactions
  - May Repeat in 5 minutes if Symptoms Do Not Improve
- Initiate Transport

**EMT**

- Consider Nasal Airway
- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Consider Assisting Patient with His/Her Prescribed Meter Dosed Inhaler
- Consider Assisting Patient with His/Her Prescribed Epinephrine Auto Injector
  - May Repeat in 5 minutes if Symptoms Do Not Improve
- Initiate Transport

**EMT Options if Approved**

- Consider 2.5mg Unit Dose Albuterol Nebulizer Treatment For Moderate and Severe Reactions
- Consider 0.3mg (Adult) Epinephrine Auto Injector For Moderate and Severe Reactions
  - May Repeat in 5 minutes if Symptoms Do Not Improve
- Consider IV Access

**AEMT**

- Consider 0.3mg Epinephrine 1:1000 IM or SubQ For Moderate and Severe Reactions
  - May Repeat in 5 minutes if Symptoms Do Not Improve
- Consider IO Access In Moderate and Severe Reactions When IV Access Fails

**EMT-I**

- May Consider One of the Other EMT-I Approved Bronchodilators
- May Consider 0.3 mg Epinephrine 1:10,000 IV/IO as Alternate to Epi 1:1000 IM or SubQ
- Consider 25 to 50mg Diphenhydramine IV/IO for Mild, Moderate, and Severe Reactions
- Consider 125 to 250 mg Methylprednisolone IV/IO for Moderate and Severe Reactions
- Initiate Cardiac Monitoring

**Paramedic**

- Consider RSI
- Consider Vasopressor Agent for Anaphylactic Shock with Hypotension

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**BEHAVIORAL EMERGENCIES**

**ALL LEVELS**

- Routine Assessment and Care

**EMR and EMT**

- Consider Oxygen
- Assess for Medical or Traumatic Causes for Behavioral Changes
- Attempt Non-Confrontational Verbal Reassurance to Calm Patient – Give Clear Direction
- Combative Patients
  - Contact Law Enforcement
  - Consider Physically Restraining Patient **\*\*[See Restraint Protocol](#)**
  - Consider Use of Spit Hood
- Consider **Excited Delirium Syndrome**: patients are truly out of control and have a life-threatening medical emergency they will have some or all of the following sx: *Paranoia, disorientation, hyperaggression, hallucination, tachycardia, increased strength, hyperthermia*
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options If Approved**

- Consider Obtain Blood Glucose Reading

**AEMT and EMT-I**

- In Absence of Other Signs and Symptoms No Additional Protocol Items

**Paramedic**

- Consider IV/IO Access
- Consider Ketamine 4 mg/kg IM (Max 500 mg) for Excited Delirium
- Consider Lorazepam 0.5 mg to 1 mg IV/IO/MAD
- **-or-**
- Midazolam 0.05 mg/kg IV/IO/MAD may repeat 1-2 mg every 10 minutes (no max)
- Consider 2.5 to 5mg Haloperidol IV/IO/IM for Combative Patients
- Consider Benzodiazepine for Anxiety

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**CARDIAC ARREST – DISCONTINUING BYSTANDER CPR AND WITHHOLDING CPR**

The EMR or EMT may be presented with patients in which bystander CPR has been started or the patient presents with certain sign/symptoms of obvious death or a valid DNR.

**Situations where bystander CPR has been initiated OR EMS arrives and no CPR is initiated:**

**Un-Safe Scene**

- If the scene will place the OOHECP “at risk of serious injury or mortal peril”<sup>1</sup> CPR may be discontinued or withheld

**ALL LEVELS**

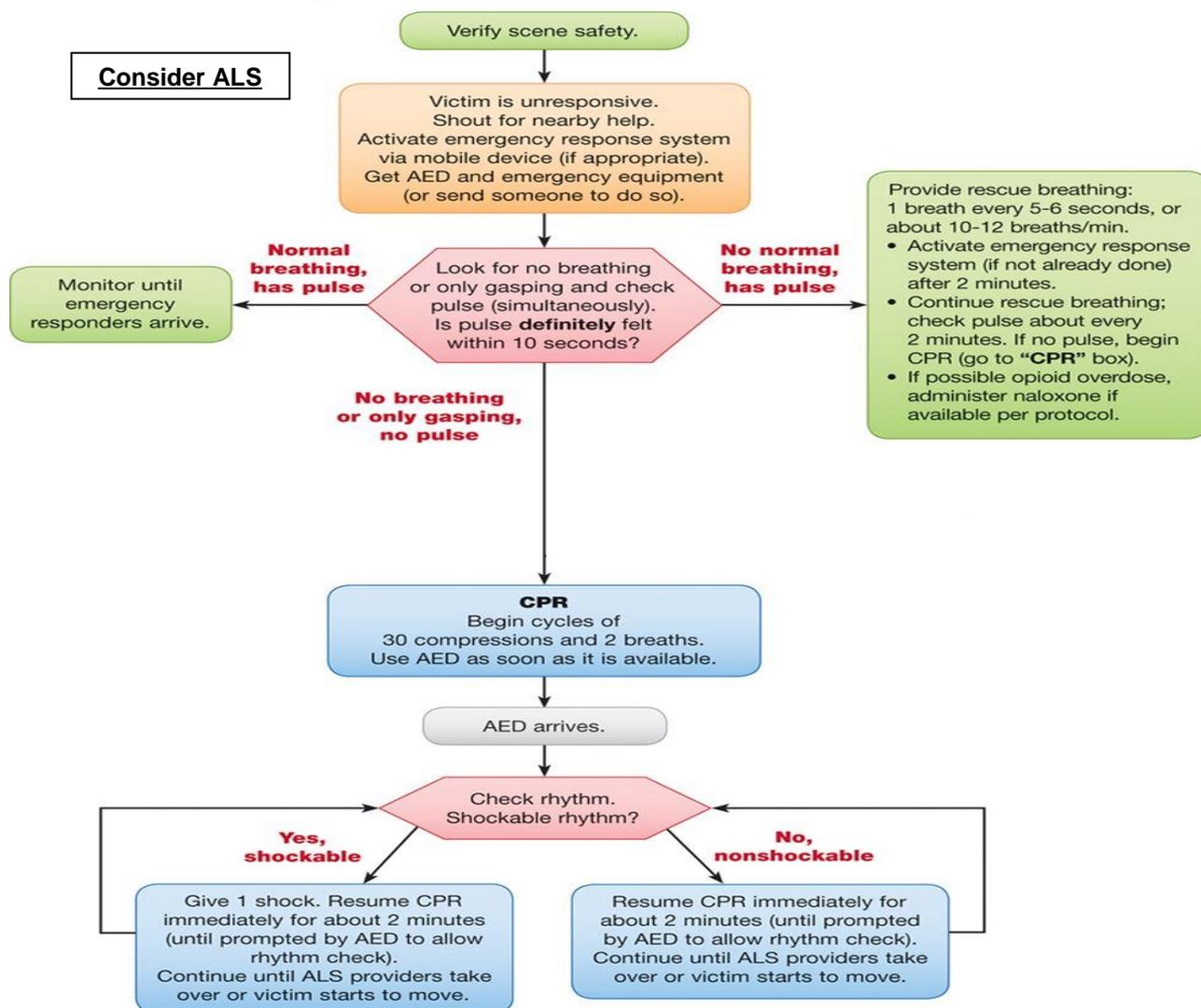
- Confirm the Patient Has
  - No Pulse
  - No Respirations or Attempts at Respirations
  
- May Stop CPR or Not Initiate CPR IF the Patient Presents with At Least One of the Following:
  - Rigor mortis
  - Decapitation
  - Decomposition
  - Dependent lividity
  - Traumatic cardiopulmonary arrest with injuries incompatible with life; Examples
    - Massive blood loss
    - Displacement of brain tissue
    - Blunt Head/Chest Trauma
  - Valid DNR form
  - Physician authorization
  
- The following will be included in the Patient Care Report;
  - CPR was or was not being performed prior to EMS arrival; OR
  - If CPR was being performed and the time it was discontinued
  - The patient had No Respirations and No Pulse
  - The additional criteria (from above) use to discontinue or withhold CPR

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<sup>1</sup> Part 3: Ethics: 2010 AHA CPR and EEC Guild lines **Withholding and Withdrawing CPR(Termination of Resuscitative Efforts) Related to Out-of Hospital Cardiac Arrest**

Nebraska EMS Model Protocols  
 Adult Medical Protocols  
**CARDIAC ARREST – AED AND CPR**  
**EMR – EMT – AEMT**

**BLS Healthcare Provider**  
**Adult Cardiac Arrest Algorithm—2015 Update**



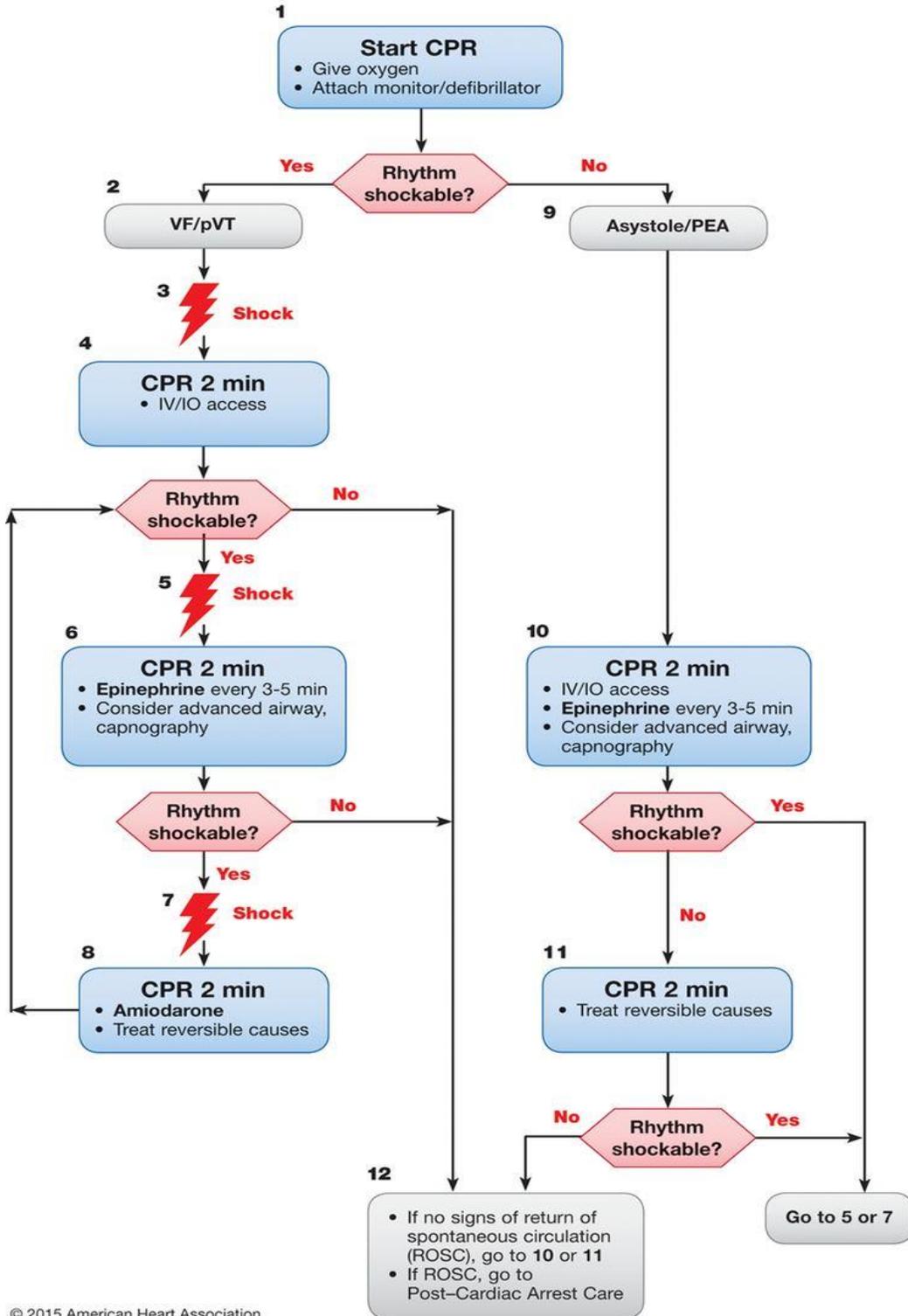
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- EMR Options If Approved**
- Place Patient On Back/CPR Board
  - Initiate Transport
  - Call for Intercept from Backup Service

- EMT**
- Place Patient On Back/CPR Board
- EMT Options if Approved and AEMT, Paramedic**  
After First Cycle of CPR and Shock or No Shock
- Consider an Advanced Airway
  - Consider Impedance Threshold Device
  - Consider IV Access with Normal Saline or LR
- AEMT**
- Consider IO Access
- EMT/AEMT/Paramedic**
- Consider mechanical CPR

Nebraska EMS Model Protocols  
 Adult Medical Protocols  
**CARDIAC ARREST – ADVANCED CARDIAC LIFE SUPPORT**  
**EMT-I AND PARAMEDIC**

**Adult Cardiac Arrest Algorithm – 2015 Update**



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CPR Quality
<ul style="list-style-type: none"> <li>• Push hard (at least 2 inches [5 cm]) and fast (100-120/min) and allow complete chest recoil.</li> <li>• Minimize interruptions in compressions.</li> <li>• Avoid excessive ventilation.</li> <li>• Rotate compressor every 2 minutes, or sooner if fatigued.</li> <li>• If no advanced airway, 30:2 compression-ventilation ratio.</li> <li>• Quantitative waveform capnography             <ul style="list-style-type: none"> <li>– If PETCO<sub>2</sub> &lt;10 mm Hg, attempt to improve CPR quality.</li> </ul> </li> <li>• Intra-arterial pressure             <ul style="list-style-type: none"> <li>– If relaxation phase (diastolic) pressure &lt;20 mm Hg, attempt to improve CPR quality.</li> </ul> </li> </ul>
Shock Energy for Defibrillation
<ul style="list-style-type: none"> <li>• <b>Biphasic:</b> Manufacturer recommendation (eg, initial dose of 120-200 J); if unknown, use maximum available. Second and subsequent doses should be equivalent, and higher doses may be considered.</li> <li>• <b>Monophasic:</b> 360 J</li> </ul>
Drug Therapy
<ul style="list-style-type: none"> <li>• <b>Epinephrine IV/IO dose:</b> 1 mg every 3-5 minutes</li> <li>• <b>Amiodarone IV/IO dose:</b> First dose: 300 mg bolus. Second dose: 150 mg.</li> </ul>
Advanced Airway
<ul style="list-style-type: none"> <li>• Endotracheal intubation or supraglottic advanced airway</li> <li>• Waveform capnography or capnometry to confirm and monitor ET tube placement</li> <li>• Once advanced airway in place, give 1 breath every 6 seconds (10 breaths/min) with continuous chest compressions</li> </ul>
Return of Spontaneous Circulation (ROSC)
<ul style="list-style-type: none"> <li>• Pulse and blood pressure</li> <li>• Abrupt sustained increase in PETCO<sub>2</sub> (typically ≥40 mm Hg)</li> <li>• Spontaneous arterial pressure waves with intra-arterial monitoring</li> </ul>
Reversible Causes
<ul style="list-style-type: none"> <li>• <b>Hypovolemia</b></li> <li>• <b>Hypoxia</b></li> <li>• <b>Hydrogen ion (acidosis)</b></li> <li>• <b>Hypo-/hyperkalemia</b></li> <li>• <b>Hypothermia</b></li> <li>• <b>Tension pneumothorax</b></li> <li>• <b>Tamponade, cardiac</b></li> <li>• <b>Toxins</b></li> <li>• <b>Thrombosis, pulmonary</b></li> <li>• <b>Thrombosis, coronary</b></li> </ul>

Nebraska EMS Model Protocols  
Adult Medical Protocols

**CARDIAC ARREST – SPECIAL SITUATIONS**

**ALL LEVELS**

- Follow Cardiac Arrest Algorithm With These Special Considerations

**CARDIAC ARREST OF THE OBVIOUS PREGNANT PATIENT**

**EMR, EMT, AEMT**

- Place Patient On Backboard and Tilt Patient On Backboard Approximately 30 Degrees to the Patient's Left

**EMT-I and Paramedic**

- Alternative to Tilting Patient on Backboard Manually Displace Gravid Uterus to the Patient's Left

**CARDIAC ARREST IN SUSPECTED HYPOMAGNESEMIA**

**Paramedic**

- Identify If Patient Has Torsades de Points Cardiac Rhythm and Consider 1-2 grams Magnesium Sulfate IV/IO

**CARDIAC ARREST IN SUSPECTED HYPERKALEMIA**

**Paramedic**

- Identify If Patient Has Tall Spiked T Waves on 12 Lead EKG Or Diagnostic Mode Three Lead
- Consider
  - 15mg Albuterol Nebulized and Ventilated into Patient
  - **OR** 5 to 10ml of 10% Calcium Chloride IV/IO Over 2-5 Minutes
  - **OR** 15 to 30ml 10% Calcium Gluconate IV/IO Over 2-5 Minutes

**CARDIAC ARREST IN KNOWN TRICYCLIC ANTIDEPRESSANT OVERDOSE**

**Paramedic**

- Confirm Patient Overdosed on Tricyclic Antidepressant
- Consider 50mEq 8.4% Sodium Bicarbonate IV/IO

**CARDIAC ARREST IN KNOWN OR HIGH SUSPICION OF CYANIDE POISONING**

**Paramedic**

- Consider 5g diluted in 200ml Hydroxocobalamin IV/IO Infused over 15 minutes

**CARDIAC ARREST IN SUSPECTED NARCOTIC – BENZODIAZEPINE – BETA BLOCKER – CALCIUM CHANNEL BLOCKER OVERDOSE**

**ALL LEVELS**

- No Additional Considerations – Antidotes Are Contra-Indicated in Cardiac Arrest

**CARDIAC ARREST IN HYPOTHERMIA–DROWNING**

**EMR and EMT**

- Remove Wet Clothing and Passively Warm Patient

**EMT IV Options If Approved**

- Use Warmed IV Fluids

**EMT-I and Paramedic**

- May Use Epinephrine in Severe Hypothermia (<87°F)
- Avoid Amiodarone and Lidocaine in Sever Hypothermia (<87°F)

**CARDIAC ARREST IN TRAUMA**

**ALL LEVELS**

- If Resuscitation Attempted Follow Appropriate **Cardiac Arrest Protocol**

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**CARDIAC ARREST – RETURN OF SPONTANEOUS CIRCULATION**

**ALL LEVELS**

- Routine Assessment and Care

**EMR and EMT**

- Keep AED Attached to Patient
- Assist Ventilations
- Administer Oxygen
- If Gag Reflex Returns Removal of Oral Airway
- Suction as Needed
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94 to 99%
- Consider Obtaining 12 Lead EKG
- Initiate Transport

**EMT Options If Approved**

- Consider Advance Airway If Not Already In Place During Cardiac Arrest
- Consider Obtain a Blood Glucose Reading
- Consider IV Access

**AEMT**

- Consider IV or IO Access

**EMT-I**

- Consider Intubation If Not Already In Place During Cardiac Arrest
- Initiate Cardiac Monitoring
- Treat Cardiac Dysrhythmias
- Adjust Ventilations (Rate, Tidal Volume, FiO<sub>2</sub>) To Maintain These Goals
  - O<sub>2</sub> Saturation 94 to 99%
  - EtCO<sub>2</sub> 35 to 45 mmHg

**Paramedic**

- If Patient Intubated
  - Consider Sedative Agent **OR**
  - Consider Sedative Agent **First** Then a Non-Depolarizing Paralytic
- Consider Inducing Hypothermia If Patient Meet Criteria
  - **\*\* See Cardiac Arrest Return of Spontaneous Circulation Induced Hypothermia**
- Consider Vasopressor Agent for Sustained Hypotension

Nebraska EMS Model Protocols  
 Adult Medical Protocols  
**CARDIAC ARREST – RETURN OF SPONTANEOUS CIRCULATION INDUCED HYPOTHERMIA**

**EMR – EMT – AEMT – EMT-I**

- **Not Approved for this Protocol**

**Paramedic**

- DO NOT Attempt Hypothermia Unless The Destination Facility Has Capabilities to Maintain/Continue This Process
- For this protocol to be in effect the following criteria must be met.

<b>Destination Facility and ALS Service Criteria</b>	
<b>Destination Facility Criteria</b>	<b>ALS Service Criteria</b>
Policies and Procedures For Management of Inducing and Maintaining Hypothermia After ROSC	PMD Authorization For This Protocol and RSI Protocol
Equipment and Supplies To Maintain Hypothermia	Ability To <ul style="list-style-type: none"> <li>• Maintain Two 1,000ml IV Bags of NS or LR at 34° to 36° F</li> <li>• Monitor Body Temperature</li> </ul>
Facility is Aware and Approves of Service To Induce Hypothermia After ROSC	Medications Availability <ul style="list-style-type: none"> <li>• Sedative Agent(s)</li> <li>• Non-Depolarizing Paralytic(s)</li> <li>• Vasopressor Agent</li> </ul>

<b>Patient Criteria</b>	
<b>Inclusion Criteria:</b>	<b>Exclusion Criteria</b>
GCS 8 or Less	GCS Over 8
Age 16 and Above	Under Age 16
Cardiac Arrest Due To Suspected Cardiac Problem	Cardiac Arrest Due to: <ul style="list-style-type: none"> <li>• Trauma</li> <li>• Toxins/Poisonings</li> <li>• Status Asthmaticus</li> <li>• Status Epilepticus</li> </ul>
Advanced Airway In Place and Confirmed Patent	Patient Obviously Pregnant or Confirmed Pregnant
At Least One IV/IO Access Line - Preferably Two	Existing DNR or Terminal Illness
EtCO <sub>2</sub> of 20mmHg or More	Vegetative or Comatose Patient Prior to Cardiac Arrest
Initial Body Temp of 93°F (34°C) or Greater	Anti-Coagulated Patient

- The Paramedic will Monitor VS Including
  - Temperature
  - SaO<sub>2</sub> and EtCO<sub>2</sub>
  - Cardiac Rhythm
- Verify Inclusion Criteria are Meet and No Exclusion Criteria are Present
- Administer Cold IV Fluid in 500ml Boluses until Patient Temp Reaches 93 to 94°F OR Maximum of 2000ml
- Apply Cold Packs to Groin and Axillary Regions
- Prevent Shivering
  - Administer Sedative Agent First Then Non-Depolarizing Paralytic Agent
- Treat Hypotension with Vasopressor Agent
- Treatment Goals – Adjust Care As Needed
  - Prevent Shivering
  - Body Temp of 93°F But NOT Colder than 93°F
  - O<sub>2</sub> Saturation 94% to 99% But Not Above 99%
  - EtCO<sub>2</sub> of 35 to 45 mmHg
  - Systolic BP 80 to 100

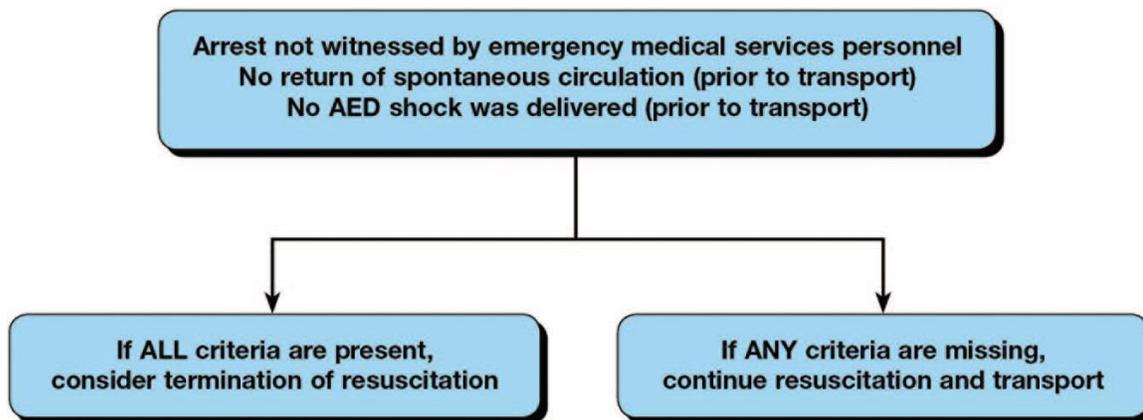
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Adult Medical Protocols  
**CARDIAC ARREST – TERMINATION OF RESUSCITATION**

**ALL LEVELS**

- Routine Assessment

**EMR, EMT and AEMT**

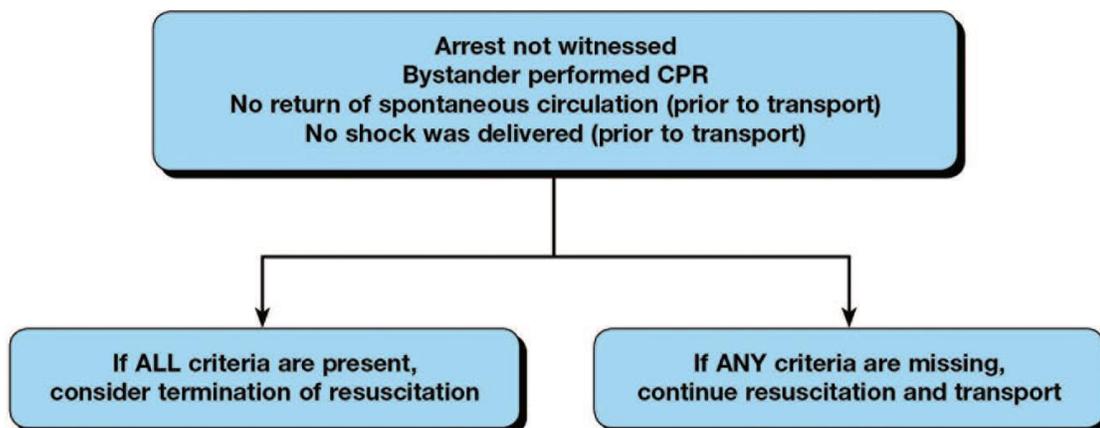
- Consider Termination Resuscitation In Accordance With The Following Algorithm
- Consider Consultation with Medical Control or PMD



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**EMT-I and Paramedic**

- Consider Termination Resuscitation In Accordance With The Following Algorithm



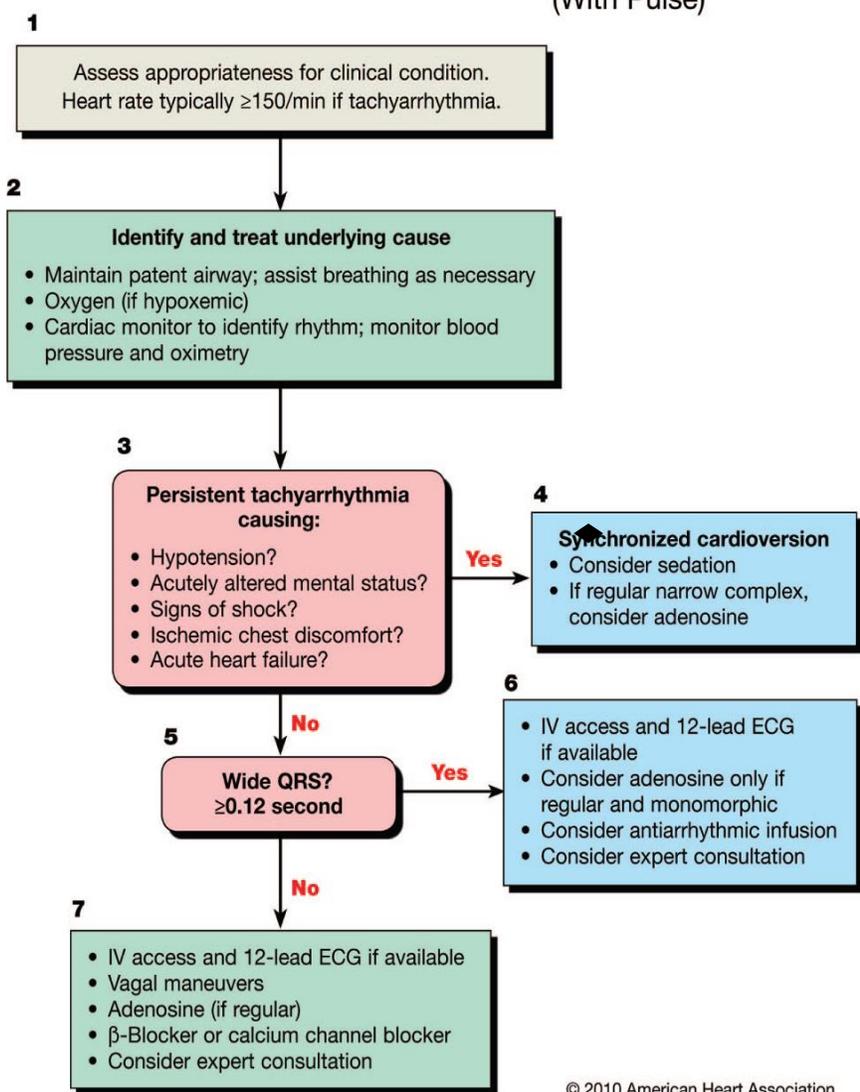
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**Paramedic**

- As An Option to Above when ALL Criteria Are Not Met the Paramedic May Consider the Following
  - Patient Presents or Develops Asystole in Three Leads
  - 1mg Epinephrine Administered
  - Advanced Airway Placed – Endotracheal Or Advanced Non-Visualized Airway
  - Consider Termination of Resuscitation

Nebraska EMS Model Protocols  
 Adult Medical Protocols  
**CARDIAC DYSRHYTHMIA TACHYCARDIA**  
**EMT-I AND PARAMEDIC**

**Adult Tachycardia**  
 (With Pulse)



**Doses/Details**

**Synchronized Cardioversion**  
 Initial recommended doses:  
 • Narrow regular: 50-100 J  
 • Narrow irregular: 120-200 J biphasic or 200 J monophasic  
 • Wide regular: 100 J  
 • Wide irregular: defibrillation dose (NOT synchronized)

**Adenosine IV Dose:**  
 First dose: 6 mg rapid IV push; follow with NS flush.  
 Second dose: 12 mg if required.

---

**Antiarrhythmic Infusions for Stable Wide-QRS Tachycardia**

**Procainamide IV Dose:** ★  
 20-50 mg/min until arrhythmia suppressed, hypotension ensues, QRS duration increases >50%, or maximum dose 17 mg/kg given. Maintenance infusion: 1-4 mg/min. Avoid if prolonged QT or CHF.

**Amiodarone IV Dose:** ★  
 First dose: 150 mg over 10 minutes. Repeat as needed if VT recurs. Follow by maintenance infusion of 1 mg/min for first 6 hours.

**Sotalol IV Dose:** ★  
 100 mg (1.5 mg/kg) over 5 minutes. Avoid if prolonged QT.

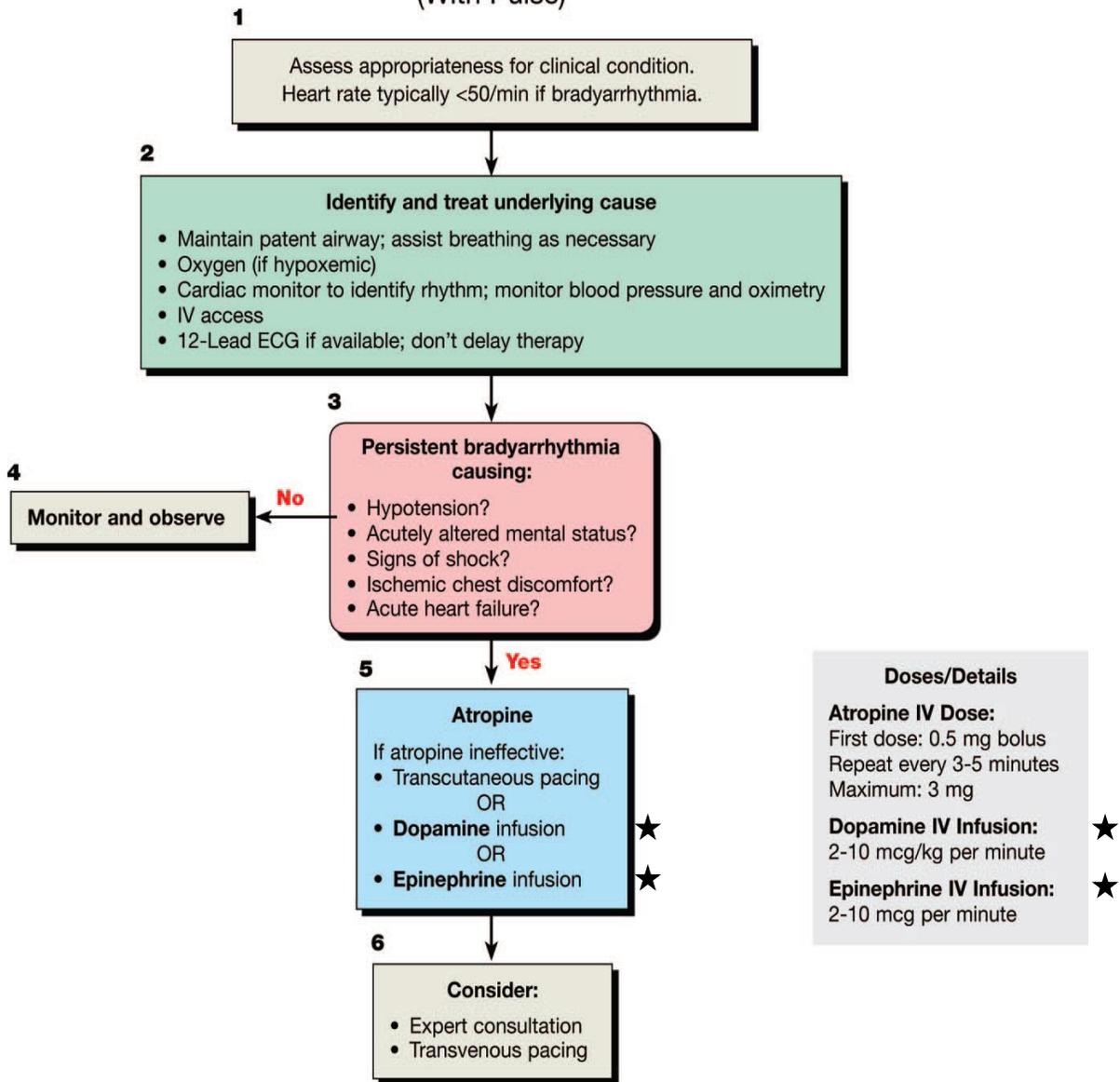
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★ **Paramedic Only Medication**  
 Procainamide  
 Amiodarone Infusion  
 Sotalol

◆ **EMT-I Must Have Completed ACLS to Perform Synchronized Cardioversion**

Nebraska EMS Model Protocols  
 Adult Medical Protocols  
**CARDIAC DYSRHYTHMIA BRADYCARDIA**  
**EMT-I AND PARAMEDIC**

**Adult Bradycardia**  
 (With Pulse)



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**★Paramedic Only Medication/Skill**

Dopamine Infusion  
 Epinephrine Infusion

Nebraska EMS Model Protocols  
 Adult Medical Protocols  
**CARDIAC 12 LEAD FINDINGS AND SPECIAL TREATMENTS**

**TALL SPIKED T WAVES**

**Paramedic**

- Consider Hyperkalemia
  - Consider Continuous Albuterol Nebulizer Treatments

**ST ELEVATION**

**Paramedic**

- Consider STEMI Event **\*\*See ACS Protocol**
  - ST Elevation In Contiguous Leads
  - No Bundle Branch Block (Unless Paramedic Has a Comparison EKG)
  - Increased Suspicion Of STEMI If Reciprocal to ST Elevation – ST Depression Presents

Lead to Cardiac Wall Chart

Lead I Lateral Wall	aVR	V1 Septal Wall	V4 Anterior Wall
Lead II Inferior Wall	aVL Lateral Wall	V2 Septal Wall	V5 Lateral Wall
Lead III Inferior Wall	aVF Inferior	V3 Anterior Wall	V6 Lateral Wall

- If Patient Presents with ST Elevation in Inferior Leads
  - Consider Use of Right Sided EKG To Determine Right Ventricular Involvement
  - Do Not Delay Transport
- If Patient Presents with ST Elevation in Inferior Leads With T Wave Inversion in V1 and V2
  - Consider Moving V4, 5 And 6 To Position V 7, 8, and 9 To Determine Posterior Involvement
  - Do Not Delay Transport

**AXIS DEVIATION**

**Paramedic**

- Extreme Right Axis Deviation – Lead I and aVF Predominantly Negative
  - Be Alert for Ventricular Ectopy Including V-Tach
- Right Axis Deviation – Lead I Predominantly Negative and aVF Predominantly Positive
  - Consider Right Ventricular Hypertrophy
  - Consider Dextrocardia
- Left Axis Deviation – Lead I Predominantly Positive, aVF Predominantly Negative, and Lead II Predominantly Negative
  - Consider Left Sided Heart Hypertrophy
  - Inferior Wall MI

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**STEMI GUIDELINES\***

**ALL LEVELS**

Obtain 12-lead ECG with initial vital signs – GOAL – First medical contact (FMC) to ECG  $\leq$  10 min, scene time:  $\leq$  15 minutes \*To provide early identification and pre-hospital arrival notification for suspected myocardial infarction or STEMI.

1. Chest pain, pressure, tightness or persistent discomfort above the waist in patients  $\geq$  35 years of age
2. "heartburn" or epigastric pain
3. Complaints of "heart racing" (HR  $>$ 150 or irregular and  $>$ 120) or "heart too slow" (HR  $<$  50 and symptomatic)
4. A syncopal episode, severe weakness, or unexplained fatigue
5. New onset stroke symptoms ( $<$  24 hours old)
6. Difficulty breathing or shortness of breath (with no obvious non-cardiac cause)
7. ROSC (return of spontaneous circulation) post cardiac arrest
8. Recent cocaine, stimulant and/or other illicit drug use (patients of any age)
9. *If initial ECG is not diagnostic but suspicion is high for MI and symptoms persist, obtain serial ECG's at 5-10 minute intervals*

**EMR**

- Transmit 12-lead ECG to facility for interpretation or present to ALS for interpretation
- Alert hospital staff or qualified ALS personnel if ECG monitor interpretive statement infers "acute myocardial infarction" and patient has signs & symptoms suspect of acute myocardial infarction including chest discomfort and symptoms listed above
- Administer O2 based on assessment findings
- Obtain systolic/diastolic blood pressure (BP) in both arms
- Administer chewable aspirin 324 mg by mouth or rectally

**EMT – AEMT – EMT-I**

- Evaluate if erectile dysfunction or pulmonary hypertension medications taken in the past 24 hours including: sildenafil (Viagra, Revatio), vardenafil (Levitra, Staxyn), or avanafil (Stendra), tadalafil (Cialis, Adcirca). Hold nitrates for 48 hours following the last dose
- Administer nitroglycerin sublingual 0.4 mg every 5 minutes up to 3 doses if chest discomfort present and SBP  $>$  100. Check BP prior to each administering dose. Hold if SBP  $<$  100 mm HG (note: BLS providers are only able to assist patients with self-administration of their own prescribed sublingual nitroglycerin)
- Request ALS intercept per local protocol
- Establish large bore IV (upper extremity preferred) access per protocol – normal saline IV. Establish a 2nd IV line as time allows.

**Paramedic**

- 12-lead ECG trained to recognize ST segment elevation of  $\geq$  1 mm in 2 contiguous leads or confirmed interpretation of STEMI transmitted and reviewed by a physician, nurse practitioner or physician assistant
- ECG monitor interpretive statement infers "acute myocardial infarction" with signs & symptoms suspect of acute myocardial infarction including chest discomfort and symptoms listed above
- ACI-TIPI score of 75 or greater
- Clopidogrel (Plavix) 300 mg by mouth if transferring for PPCI after confirmation by PCI receiving facility and local medical control per protocol
- Establish a nitroglycerine IV drip (if appropriate) if chest discomfort is unrelieved. Delivered via pump only. Initiate @ 5 mcg/min & titrate in increments of 5 mcg/min to maintain a systolic BP of 100 mm/HG or greater. Hold nitrates as indicated
- Administer analgesia as needed for discomfort per protocol

\*Based on Mission: Lifeline and the American Heart Association

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**STEMI TRANSPORT GUIDELINES\***

**ALL LEVELS**

- If FMC to percutaneous coronary intervention (PCI) can be achieved in less than 90 minutes, arrange for ALS (air or ground) intercept and transport directly to PCI capable receiving hospital for primary PCI
- If FMC to PCI is greater than 90 minutes, transport to the closest appropriate non-PCI capable referring hospital for possible fibrinolytic therapy and urgent transfer to a PCI capable receiving facility for reperfusion
- Activate STEMI alert, transmit 12-lead ECG as able, provide report to receiving hospital

**Diversion Criteria**

If patient demonstrates instability and/or has any one of the following diversion criteria requiring ED evaluation by a practitioner proceed to closest appropriate hospital:

- Possible need of head CT or neurological intervention / confusion
- Emergent intubation immediate circulatory stabilization
- Chest trauma or MVC victims
- Consider DNR status
- Consider scoring with Sgarbossa criteria

**Documentation Reminders**

- Provide copy of eNARSIS report with verbal report to registered nurse or physician
- If STEMI/AMI alert is requested of the receiving hospital, document the time
- Provide a printed or electronic copy of pre-hospital 12-lead ECG with report to registered nurse or physician

**Patient Care Goals**

- Provide early identification of patients and early notification of the hospital for suspected AMI or STEMI
- Utilize an assessment tool that may reduce the time from onset of symptoms to receiving definitive cardiac interventions at the receiving hospital
- Prepare patient for immediate transport with indicated medications administered en route to hospital. Attempt to limit the scene time to the shortest time possible

**American Heart Association Mission: Lifeline EMS Best Practice Goals**

- All patients with non-traumatic chest discomfort,  $\geq 35$  years of age, treated and transported by EMS receive a pre-hospital 12-lead electrocardiogram
- All STEMI patients transported directly to a STEMI receiving center, receive a first (pre-hospital) medical contact to PCI time  $\leq 90$  minutes directly or  $\leq 120$  minutes for interfacility hospital transfers
- All lytic eligible STEMI patients treated and transported to a referring hospital for fibrinolytic therapy receive a door to needle time  $\leq 30$  minutes

**American Heart Association Mission: Lifeline EMS Reporting Measures**

- Time from symptom onset to EMS dispatch
- Time from dispatch to EMS vehicle arrival at receiving or referring hospital door
- Number of suspected AMI/STEMI patients treated and transported by EMS who receive a 12-lead ECG
- Number of STEMI patients treated and transported to a referring hospital for potential reperfusion by fibrinolysis therapy who receive a fibrinolytic checklist screening en route to identify possible contraindications
- Number of STEMI patients who received a pre-hospital ECG, recognized STEMI, and called for a STEMI alert at the receiving or referring hospital prior to arrival

\*Based on Mission: Lifeline and the American Heart Association

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**CHEST PAIN – DISCOMFORT**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Consider OPQRST Pneumonic for Assessment of Pain
- Administer Oxygen
  - Minor Distress 2-6 LPM Nasal Cannula
  - Moderate to Severe Distress 10 – 15 LPM Non-Rebreather Mask
- Consider ALS

**EMR Options if Approved**

- Consider 4 each 81mg (Total 324mg) Aspirin Chewed and Swallowed
- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94 to 99% O2 Saturation
- Consider 4 each 81mg (Total 324mg) Aspirin Chewed and Swallowed
- Consider Obtaining 12 Lead EKG And Transmit/Handoff for Interpretation
- Consider Assisting Patient with His/Her Own Prescribed Nitroglycerin
  - BP Must Be 110 Systolic or Greater
  - May Repeat Every 5 Minutes To Total Of 3 Doses As Long As BP Remains Above 110 Systolic
- Initiate Transport

**EMT Options if Approved**

- Consider IV Access

**AEMT**

- Consider 0.4mg Nitroglycerin SL
  - BP Must Be 110 Systolic or Greater
  - May Repeat Every 5 Minutes To Total Of 3 Doses As Long As BP Remains Above 110 Systolic
- Consider Morphine 2 – 4mg IV

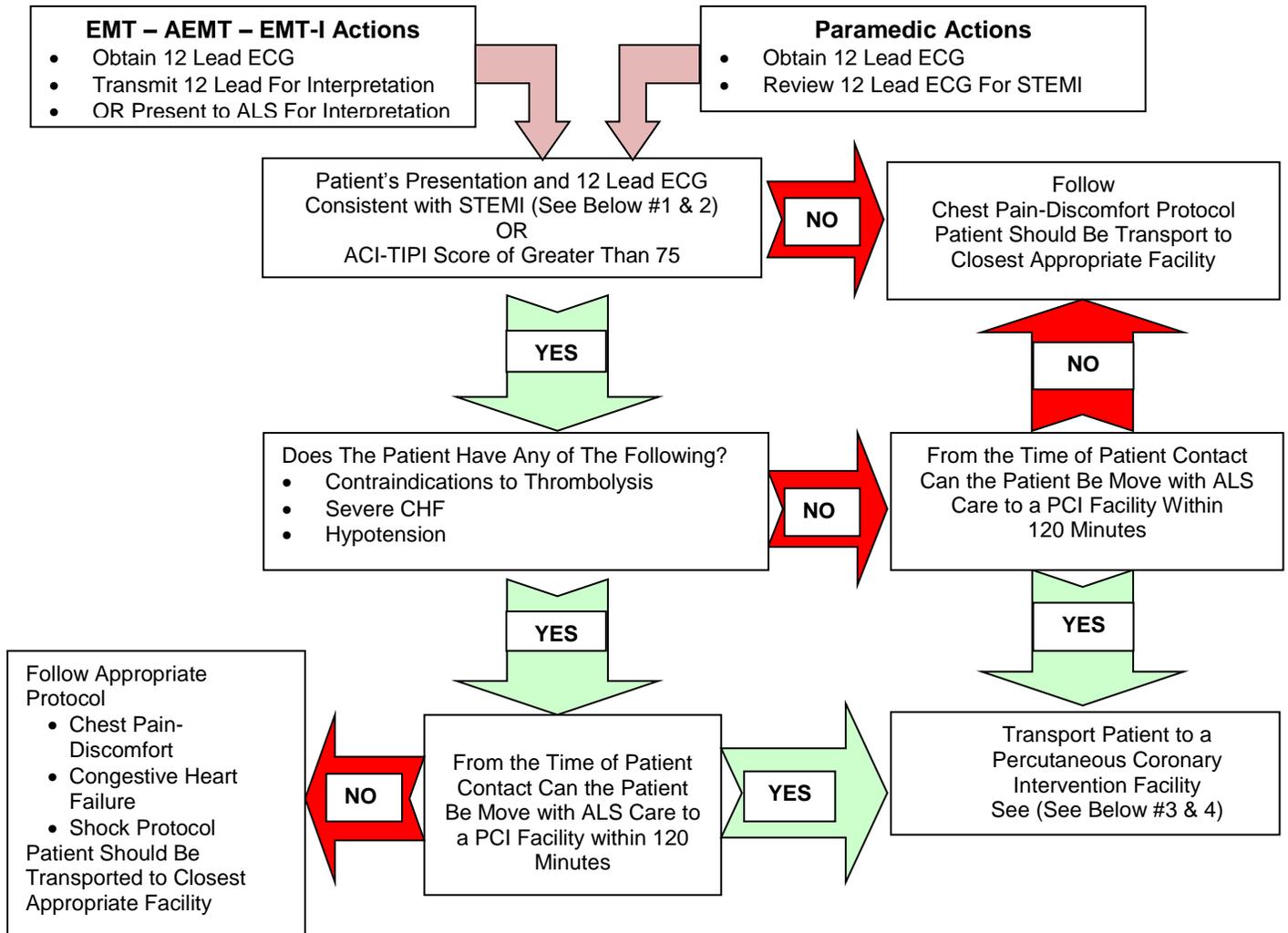
**EMT-I**

- Initiate Cardiac Monitoring
- Manage Dysrhythmia \*\* **See Appropriate Protocol**

**Paramedic**

- Consider 12 Lead Interpretation
- Consider 0.4 mg Nitroglycerin SL
  - May Repeat As Needed For Continued Chest Pain If BP Remains Greater Than 100 Systolic
  - After 1<sup>st</sup> Dose May Consider Nitroglycerin in Conjunction with Pain Management
- Consider Pain Management
- Consider Anti-Emetic
  - **DO NOT USE** Droperidol (Inapsine)
  - Avoid Phenothiazine Class Anti-Emetics Unless No Other Option is Available, Then Use With Precaution in Inferior Wall AMI or Right Ventricular AMI as Identified on 12 Lead

Nebraska EMS Model Protocols  
 Adult Medical Protocols  
**CHEST PAIN – DISCOMFORT – ACUTE CORONARY SYNDROME**



**Additional Guide Lines**

1. Acute Coronary Syndrome (ACS)
  - ACS is defined as patients presenting with angina or angina equivalents such as chest, epigastric, arm, or jaw pain and may be associated with diaphoresis, nausea and shortness of breath/difficulty breathing.
2. 12 Lead ECG Inclusion Criteria for STEMI
  - Anterior – Inferior – Lateral MI: With ST Elevation Greater Than 1mm In Two Or More Contiguous Leads and QRS Complex 0.12 or Narrower
  - Posterior MI – ST Depression Greater Than 1mm in V1 and V2 With An R/S Ratio of Greater Than Or Equal To One AND QRS Complex 0.12 or Narrower
  - New Left Bundle Branch Block: If Patient Has In His/Her Possession a Previous ECG With Narrow QRS Complex To Demonstrate The Current Wide QRS Complex Is New Onset
3. Notify PCI Facility As Soon As Determination is Made
4. If Patient Is To Be Flown: Move Patient To Land Zone/ Staging Area And Manage Until Intercept

Nebraska EMS Model Protocols  
 Adult Medical Protocols  
**CONGESTIVE HEART FAILURE**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Administer Oxygen
  - Minor Distress 2-6 LPM Nasal Cannula
  - Moderate to Severe Distress 10 – 15 LPM Non-Rebreather Mask
- Consider Assisted Ventilations
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94 to 99% O2 Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider IV Access KVO/TKO Rate
- Consider CPAP **\*\*See Chart Below for Indications and Contra-Indications**

**AEMT**

- Consider 2.5mg Albuterol Neb Treatment

**EMT-I**

- Initiate Cardiac Monitoring
- Consider EtCO2 Monitoring
- Manage Dysrhythmia **\*\* See Appropriate Protocol**
- Consider 0.4mg Nitroglycerin SL If Systolic BP at Least 100
- May Consider One of the Other Nebulized Bronchodilators

**Paramedic**

- Consider 12 Lead Interpretation
- Consider CPAP
- Consider Minimal Sedation with Benzodiazepine Class Sedative
- Consider Nitroglycerin **\*\*Must have Patent IV/IO Access**
  - Systolic BP 180 and Greater      Consider 3 each – 0.4mg Nitroglycerin SL
  - Systolic BP 140 to 180              Consider 2 each – 0.4mg Nitroglycerin SL
  - Systolic BP 100 to 140              Consider 1 each – 0.4mg Nitroglycerin SL
- Consider Vasopressor Agent for Pulmonary Edema and Hypotension
- Consider RSI

<b>CPAP</b>	
<b>Indications</b>	<b>Contra-Indications</b>
<ul style="list-style-type: none"> <li>• Patient Able To Maintain Own Airway</li> <li>• Patient Able to Follow At Least Simple Commands</li> <li>• Patient Complains of Shortness of Breath-Difficulty Breathing</li> <li>• Systolic BP At Least 100</li> <li>• Decreased /Abnormal Lung Sounds</li> <li>• Patient Has Signs Of Respiratory Distress (Not All Must Be Present)               <ul style="list-style-type: none"> <li>○ Able to Speak Only Short Phrases</li> <li>○ Retractions</li> <li>○ Tripod Positioning</li> </ul> </li> <li>• Known or Suspected Cause Of Respiratory Distress of               <ul style="list-style-type: none"> <li>○ Pulmonary Edema – Congestive Heart Failure</li> <li>○ Exacerbation of COPD</li> <li>○ Exacerbations of Asthma Not Relieved with Bronchodilator Medication</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Patient Under Age 18</li> <li>• Patient Unable To Maintain Own Airway</li> <li>• Patient Unable to Follow Simple Commands – Decreased LOC</li> <li>• Patient Vomiting</li> <li>• Systolic BP Under 90</li> <li>• Upper Airway Partial Obstructions (Croup-Epiglottis-Upper Airway Edema-Partial FBAO)</li> <li>• Shortness of Breath-Difficulty Breathing With a Suspected/Known Cause of               <ul style="list-style-type: none"> <li>○ Pneumothorax</li> <li>○ Trauma</li> <li>○ Respiratory Infection Without Pulmonary Edema</li> </ul> </li> <li>• Facial Deformities In Which a Mask Seal Can Not Be Obtained</li> </ul>

Nebraska EMS Model Protocols  
Adult Medical Protocols

**CPR INDUCED CONSCIOUSNESS SEDATION PROTOCOL**

**ALL LEVELS**

- Routine Assessment and Care
- Assess for signs of consciousness: Spontaneous eye opening, purposeful movement, verbal response to include moaning

**EMR, EMT, AEMT**

- Continue CPR
- If tiering is available, requires ALS intercept

**Paramedic**

- Administer Ketamine Bolus  
IV: 0.5-1.0 mg/kg  
IM: 2-3 mg/kg
- Consider co-administration of midazolam bolus\*  
IV: 1 mg  
IM: 2 mg
- May repeat Ketamine bolus after 5-10 minutes if needed for continued sedation or if needed for continued sedation start infusion
  - IV bolus dose: 0.5-1.0 mg/kg OR IM: 2-3 mg/kg
  - IV infusion dose: 2-7 mcg/kg/minute

\*Co-administration of benzodiazepines with ketamine has been suggested to decrease myocardial oxygen demand

Nebraska EMS Model Protocols  
Adult Medical Protocols

**CVA – STROKE**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Consider Oxygen
- Utilize A Non-Invasive Stroke Scale
- Obtain Onset Time
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94 to 99% O2 Saturation
- Initiate Transport

**EMT Options if Approved and AEMT**

- Consider IV Access
- Obtain Blood Glucose Reading – **If Abnormal Go to Appropriate Protocol**
- Consider Advanced Airway for Persistent Decrease Mental Status

**EMT-I**

- Initiate Cardiac Monitoring
- Manage Dysrhythmia \*\* **See Appropriate Protocol**
- Consider Intubation for Persistent Decrease Mental Status

**Paramedic**

- Consider 12 Lead

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**DECREASED LEVEL OF CONSCIOUSNESS – DECREASED MENTAL STATUS**

**ALL LEVELS**

- Routine Assessment and Care
- Consider 0.4 to 2 mg Naloxone IM Auto-Injector/MAD for suspected or known narcotic overdose, or IV/IM/MAD for AEMT and above

**EMR**

- Consider Oral Airway and Assisted Ventilations
- Administer Oxygen
- Consider 12 Lead ECG acquisition and transmission
- Utilize A Non-Invasive Stroke Scale
- Obtain Onset Time
- Assess for Medical or Traumatic Cause and Utilize Additional Protocols As Needed
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O<sub>2</sub> Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decreased Mental Status
- Consider IV Access
- Obtain Blood Glucose Reading – If Abnormal Go to Appropriate Protocol

**AEMT**

- Consider 0.4 to 2 mg Naloxone IV/IM/MAD

**EMT-I**

- Consider Intubation for Persistent Decreased Mental Status
- Initiate Cardiac Monitoring

**Paramedic**

- Consider RSI

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**EPIGLOTTITIS**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Administer Oxygen By Blow By or Non-Rebreather Mask Humidified if Possible
- Calm Patient
- Allow Patient to Assume a Position Where He/She Can Maintain Own Airway
- If Patient Loses Airway Attempt BVM Ventilations
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved and AEMT**

- Defer Attempts at Advanced Airway
- Defer IV Unless Patient Loses Airway

**EMT-I**

- Initiate Cardiac Monitoring

**Paramedic**

- Consider Cricothyroidotomy

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**HYPOGLYCEMIA – INSULIN SHOCK**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Assess for Stroke
- Assess for Signs and Symptoms of Hypoglycemia
- If No Trauma Position Patient to Protect Airway
- Consider Oxygen
- IF PATIENT CAN FOLLOW SIMPLE COMMANDS AND PROTECT OWN AIRWAY
  - Consider Having Patient Drink Juice, Non-Diet Pop or Milk
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94 %or Better O2 Saturation
- IF PATIENT CAN FOLLOW SIMPLE COMMANDS AND PROTECT OWN AIRWAY
  - Consider 15grams Oral Glucose Gel or Tablets
- Initiate Transport

**EMT Options if Approved**

- Obtain Blood Glucose Reading
- Consider IV Access
- Consider Advanced Airway for Persistent Decrease Mental Status

**AEMT**

- Consider IO Access when:
  - Blood Glucose Level Indicates Hypoglycemia
  - **AND** Patient's Mental Status is Decreased to Point Where Patient Can Not Maintain an Airway
  - **AND** IV Access Can Not Be Obtained
- Consider 12.5 to 25 Grams Dextrose 50% IV or IO
- ALTERNATE Treatments
  - IF PATIENT CAN FOLLOW SIMPLE COMMANDS AND PROTECT OWN AIRWAY
    - Consider Mixing 12.5 to 25 Grams Dextrose 50% in Juice and Have Patient Drink
  - Defer IO and IV and Administer 1mg Glucagon IM or MAD
    - If Glucagon Fails to Resolve Hypoglycemia
      - IF PATIENT CAN FOLLOW SIMPLE COMMANDS AND PROTECT OWN AIRWAY
        - Consider Mixing 12.5 to 25 Grams Dextrose 50% in Juice and Have Patient Drink
      - **OR** Consider IV Access and 12.5 to 50 Grams Dextrose 50% IV

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status After Treatment With Dextrose or Glucagon
  - Assess For Other Causes of Decreased Mental Status
- Consider Cardiac Monitoring

**Paramedic**

- Consider 100mg Thiamine Prior to Dextrose 50% When Patient Appears Malnourished or Chronic Alcohol Abuse

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**HYPERGLYCEMIA – DIABETIC COMA**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Consider Oxygen
- Assess for Stroke
- Assess for Signs and Symptoms of Hyperglycemia
- If No Trauma Position Patient to Protect Airway
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O<sub>2</sub> Saturation
- Initiate Transport

**EMT Options if Approved**

- Obtain Blood Glucose Reading
- Consider IV Access
- Consider Fluid Bolus
  - Signs and Symptoms Indicate Dehydration
  - **OR** Glucometer Indicates Ketones
- Consider Advanced Airway for Persistent Decrease Mental Status

**AEMT**

- Consider IO Access When
  - IV Access Can Not Be Obtained
  - **AND** Blood Glucose Reading is 400 or More

**EMT-I**

- Consider Cardiac Monitoring
- Consider Intubation for Persistent Decrease Mental Status

**Paramedic**

- Assess For DKA and Hyperosmolar Non-Ketotic Coma (Syndrome)

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**GI HEMORRHAGE**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Consider Oxygen
- Consider OPQRST Pneumonic for Assessment of Pain Complaints
- Assess-Question Patient On Nausea/Vomiting and Bowel/Stools
- Monitor For Shock
- Be Prepared for Suctioning
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved and AEMT**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider IV Access

**AEMT**

- Consider IO Access For Profound Shock and IV Access Can Not Be Obtained

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Consider Cardiac Monitoring
- Consider NG or OG Tube for Upper GI Hemorrhage

**Paramedic**

- Consider Anti-Emetic

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**HEADACHE**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Consider Oxygen
- Consider OPQRST Pneumonic for Assessment of Pain
- Assess Cause of Headache (Stroke, Trauma, etc.)
- Monitor For Shock
- Be Prepared for Suctioning
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved and AEMT**

- Consider IV Access for Severe Headache Associated with
  - Nausea and Vomiting
  - Changes in Mental Status

**EMT-I**

- Consider Cardiac Monitoring

**Paramedic**

- Consider Anti-Emetic
- Consider Pain Management After Paramedic Level Neuro Assessment

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**NAUSEA – VOMITING – DIARRHEA**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Consider Oxygen
- Consider OPQRST Pneumonic for Assessment of Pain
- Assess For Cause
- Assess for Dehydration
- Be Prepared for Suctioning
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Examine if Possible
  - Emesis for Frank Blood or Coffee Ground Type Emesis **\*\*[See GI Hemorrhage Protocol](#)**
  - Stools for Frank Blood or Tarry Foul Smelling Stools **\*\*[See GI Hemorrhage Protocol](#)**
- Initiate Transport

**EMT Options if Approved and AEMT**

- Consider IV Access
- Consider 250 to 500 ml Fluid Bolus(es)

**EMT-I**

- Consider Cardiac Monitoring

**Paramedic**

- Consider Anti-Emetic

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**NON-TRAUMATIC GENERALIZED PAIN**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Consider Oxygen
- Consider OPQRST Pneumonic for Assessment of Pain Complaints
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider IV Access

**AEMT**

- Consider IO Access If IV Can Not Be Obtained
- Consider 2-4 mg Morphine May Repeat to Total 10mg

**EMT-I**

- Consider Cardiac Monitoring

**Paramedic**

- Consider Pain Management
- Consider Anti-Emetic

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**NON-TRAUMATIC NOSE BLEED**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Consider Oxygen by Non-Rebreather Mask or Blow By – Humidified if Possible
- Position Patient
  - Sitting Upright
  - Head in Neutral Position
  - Avoid Head Tilt Position
  - If Upright Not Possible Consider Lateral Position
- Pinch Nares Together
- Direction to Patient
  - Spit Blood/Clot Out
  - Try Not to Swallow Blood
  - Do Not Rub – Blow Nose or Sniff
- Suction as Needed
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider IV Access For Sign and Symptoms of Shock
- Consider Fluid Bolus(es)

**AEMT**

- Consider IO Access For Signs and Symptoms of Shock AND If IV Can Not Be Obtained

**EMT-I**

- Consider Cardiac Monitoring

**Paramedic**

- Consider Anti-Emetic

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**RESPIRATORY ARREST**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Open Airway
  - Trauma Suspected Use Jaw Thrust Method
  - Non-Traumatic Use Head Tilt-Chin Lift Method
- Consider Oral Airway
- Begin Ventilations at 10-12 times a minute with Bag-Valve-Mask or Mouth to Mask Device Attached to Oxygen
- Suction as Needed
- Verify Pulse Present
- Consider Cause Use Additional Protocols if Needed
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Monitor Oxygen Saturation Adjust Ventilation/Minute to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway
- Consider IV Access
- Obtain Blood Glucose Reading

**AEMT**

- Consider IO Access If IV Can Not Be Obtained
- Consider Cause Use Additional Protocols if Needed

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Utilize EtCO2 Monitoring
- Initiate Cardiac Monitoring
- Consider Cause Use Additional Protocols if Needed

**Paramedic**

- Consider Cause Use Additional Protocols if Needed

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**RESPIRATORY DISTRESS – ASTHMA**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Administer Oxygen
- Consider Assisted Ventilations
- Suction as Needed
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O<sub>2</sub> Saturation
- Consider Assisting Patient with His/Her Prescribed Metered Dose Inhaler
  - Administer Prescribed Number of Puffs Repeat Two Times Every 5-10 Minutes If Distress Continues
  - Consult Medical Control, PMD, or Patient's Physician for Additional Doses
- Consider Assisting Patient with His/Her Prescribed Epinephrine Auto-Injector for Status Asthmaticus
  - Consult Medical Control, PMD, or Patient's Physician for Additional Doses
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider 2.5mg in 3 ml Albuterol Nebulizer Treatment Repeat Two Times If Symptoms Do Not Improve OR Patient's Condition Deteriorates
- Consider CPAP with inline 2.5 mg in 3 ml Albuterol Nebulizer Treatment \*\*See Chart on Next Page for Indications and Contra-Indications
- If Albuterol Nebulizer Treatments Fail to Improve Distress
  - Consider 0.3mg (Adult) Epinephrine Auto-Injector For Status Asthmaticus\* (**See Below**)
- Consider IV Access

**AEMT**

- Consider IO Access If IV Can Not Be Obtained
- If Albuterol Nebulizer Treatments Fail to Improve Distress
  - Consider 0.3 to 0.5mg Epinephrine 1:1000 IM for Status Asthmaticus\* (**See Below**)

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
  - Consider Ventilating in a Nebulized Bronchodilator
- Consider EtCO<sub>2</sub> Monitoring
- Consider Bronchodilator
- Consider Cardiac Monitoring
- Consider 125 -250mg Methylprednisolone IV/IO

**Paramedic**

- If First Line Pharmaceutical Interventions Have Minimal or No Effect
  - Consider 1 to 2 grams Magnesium Sulfate infused over 10 minutes
  - **OR** Consider 0.5 to 0.75 ml of a 2.5% Racemic Epinephrine Nebulizer Treatment
  - **OR** Consider 3 to 5 mls 1:1000 Epinephrine Nebulizer Treatment
  - **OR** Consider CPAP with Inline Nebulized Bronchodilator
- Consider RSI
  - Consider Ventilating in a Nebulized Bronchodilator

**\* Status Asthmaticus Means Sustained Asthma Not Relieved By Oxygen, Meter Dose Inhaler, or Nebulizer Treatment**

Nebraska EMS Model Protocols  
 Adult Medical Protocols  
**RESPIRATORY DISTRESS – EXACERBATION OF COPD**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Administer Oxygen
- Consider Assisted Ventilations
- Suction as Needed
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Consider Assisting Patient with His/Her Prescribed Metered Dose Inhaler
  - Administer Prescribed Number of Puffs Repeat Two Times Every 5-10 Minutes If Distress Continues
  - Consult Medical Control, PMD, or Patient's Physician for Additional Doses
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider 2.5mg in 3 ml Albuterol Nebulizer Treatment Repeat Two Times If Symptoms Do Not Improve OR Patient's Condition Deteriorates
- Consider IV Access
- Consider CPAP with inline 2.5 mg in 3 ml Albuterol Nebulizer Treatment \*\*See Chart below for Indications and Indications and Contra-Indications

**AEMT**

- Consider IO Access If IV Can Not Be Obtained

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
  - Consider Ventilating in a Nebulized Bronchodilator
- Consider Bronchodilator
- Initiate Cardiac Monitoring
- Consider EtCO2 Monitoring

**Paramedic**

- Consider CPAP with Inline Nebulized Bronchodilator
  - Consider Minimal Sedation with Benzodiazepine Class Sedative
- Consider RSI
  - Consider Ventilating in a Nebulized Bronchodilator

<b>CPAP</b>	
<b>Indications</b>	<b>Contra-Indications</b>
<ul style="list-style-type: none"> <li>• Patient Able To Maintain Own Airway</li> <li>• Patient Able to Follow At Least Simple Commands</li> <li>• Patient Complains of Shortness of Breath-Difficulty Breathing</li> <li>• Systolic BP At Least 100</li> <li>• Decreased /Abnormal Lung Sounds</li> <li>• Patient Has Signs Of Respiratory Distress (Not All Must Be Present)               <ul style="list-style-type: none"> <li>○ Able to Speak Only Short Phrases</li> <li>○ Retractions</li> <li>○ Tripod Positioning</li> </ul> </li> <li>• Known or Suspected Cause Of Respiratory Distress of               <ul style="list-style-type: none"> <li>○ Pulmonary Edema – Congestive Heart Failure</li> <li>○ Exacerbation of COPD</li> <li>○ Exacerbations of Asthma Not Relieved with Bronchodilator Medication</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Patient Under Age 18</li> <li>• Patient Unable To Maintain Own Airway</li> <li>• Patient Unable to Follow Simple Commands – Decreased LOC</li> <li>• Patient Vomiting</li> <li>• Systolic BP Under 90</li> <li>• Upper Airway Partial Obstructions (Croup-Epiglottis-Upper Airway Edema-Partial FBAO)</li> <li>• Shortness of Breath-Difficulty Breathing With a Suspected/Known Cause of               <ul style="list-style-type: none"> <li>○ Pneumothorax</li> <li>○ Trauma</li> <li>○ Respiratory Infection Without Pulmonary Edema</li> </ul> </li> <li>• Facial Deformities In Which a Mask Seal Can Not Be Obtained</li> </ul>

Nebraska EMS Model Protocols  
Adult Medical Protocols

**RESPIRATORY DISTRESS – SPONTANEOUS PNEUMOTHORAX**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Administer Oxygen
- Consider Assisted Ventilations
- Suction as Needed
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O<sub>2</sub> Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider IV Access

**AEMT**

- Consider IO Access If IV Can Not Be Obtained

**EMT-I**

- Consider Needle Decompression for Signs and Symptoms of Tension Pneumothorax
- Initiate Cardiac Monitoring

**Paramedic**

- Consider RSI

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**RESPIRATORY INFECTIONS**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Administer Oxygen
- Suction as Needed
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Obtaining a Body Temperature
- Consider Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O<sub>2</sub> Saturation
- Consider Assisting Patient with His/Her Prescribed Metered Dose Inhaler for Sign and Symptoms of Distress
  - Administer Prescribed Number of Puffs Repeat Two Times Every 5-10 Minutes If Distress Continues
  - Consult Medical Control, PMD, or Patient's Physician for Additional Doses
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider 2.5mg in 3 ml Albuterol Nebulizer Treatment for Sign and Symptoms of Distress
  - May Repeat Two Times If Symptoms Do Not Improve OR Patient's Condition Deteriorates
- Consider IV Access

**AEMT**

- Consider IO Access
  - If IV Can Not Be Obtained
  - Patient In Respiratory Distress

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
  - Consider Ventilating in a Nebulized Bronchodilator
- Consider Bronchodilator for Respiratory Distress
- Consider Cardiac Monitoring
- Consider EtCO<sub>2</sub> Monitoring
- Consider 125 – 250mg Methylprednisolone

**Paramedic**

- Consider RSI
  - Consider Ventilating in a Nebulized Bronchodilator

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**RENAL DIALYSIS PATIENT**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Consider Oxygen
- Do Not Use Same Limb For BP Measurement As Active Dialysis Shunt
- Hemorrhage from Shunt Puncture Site
  - Use Direct Pressure and Pressure Bandage
  - As Last Resort Use a Tourniquet
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O<sub>2</sub> Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider IV Access – DO NOT ATTEMPT TO ACCESS SHUNT
  - Limit Fluid Administration Rate

**AEMT**

- Consider IO Access If IV Can Not Be Obtained

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Initiate Cardiac Monitoring

**Paramedic**

- Consider 12 Lead
- Evaluate 12 Lead for Tall Spiked T Waves Indicating Hyperkalemia
  - Consider Continuous Albuterol Nebulizer Treatments to Total Dose of 15 mg
- Consider 100mg Thiamine for Signs and Symptoms of Wernicke's Syndrome

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**SEIZURE AND POSTICTAL PERIOD**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Active Seizure
  - Administer Oxygen (Blow By Acceptable During Seizure)
  - Protect Patient – Pads Around Patient
  - Do Not Restrain Patient
  - Do Not Insert Anything Orally
- Postictal Period
  - Consider Oxygen
  - Consider Assisted Ventilations and Oral Airway for Persistent Decreased Mental Status
  - Suction as Needed
- Assess For Trauma and Stroke
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Nasal Airway for Persistent Decreased Mental Status
- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider Obtaining Blood Glucose
- Consider IV Access

**AEMT**

- Consider IO Access
  - If IV Can Not Be Obtained
  - Seizures Reoccur

**EMT-I**

- Consider Cardiac Monitoring
- Consider 2 – 4mg Diazepam IV/IO
  - Repeat if needed to Maximum of 10mg
  - Contact Medical Control for Additional Doses
- Consider Intubation for Persistent Decrease Mental Status

**Paramedic**

- Consider Benzodiazepine for Repeat or Continued Seizures

Nebraska EMS Model Protocols  
 Adult Medical Protocols  
**TOXINS – AUTO INJECTOR ANTIDOTE KITS**  
**NERVE AGENT – ORGANOPHOSPHATE EXPOSURE**

**ALL LEVELS**

- Routine Assessment and Care

**EMR and EMT and AEMT**

- May administer auto injector antidote kits to a fellow responder or patients in mass numbers when higher level out-of-hospital care providers are overwhelmed.

The **EMT-I and Paramedic**

- May administer the auto injector antidote kits

<b>Adult Auto Injector Antidote Kit Dosing Chart</b>			
<b>Severity</b>	<b>Mild Symptoms</b>	<b>Moderate Symptoms</b>	<b>Severe Symptoms</b>
<b>Signs And Symptoms</b>	<ul style="list-style-type: none"> <li>• Pinpoint pupils (miosis)</li> <li>• Excessive sweating</li> <li>• Tearing (lacrimation)</li> <li>• Drooling (salivation)</li> <li>• Runny nose</li> <li>• Mild chest tightness</li> <li>• Mild shortness of breath</li> </ul>	<ul style="list-style-type: none"> <li>• Severe chest tightness</li> <li>• Wheezing</li> <li>• Profuse airway secretions</li> <li>• Respiratory distress</li> <li>• Vomiting, abdominal cramps</li> <li>• Diarrhea</li> <li>• Muscle weakness</li> </ul>	<ul style="list-style-type: none"> <li>• Cyanosis</li> <li>• Seizures</li> <li>• Coma</li> <li>• Flaccid paralysis</li> <li>• Respiratory failure</li> <li>• Apnea</li> </ul>
<b>Treatment</b>	<p style="text-align: center;"><b>Evacuate To A Safe Area</b></p> <p style="text-align: center;"><b>Administer</b></p> <ul style="list-style-type: none"> <li>• One Each – Atropine and Pralidoxime (Mark I)</li> </ul> <p style="text-align: center;"><b><u>OR</u></b></p> <ul style="list-style-type: none"> <li>• One – Atropine/Pralidoxime (DouDote)</li> </ul>	<p style="text-align: center;"><b>Do Not Delay</b></p> <p style="text-align: center;"><b>Administer</b></p> <ul style="list-style-type: none"> <li>• Two Each – Atropine and Pralidoxime(Mark I)</li> </ul> <p style="text-align: center;"><b><u>OR</u></b></p> <ul style="list-style-type: none"> <li>• Two – Atropine/Pralidoxime (DouDote)</li> </ul>	<p style="text-align: center;"><b>Do Not Delay</b></p> <p style="text-align: center;"><b>Administer</b></p> <ul style="list-style-type: none"> <li>• Three Each – Atropine and Pralidoxime (Mark I)</li> </ul> <p style="text-align: center;"><b><u>OR</u></b></p> <ul style="list-style-type: none"> <li>• Three – Atropine/Pralidoxime (DouDote)</li> </ul>

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**TOXINS – INHALED**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Assess For Trauma
- Administer High Flow Oxygen
- Consider Assisted Ventilations
- Consider Oral Airway
- Suction as Needed
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Nasal Airway
- Assess CO Level by Non-Invasive Monitor
  - If Elevated Administer High Flow Oxygen
  - If within Normal Values Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- If Non-Invasive CO Monitoring Not Available
  - Administer High Flow Oxygen
- Consider Assisting Patient with His/Her Prescribed Metered Dose Inhaler
  - Administer Prescribed Number of Puffs Repeat
    - May Repeat In 10 Minutes If Distress Continues
    - Total Repeat Doses is Two
  - Consult Medical Control, PMD, or Patient's Physician for Additional Doses
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider 2.5mg in 3 ml Albuterol Nebulizer Treatment
  - May Repeat Two Times If Symptoms Do Not Improve OR Patient's Condition Deteriorates
- Consider IV Access

**AEMT**

- Consider IO Access If IV Can Not Be Obtained

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
  - Consider Ventilating in a Nebulized Bronchodilator
- Consider Nebulized Bronchodilator
- Initiate Cardiac Monitoring
- Consider EtCO2 Monitoring

**Paramedic**

- Consider RSI
  - Consider Ventilating in a Nebulized Bronchodilator

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**TOXINS – OVERDOSE**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Consider Oxygen
- Consider Assisted Ventilations
- Consider Oral Airway
- Obtain Name of Medication/Drug
  - **See Next Page for Additional Information**
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Nasal Airway
- Consider Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Consider Contacting Destination Facility Via Radio/Phone With Name of Medication/Drug
- Consider Contacting Poison Control
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider IV Access

**AEMT**

- Consider IO Access If IV Can Not Be Obtained

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Consider Cardiac Monitoring

**Paramedic**

- Consider Anti-Emetic

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**TOXINS – OVERDOSE**

**SPECIAL INSTRUCTIONS FOR SPECIFIC TOXINS**

**IF LEVEL NOT LISTED USE THE TOXIN – OVERDOSE PROTOCOL ABOVE**

**STIMULANTS – COCAINE – METHAMPHETAMINE – ECSTASY**

**EMR-EMT**

- Obtain Temperature
- If Temp Over 102 An Infection Not Suspected Consider Passive Cooling

**EMT Options if Approved and AEMT**

- Consider Fluid Boluses For Elevated Temps and Signs and Symptoms of Dehydration

**EMT-I**

- For Patients That Present Awake, Alert with Severe Anxiousness/Anxiety and/or Hallucinations
  - Consider 2 – 4mg Diazepam IV/IO

**Paramedic**

- For Patients That Present Awake, Alert with Severe Anxiousness/anxiety and/or Hallucinations
  - Consider Benzodiazepine

**NARCOTICS – OPIATES – BARBITUATES**

**EMR-EMT**

- Consider 0.4 to 2 mg Naloxone IM Auto-Injector/MAD for suspected or known narcotic overdose, or IM/IV/IO/MAD for AEMT and above

**EMT**

- Consider 12 Lead ECG acquisition and transmission

**AEMT**

- Consider Advanced Airway If Naloxone Fails to Improve Respiratory Status

**EMT-I and Paramedic**

- Consider Intubation If Naloxone Fails to Improve Respiratory Status

**TRICYCLIC ANTIDEPRESSANT**

**Paramedic**

- For Patients That Present or Develop Decreased Mental Status, Hypotension and Widen QRS
  - Consider 50mEq 8.4% Sodium Bicarbonate
  - Consider Vasopressor Agent

**CALCIUM CHANNEL BLOCKER**

**Paramedic**

- For Known Calcium Channel Blocker Overdose and Patients That Present or Develop Decreased Mental Status, and Hypotension
  - Consider 5ml of 10% Calcium Chloride IV/IO Over 2-5 Minutes
  - **OR** 15ml of 10% Calcium Gluconate IV/IO Over 2-5 Minutes
  - Consider Vasopressor Agent
- **\*\*\*Avoid Calcium Chloride and Calcium Gluconate when Calcium Channel Blocker Overdose Can NOT be Confirmed OR in Mixed Overdose Situations**

Nebraska EMS Model Protocols  
Adult Medical Protocols  
**TOXINS – POISONS**

**ALL LEVELS**

- Routine Assessment and Care
- Call For Special Resources to Remove Patient from Hot Zone If Needed

**EMR**

- Consider Oxygen
- Decontaminate Patient if Needed – Call For Special HAZMAT If Needed
  - Dry Chemicals Brush then Flush from Skin
  - Wet Chemical Flush with Water
- Obtain Name of Toxin and Route(s) of Exposure
- Unless Directed by Medical Control OR Poison Control Do Not Induce/Encourage Vomiting
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Contacting Destination Facility Via Radio/Phone With Name of Toxin
- Consider Contacting Poison Control
- Initiate Transport

**EMT Options if Approved**

- Consider IV Access
- Consider Advanced Airway for Persistent Decrease Mental Status

**AEMT**

- Consider IO Access If IV Can Not Be Obtained

**EMT-I**

- Consider Cardiac Monitoring
- Consider Intubation for Persistent Decrease Mental Status

**Paramedic**

- Consider Anti-Emetic

**SPECIAL INSTUCTIONS FOR SPECIFIC POISONS**  
**ORGANOPHOSPHATES**

**EMR – EMT – AEMT**

- See Above

**EMT-I**

- Consider Atropine 1mg IV/IO Repeat until Symptoms Improve

**Paramedic**

- Consider 600mg to 1200mg Pralidoxime Over 5 Minutes IV/IO or Infusion Over 15 – 30 Minutes

**CYANIDE POISONING**

**EMR-EMT-AEMT-EMT-I**

- See Above

**Paramedic**

- Consider 5g in 200mL NS Hydroxocobalamin over 15 minutes

Nebraska EMS Model Protocols

Adult Medical Protocols

**SHOCK**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Administer Oxygen
- Consider Assisted Ventilations
- Consider Oral Airway
- Assess For Trauma
  - Control External Hemorrhage
  - Manually Stabilize C-Spine and Extremity Deformities
- Assess For Dehydration
- Assess for Potential of Allergic Reaction **\*\*Go to [Allergic Reaction Anaphylaxis Protocol](#)**
- Position Supine Unless Respiratory Status Does Not Allow For This
- Conserve Body Heat
- Consider ALS

**EMR Options if Approved**

- If Trauma Present
  - Consider Spinal Stabilization and Extremity Stabilization
- Initiate Transport

**EMT**

- Consider Nasal Airway
- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Obtain Temperature and If Fever Present in Absence of Trauma Consider Dehydration/Sepsis
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider IV Access
- Consider Fluid Boluses 250ml to 500ml Then Reassess

**AEMT**

- Consider IO Access If IV Can Not Be Obtained

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Initiate Cardiac Monitoring
- Assess for Potential of Cardiogenic Shock

**Paramedic**

- Assess For Type of Shock
- General Considerations for Shock
  - When Considering Anti-Emetic Choose an Agent With the Least Cardiac Effects
  - When Considering Pain Management Choose an Agent With Least Effect on BP
- Shock Types and Considerations

<b>Hypovolemic</b>	<b>Cardiogenic</b>	<b>Obstructive Shock</b>	<b>Distributive</b>
<ul style="list-style-type: none"> <li>• Consider 250 to 500ml Fluid Boluses With Frequent Reassessments</li> </ul>	<ul style="list-style-type: none"> <li>• Consider Fluid Bolus</li> <li>• Consider Vasopressor Agent</li> <li>• Manage Dysrhythmias</li> </ul>	<ul style="list-style-type: none"> <li>• Assess for Tension Pneumothorax – Treat with Needle Decompression</li> <li>• Assess for Cardiac Tamponade – Alert Destination Facility</li> </ul>	<ul style="list-style-type: none"> <li>• Anaphylaxis – <b>Go To Allergic Reaction Anaphylaxis Protocol</b></li> <li>• Neurogenic (Spine) Shock – Fluid Boluses</li> <li>• Sepsis</li> <li>• Consider Fluid Boluses</li> <li>• Consider Vasopressor Agents</li> </ul>

# **Adult Trauma Protocols**



Nebraska EMS Model Protocols  
Adult Trauma Protocols  
**TRAUMA SYSTEM**

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 should consult with Medical Control/Local Hospital 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.

The Nebraska Trauma System is divided into geographic regions each with its own regional advisory board. Each region and specifically designate trauma centers may have additional trauma system activation guidelines. This protocol presents a general overview for the OOHECP.

**GENERAL TRAUMA SYSTEM (TRAUMA TEAM) GUIDELINES:**

1. Considerations For Trauma System Activation

- Vitals And LOC
  - Adult Heart Rate >130
  - Adult Systolic BP <85
  - Adult Respiratory Rate <10 Or >29
  - **\*\*See Pediatric Vital Signs And Ventilation Guidelines**
  - Altered Mental Status
- Anatomy Of Injury
  - Penetrating Trauma To Head, Neck, Torso, Groin
  - Combinations Of Burns >20% Or Face/Airway Burns
  - Amputation At Or Above Wrist/Ankle
  - Spinal Cord Injury
  - Flail Chest
  - Two Or More Proximal Long Bone Injuries
- Biomechanics Of Injury
  - Ejected From Vehicle
  - Auto vs. Pedestrian/Bicycle >5 mph
  - Motorcycle/ ATV Crash
  - Pedestrian Thrown Or Run Over
- Other Risk Factors
  - Provider Impression Of Unstable Patient
  - Extreme(s)
  - Age (<2 >60)
  - Environment (Heat/Cold)
  - Health/Illness (Pregnancy, COPD, CHF, Diabetes)
  - Exposure To Hazardous Materials
- High Energy Transfer
  - Rollover
  - Fall >10 Feet
  - Extrications > 20 Minutes
- Burn Injury
  - 2nd And 3rd Degree Burns Of Face, Hands, Feet, Perineum
  - Significant Electrical Burns
  - Inhalation Injury

2. Procedure:

- Consult With Medical Control And/or Local Hospital
- Request Trauma System (Trauma Team) Activation
- Call For ALS Intercept – If Available

Nebraska EMS Model Protocols  
 Adult Trauma Protocols  
**TRAUMA CARE**  
**HEAD – CHEST – ABDOMEN**

**ALL LEVELS**

- Adult Routine Assessment and Care
- Assess For Shock and Treat

	Head/Neck/Spine	Chest	Abdomen
<b><u>EMR</u></b>	Administer Oxygen Consider Assisted Ventilations Consider Oral Airway Consider OPQRST Pneumonic for Assessment of Pain Suction as Needed Manually Stabilize Head and Neck Control External Bleeding Stabilize Impaled Objects In Place Assess CMS Consider Trauma Team – Trauma System Activation		
	<b>Open Trauma</b> <ul style="list-style-type: none"> <li>• *Bandage Open Wounds</li> <li>• *Consider Occlusive Dressing for Open Neck Wounds</li> </ul> <b>Closed Trauma</b> <ul style="list-style-type: none"> <li>• *Consider Cold Pack to Areas of Edema</li> </ul>	<b>Open Chest Trauma – Sucking Chest Wound</b> <ul style="list-style-type: none"> <li>• *Seal Wound With Occlusive Dressing</li> </ul> <b>Closed Chest Trauma</b> <ul style="list-style-type: none"> <li>• *Consider Stabilizing Fail Sections With Bulky Dressings</li> </ul>	<b>Open Abdominal Trauma – Eviscerations</b> <ul style="list-style-type: none"> <li>• *Do Not Attempt to Replace Contents</li> <li>• *Place Contents On Top of Abdomen</li> <li>• *Cover With Thick Moist Dressing</li> </ul> <b>Closed Abdominal Trauma</b> <ul style="list-style-type: none"> <li>• *Attempt to Localize Pain to an Abdominal Region/Quadrant</li> </ul>
<b><u>EMR Options</u></b>	Consider Spinal Stabilization Consider Extremity Stabilization Initiate Transport		
<b><u>EMT</u></b>	<b>Defer Nasal Airways</b>	<b>May Consider Nasal Airway</b>	<b>May Consider Nasal Airway</b>
	Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation For Signs and Symptoms of ICP <b>AND</b> GCS of 6 and Under – Consider Hyperventilation Of Patient Initiate Transport		
<b><u>EMT Options</u></b>	Consider Advanced Airway for Persistent Decrease Mental Status Consider IV Access Assess For Shock and Administer Appropriate Fluid Boluses		
<b><u>AEMT</u></b>	Consider IO Access As First Access Route in Unstable Pediatric Patients Assess For Shock and Administer Appropriate Fluid Boluses Consider Morphine 2 – 4 mg IV/IO/MAD		
<b><u>EMT-I</u></b>	*Consider Cardiac Monitoring	<ul style="list-style-type: none"> <li>• *Initiate Cardiac Monitoring</li> <li>• *Needle Decompress Patient With Sign and Symptoms of Tension Pneumothorax</li> </ul>	*Consider Cardiac Monitoring
<b><u>Paramedic</u></b>	<ul style="list-style-type: none"> <li>• Consider RSI</li> <li>• Consider Anti-Emetic</li> <li>• Consider Pain Management</li> </ul>	<ul style="list-style-type: none"> <li>• Defer Insertion of NG Tube – Use OG Tube In Suspected Head Injury</li> <li>• Defer Insertion of NG AND OG Tube in Any Patients with Gastric Bypass or Gastric Banding</li> <li>• Consider 100 mg Thiamine IV/IO for Patients With Gastric Bypass or Gastric Banding</li> </ul>	
<b>*Special Consideration for Extremity Injuries in Multi-Systems Trauma</b>			
<ul style="list-style-type: none"> <li>• Consider Utilizing a Full Body Stabilization Device and Splint Injured Extremities to the Device and/or Patient to Allow For Rapid Scene Time and then Splint Extremities enroute to Destination</li> <li>• Stabilization of Suspected Pelvic and Femur Fractures is a High Priority</li> </ul>			

Nebraska EMS Model Protocols

Adult Trauma Protocols

**TRAUMA CARE**

**AMPUTATIONS – EXTREMITY – SOFT TISSUE TRAUMA**

**ALL LEVELS**

- Adult Routine Assessment and Care
- Assess For Shock and Treat

	<b>Amputations</b>	<b>Extremity</b>	<b>Soft Tissue</b>
<b><u>EMR</u></b>	Administer Oxygen Consider Assisted Ventilations Consider Oral Airway Consider OPQRST Pneumonic for Assessment of Pain Suction as Needed Manually Stabilize Head and Neck Control External Bleeding Stabilize Impaled Objects In Place Assess CMS Consider Trauma Team Activation		
	<ul style="list-style-type: none"> <li>• *Wrap Amputated Part in Dressing and Keep Cool</li> <li>• *Do Not Place Tissue Directly On Ice</li> </ul>	<ul style="list-style-type: none"> <li>• *Manually Stabilize Painful and/or Deformed Extremity</li> <li>• *Apply Cold Pack to Extremity</li> </ul>	<ul style="list-style-type: none"> <li>• *Return Avulsion type flaps to anatomic position if possible.</li> <li>• *Bandage Open Wounds</li> <li>• Consider Removing Impaled Objects Through the Cheek into the Mouth</li> <li>• *For Eye Injuries – Cover Both Eyes</li> </ul>
<b><u>EMR Options</u></b>	Consider Spinal Stabilization Consider Extremity Stabilization Initiate Transport		
		<ul style="list-style-type: none"> <li>• *Consider Traction Type Splint For Femur Injuries</li> <li>• *Consider Pelvic Splint For Pelvic Injuries</li> </ul>	
<b><u>EMT</u></b>	Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation Initiate Transport		
<b><u>EMT Options</u></b>	Consider Advanced Airway for Persistent Decrease Mental Status Consider IV Access Assess For Shock and Administer Appropriate Fluid Boluses		
<b><u>AEMT</u></b>	Consider IO Access As First Access Route in Unstable Pediatric Patients Assess For Shock and Administer Appropriate Fluid Boluses Consider Morphine 2 – 4 mg IV/IO/MAD		
<b><u>EMT-I</u></b>	*Consider Cardiac Monitoring	*Consider Cardiac Monitoring	*Consider Cardiac Monitoring
<b><u>Paramedic</u></b>	Consider RSI Consider Anti-Emetic Consider Pain Management Consider Reduction of Deformed Fractures or Dislocations <b><u>ONLY</u></b> if there is Loss of Signs of Circulation, Loss of Sensation Distal to the Deformity, or if it is Necessary in Order to Otherwise Care For and Transport the Patient *For Stable Patient's Consider On-Scene Pain Management to Ease Pain of Movement/Splinting Defer Insertion of NG AND OG Tube in Any Patient with Gastric Bypass or Gastric Banding Consider 100 mg Thiamine IV/IO for Patients with Gastric Bypass or Gastric Banding		

**\*Special Consideration for Extremity Injuries in Multi-Systems Trauma**

- Consider Utilizing a Full Body Stabilization Device and Splint Injured Extremities to the Device and/or Patient to Allow For Rapid Scene Time and then Splint Extremities in route to Destination
- Stabilization of Suspected Pelvic and Femur Fractures is a High Priority

Nebraska EMS Model Protocols  
Adult Trauma Protocols  
**TRAUMA CARE**  
**SPINAL STABILIZATION**

ALL LEVELS

- See Adult Assessment Model
- See General Management of the Trauma Patient Appropriate to Level Of Provider
- EMT and EMR Specific Assessment and Care
  - Obtain GCS Score
  - Consider OPQRST Pneumonic
- Assess for Location, Type and Duration of Pain
- Assess Circulation Sensation and Movement in Extremities
  - Manually Stabilize Head/Neck
  - Control External Bleeding
  - Stabilize Impaled Objects
  - Reassess Circulation Sensation and Movement Distal to Injury
  - For Inadequate Breathing Ventilate Patient at 10 to 12 Times a Minute
- Avoid Hyperventilating Patient Unless Patient has:
  - GCS of Eye Opening 1 – Verbal 2 or Less – Motor 2 or Less AND
  - Serial Increases in BP With Increasing Pulse AND
  - Serial Decreases in Pulse AND
  - Erratic Respiratory Pattern
- Prepare for Transport
- If BLS Service, Consider ALS

EMR Options if Approved

- Consider Spinal Stabilization

EMT, AEMT, EMT-I, and Paramedic

- Consider Spinal Stabilization

Appropriate patients to be stabilized with a backboard may include those with:

- Blunt trauma and altered level of consciousness
- Spinal pain or tenderness
- Neurologic complain (e.g., numbness or motor weakness)
- Anatomic deformity of the spine
- High-energy mechanism of injury and any of the following:
  - Suspected drug or alcohol intoxication
  - Inability to communicate
  - Distracting injury

Patients for whom stabilization on a backboard is not necessary include those with all of the following:

- Normal level of consciousness (Glasgow Coma Score [GCS] 15)
- No spine tenderness or anatomic abnormality
- No neurologic findings or complaints
- No distracting injury
- No suspected drug or alcohol intoxication

Patients with penetrating trauma to the head, neck, or torso and no evidence of spinal injury should not be stabilized on a backboard.

## Nebraska EMS Model Protocols Adult Trauma Protocols

If extrication is required from a vehicle:

- After placing a cervical collar, if indicated, children in a booster seat and adults should be allowed to self-extricate.
- For infants already strapped in a car seat with built-in harness, extricate the child while strapped in his/her car seat.

Spinal precautions can be maintained by application of a rigid cervical collar and securing the patient firmly to the EMS stretcher, and may be most appropriate for:

- Patients who are found to be ambulatory at the scene
- Patients who must be transported for a protracted time, particularly prior to inter-facility transfer
- Patients for whom a backboard is not otherwise indicated

Whether or not a backboard is used, attention to spinal precautions among at-risk patients is paramount. These include application of a cervical collar, adequate security to a stretcher, minimal movement/transfers, and maintenance of in-line stabilization during any necessary movement/transfers.

In situations when utilization of a backboard is indicated:

- Assess circulation sensation and movement distal in extremities
- Select appropriate sized cervical collar and place on patient
- Select and apply spinal stabilization device
- Reassess circulation sensation and movement distal in extremities
  - Consider extremity stabilization

Nebraska EMS Model Protocols  
Adult Trauma Protocols  
**BITES AND ENVENOMATION**

**ALL LEVELS**

- Routine Assessment and Care
- Assess For Shock and Treat

**EMR**

- Consider Oxygen
- Consider OPQRST For Assessment of Pain
- Control Any External Bleeding
- Consider Manual Stabilization of Affected Extremity
- Human Bites and Animal Bites
  - Bandage Wound
- Snake Bite
  - Attempt to Identify Breed of Snake
  - Slow Venous Return
- Insect Bites
  - Remove Stinger/Venom Sac
- Spider Bites
  - Consider Cold Pack
- Assess for Allergic Reaction Go to Allergic Reaction – **\*\*See Anaphylaxis Protocol**
- Consider ALS

**EMR Options if Approved**

- Consider Extremity Stabilization
- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider IV Access
  - **\*\*Minor Bites Without Associated Sign and Symptoms, IV Should be Deferred**

**AEMT**

- Consider IV Access for Pain Management
- Consider IO Access If IV Can Not Be Obtained
- Consider 2 – 4mg Morphine IV/IO

**EMT-I**

- Consider Cardiac Monitoring

**Paramedic**

- Consider Anti-Emetic
- Consider Pain Management

Nebraska EMS Model Protocols  
Adult Trauma Protocols  
**BURNS**

**ALL LEVELS**

- Routine Assessment and Care
- Assess For Shock and Treat

**Burn Type and Treatment Chart**

Thermal Burns	Electrical Burns	Radiation Burns	Chemical Burns
<b>THINK SAFETY</b>			
Remember Scene Safety And Appropriate PPE			
Stop Burning Process	Verify the electrical source is de-energized	Patient and Radiation Source Need to be Separated	<ul style="list-style-type: none"> <li>• Brush Dry Chemicals From Skin – Flush with Water</li> <li>• Wet Chemicals Flush with Water</li> </ul>
<b>Do Not Apply Any Ointments or Creams</b>			
Do Not Intentionally Rupture Blisters	Assess for Entrance and Exit Wounds	Decontaminate Patient Prior To Transport	Decontaminate Patient Prior To Transport
Cover Burns/Wounds with Dry Dressings			Wrap Patient with Dry Sheet

**EMR**

- Administer Oxygen
- Consider Assisted Ventilations
- Consider Oral Airway
- Consider OPQRST For Assessment of Pain
- Consider Manually Stabilize Head/Neck
- Estimate Body Surface Area Burned and Extend of Burn
- Consider Trauma System Activation
- Consider ALS

**EMR Options if Approved**

- Consider Spinal Stabilization
- Consider Extremity Stabilization
- Initiate Transport

**EMT**

- Defer Nasal Airway in Facial Burns and Inhalation of Super-Heated Air
- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider IV Access

**AEMT**

- Consider IO Access If IV Can Not Be Obtained
- Consider 2 – 4mg Morphine IV/IO

**Parkland Formula for Fluid Resuscitation in Thermal Burn Patients**

4 ml X Body Surface Area Burned X Patient Weight in Kg = Total Fluid Over 24 Hours  
Half Given In 1<sup>st</sup> Eight Hours

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Initiate Cardiac Monitor for All Electrical Burns – Consider For All Other Burns

**Paramedic**

- Consider RSI For Burns to Airway – Inhaled Superheated Gases – Inhaled Chemicals
- Consider Anti-Emetic
- Consider Pain Management

Nebraska EMS Model Protocols  
Adult Trauma Protocols  
**CRUSH INJURY**

**All Levels**

- Routine Assessment and Care
- Assess For Shock and Treat

**EMR**

- Administer Oxygen
- Manually Stabilize Head/Neck
- Consider Oral Airway
- Consider Assisted Ventilations
- Consider OPQRST For Assessment of Pain
- Control External Bleeding
- Consider Trauma System Activation
- Consider ALS

**EMR Options if Approved**

- Consider Spinal Stabilization
- Consider Extremity Stabilization
- Initiate Transport

**EMT**

- Consider Nasal Airway
- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport Once Freed

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Pre – Release
  - Consider Two Large Bore IV Access Sites
  - Administer Fluid Bolus(es) to Maintain 90 Systolic BP
- Release – During Process to Free Patient
  - Administer Fluid Bolus(es) to Maintain 90 Systolic BP
- Post Release
  - Administer Fluid Bolus(es) to Maintain 90 Systolic BP

**AEMT**

- Consider Single IO Access If Unable to Obtain IV Access
- Consider 2 – 4mg Morphine if BP Stabilizes above 100 Systolic

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Initiate Cardiac Monitoring

**Paramedic**

- Consider RSI
- Consider Anti-Emetic
- Consider Pain Management
- Pre – Release
  - For Entrapment over 60 minutes **and** Systolic BP 90mmHg or greater
    - Consider Adding 50mEq Sodium Bicarbonate to 1000 ml NS infuse bolus 500 ml then remain 500 ml over 30 minutes
- Release – During Process to Free Patient
  - Administer Fluid Bolus(es) to Maintain 90 Systolic BP
- Consider Diagnostic Mode 3 lead or 12 Lead and Evaluate for Tall Spiked T Waves Indicating Hyperkalemia
  - Consider Continuous Albuterol Nebulizer Treatments To Total Dose 15mg

Nebraska EMS Model Protocols  
Adult Trauma Protocols  
**ENVIRONMENTAL TRAUMA – EXPOSURE TO HEAT AND COLD**

**ALL LEVELS**

- Routine Assessment and Care
- Assess For Shock and Treat

**EMR**

- Administer Oxygen
- Manually Stabilize Head/Neck
- Consider Assisted Ventilations
- Consider OPQRST For Assessment of Pain
- Exposure to Cold – Hypothermia
  - Gently Move Patient to Warm Area If No Spinal Injury Suspected
  - Remove Wet Clothing
  - Frozen/ Near Frozen Extremities
    - Expose to Warm Surroundings
    - Consider Dry Dressing to Pad
  - Body Wide Hypothermia
    - Passively Warm Patients With Warm Packs and Blankets
- Exposure to Heat
  - Gently Move Patient to Cool Area If No Spinal Injury Suspected
  - Remove Excessive Clothing
  - Normal Mental Status and Perspiration Intact
    - Passive Cool Patient with Fanning and Cool Dressing
  - Decrease Mental Status and/or No Perspiration
    - Aggressive Cooling with Wet Sheet, Fanning and Col Packs
- Consider Trauma System Activation
- Consider ALS

**EMR Options if Approved**

- Consider Spinal Stabilization
- Consider Extremity Stabilization
- Initiate Transport

**EMT**

- Consider Nasal Airway
- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider IV Access

**AEMT**

- Consider IO Access If IV Can Not Be Obtained

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Initiate Cardiac Monitoring

**Paramedic**

- Consider RSI
- Consider Anti-Emetic
- When Passive Warming Frozen Extremities Consider Pain Management

Nebraska EMS Model Protocols  
Adult Trauma Protocols  
**SCUBA DIVING – DECOMPRESSION “THE BENDS” TRAUMA**

**ALL LEVELS**

- Routine Assessment and Care
- Assess For Shock and Treat

**EMR**

- Administer High Flow Oxygen
- Monitor Mental Status – Track/Document AVPU and GCS
- Consider OPQRST For Assessment of Pain
- Assess and Monitor CMS
- Assess Dive History
  - Time of Dive
  - Length of Time of Dive
  - Depth
  - Any Problems with Dive
- Consider ALS

**EMR Options if Approved**

- Consider Spinal Stabilization
- Initiate Transport

**EMT**

- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O<sub>2</sub> Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider IV Access

**AEMT**

- Consider IO Access If IV Can Not Be Obtained
- Consider 2 – 4mg Morphine IV/IO

**EMT-I**

- Consider Cardiac Monitoring

**Paramedic**

- Consider Pain Management

Nebraska EMS Model Protocols  
Adult Trauma Protocols  
**SEXUAL ASSAULT**

**ALL LEVELS**

- Routine Assessment and Care
- Assess For Shock and Treat

**EMR**

- Consider Oxygen
- Consider OPQRST For Assessment of Pain
- Manage Open Wounds
- Stabilize Impaled Objects in Place
- Encourage Patient Not to Wash or Shower
- Consider Trauma System Activation
- If Possible Have EMS Provider of Same Sex as Patient Provide Assessment and Treatment
- Consider ALS

**EMR Options if Approved**

- Consider Spinal Stabilization
- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider IV Access
- Consider Advanced Airway for Persistent Decrease Mental Status

**AEMT**

- Consider IO Access If IV Can Not Be Obtained
- Consider 2 – 4 mg Morphine IV/IO

**EMT-I**

- Consider Cardiac Monitoring

**Paramedic**

- Consider Anti-Emetic
- Consider Pain Management

Nebraska EMS Model Protocols  
Adult Trauma Protocols  
**TRAUMA DURING PREGNANCY**

**ALL LEVELS**

- Routine Assessment and Care
- Assess For Shock and Treat

**EMR**

- Consider Oxygen
- Consider Assisted Ventilations
- Manually Stabilize Head/Neck
- Monitor Mental Status – Track/Document AVPU and GCS
- Consider OPQRST For Assessment of Pain
- Stabilize Impaled Objects in Place
- Assess and Monitor CMS
- Position Patient on Left Side or Sitting Position
- Consider Trauma System Activation
- Consider ALS

**EMR Options if Approved**

- Consider Spinal Stabilization
  - Consider Vest Type Device Extrication Device (KED, XP-1) and Position Patient Semi-Fowlers or On Left Side
  - Tilt Backboard Approximately 30 degrees
- Initiate Transport

**EMT**

- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider IV Access

**AEMT**

- Consider IO Access If IV Can Not Be Obtained

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Consider Cardiac Monitoring

**Paramedic**

- Consider Anti-Emetic
- Consider Pain Management

# **OB/Gynecological Protocols**



Nebraska EMS Model Protocols  
OB/Gynecological Protocols  
**GYNECOLOGICAL PAIN – VAGINAL BLEEDING**

**ALL LEVELS**

- Routine Assessment and Care

**EMR and EMT**

- Consider Oxygen
- Additional Assessment Concerns
  - Localize Pain to Abdominal Quadrant If Possible
  - Assess for Trauma
  - Obtain Bowel and Bladder Habits
  - Obtain Menstrual Cycle History
  - Obtain Gynecological History
  - Consider Ectopic Pregnancy
- Allow Patient to Assume a Position of Comfort
- Consider ALS

**EMR Options If Approved**

- Transport Patient in Position of Comfort If Safe To Do So

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Transport Patient in Position of Comfort If Safe To Do So

**EMT Options**

- Consider Advanced Airway for Persistent Decreased LOC
- Consider IV Access

**AEMT**

- Consider 2 – 4mg Morphine IV/IM

**EMT-I**

- Consider Cardiac Monitoring

**Paramedic**

- Consider Anti-Emetic
- Consider Pain Management

Nebraska EMS Model Protocols  
OB/Gynecological Protocols  
**COMPLICATIONS DURING PREGNANCY**

**ALL LEVELS**

- Routine Assessment and Care

**EMR and EMT**

- Administer Oxygen
- Obtain Bowel and Bladder Habits
- Obtain Pregnancy History
- Complications
  - Seizures (Eclampsia) – Protect Patient – Call for ALS
  - Hypertension Possible (Pre-Eclampsia) – Monitor Vitals – Reduce Stimuli
  - Hypotension – Place Patient on Left Side
  - Hypoglycemia/Hyperglycemia – [See Hypoglycemia or Hyperglycemia Protocol](#)
  - Miscarriage – Monitor for Shock – May Place OB Pad Over Genitals
- Allow Patient to Assume a Position of Comfort
- Consider ALS

**EMR Options If Approved**

- Initiate Transport

**EMT**

- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options**

- Consider Advanced Airway for Persistent Decreased LOC
- Obtain Blood Glucose Reading
- Consider IV Access

**AEMT**

- Consider IO Access IF IV Access Can Not Be Obtain
- Complications
  - Hypoglycemia – Consider 25 Grams Dextrose 50% IV/IO

**EMT-I**

- Initiate Cardiac Monitoring

**Paramedic**

- Complications
  - Pre-Eclampsia – Hypertension
    - Consider 1 – 2 grams Magnesium Sulfate Diluted in 25 to 250ml Infused Slowly
  - Eclampsia– Seizures
    - Consider 2 – 4 grams Magnesium Sulfate Diluted in 25 to 250ml Infused Slowly;
    - Contact Medical Control or PMD for Additional Doses Beyond Max Doses

Nebraska EMS Model Protocols  
OB/Gynecological Protocols  
**LABOR**

**ALL LEVELS**

- Routine Assessment and Care

**EMR and EMT**

- Consider Oxygen
- Obtain Pregnancy Status
  - Known Complications
  - Due Date
  - Number Previous Pregnancies
  - Number of Previous Live Births
  - Has Amniotic Fluid Passed (Water Broke)
- Time Contractions
- Prepare for Field Delivery If
  - Contractions Are Regular and 2 minutes or Sooner Together
  - Patient Has Urge to Push
  - Exam Genital Region For Bulging
- Do Not Perform Vaginal Exam
- Consider ALS

**EMR Options If Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O<sub>2</sub> Saturation
- Initiate Transport

**EMT Options and AEMT**

- Consider IV Access

**EMT-I and Paramedic**

- Consider Cardiac Monitoring

Nebraska EMS Model Protocols  
OB/Gynecological Protocols  
**DELIVERY – UNCOMPLICATED**

**ALL LEVELS**

- Routine Assessment and Care
- For Complicated Deliveries (Breech, Limb Presentation or Prolapsed Umbilical Cord) See **Delivery Complicated Protocol**

**EMR and EMT**

- Consider Oxygen
- Obtain Pregnancy Status
  - Known Complications
  - Due Date
  - Number Previous Pregnancies
  - Number of Previous Live Births
  - Has Amniotic Fluid Passed (Water Broke)
- Time Contractions
- Do Not Perform Vaginal Exam
- Obtain Field Delivery Kit (OB Kit)
- Uncomplicated Delivery
  - Provide Gentle Pressure/ Support As Head Emerges
  - Suction Nose and Mouth with Bulb Syringe as Head Emerges – Assess For Meconium Staining
  - Examine For Cord Around Neck and Free if Needed
  - Allow Infant's Head/Shoulders to Turn
  - Support Infant throughout Rest of Birth
  - Suction Nose and Mouth
  - See Neonatal Care Protocol For Care of Infant
- Reassess Mother
  - Prepare for Delivery of Placenta
- Consider ALS

**EMR Options If Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options and AEMT**

- Consider IV Access

**EMT-I and Paramedic**

- Consider Cardiac Monitoring

Nebraska EMS Model Protocols  
OB/Gynecological Protocols  
**DELIVERY – COMPLICATED**

**ALL LEVELS**

- Routine Assessment and Care

**EMR and EMT**

- Consider Oxygen
- Obtain Pregnancy Status
  - Known Complications
  - Due Date
  - Number Previous Pregnancies
  - Number of Previous Live Births
  - Has Amniotic Fluid Passed (Water Broke)
- Time Contractions
- Do Not Perform Vaginal Exam
- Obtain Field Delivery Kit (OB Kit)
- Consider Positioning Patient In Head Down Buttocks Up Position
- Encourage Patient to Breathe Through Contractions
- Consider ALS

**EMR Options If Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Breech Birth
  - Support Buttocks and Body as it Emerges
  - Create Airway –Two Fingers Inserted Vaginally Making a V Shape and Pushing Vaginal Wall From Nose/Mouth
  - Examine For Cord Around Neck and Free if Needed
  - Suction Nose and Mouth with Bulb Syringe as Head Emerges – Assess Form Meconium Staining
  - If Labor Stalls – Head Does Not Deliver Insert Two Fingers Vaginally Create V in Birth Canal Around Infant's Nose/Mouth – Suction If Possible
- Limb Presentation
  - Position Patient In Head Down Buttocks Up Position
  - Encourage Patient to Breathe Through Contractions
- Prolapsed Umbilical Cord
  - Position Patient In Head Down Buttocks Up Position
  - Insert Two Or Three Fingers Vaginally Provide Gentle Pressure Against Infant's Head
  - Wrap Cord With Moist Dressing
  - Encourage Patient to Breathe Through Contractions
- Initiate Transport

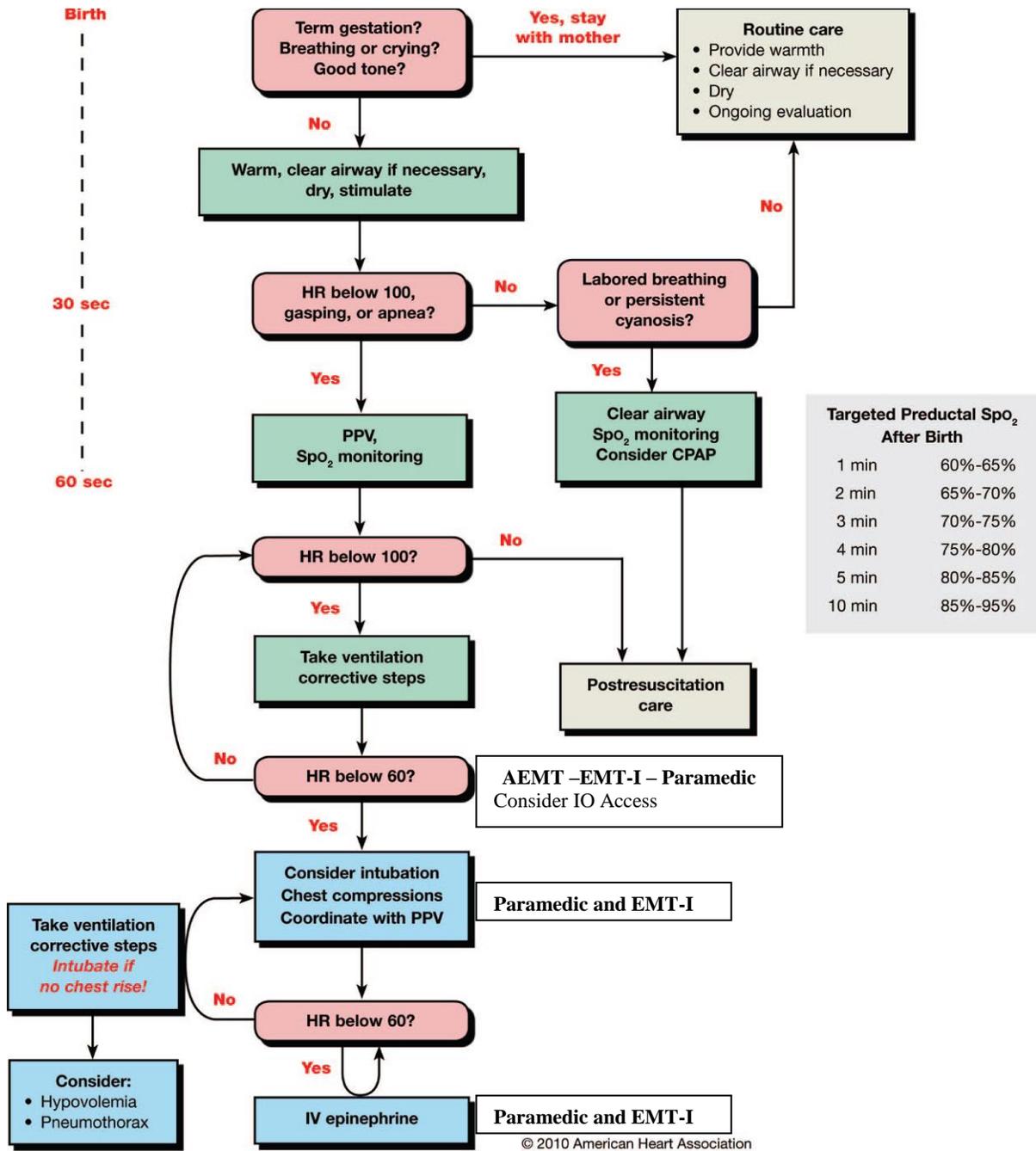
**EMT Options and AEMT**

- Consider IV Access On Mother

**EMT-I and Paramedic**

- Consider Cardiac Monitoring

Nebraska EMS Model Protocols  
 OB/Gynecological Protocols  
**NEW BORN CARE**



APGAR Scale – Score New Born at 1 Minute and 5 Minutes After Birth			
	0 Points	1 Point	2 Points
Heart Rate	Absent	<100	>100
Respiratory Effort	Absent	Slow Irregular	Strong Cry
Muscle Tone	Flaccid	Some Flexion	Active Motion
Irritability	No Response	Some	Vigorous
Color	Blue/Pale Centrally	Body Pink – Extremity Blue/Pale	Fully Pink

# **Pediatric General Principals**



Nebraska EMS Model Protocols  
Pediatric General Principals

**PROTOCOLS**

A copy of these protocols should be carried on each ambulance/first responder unit and be in a location that the care provider has access to them.

**PEDIATRIC REFERENCE AND RESUSCITATION TAPE**

It is the recommendation of these protocols that each ambulance or first responder unit should have available pediatric specific reference(s) and/or resuscitation tape carried on the unit preferably in a pediatric dedicated response kit/bag.

Examples;

- EMS Field Guide/ Handbook with Pediatric Specific Section
- Pediatric Charts – Graphs
- Broselow Tape

**RECOMMENDATIONS FOR PEDIATRIC EQUIPMENT**

It is the recommendation of these protocols that each ambulance or first responder unit should have available pediatric specific equipment.

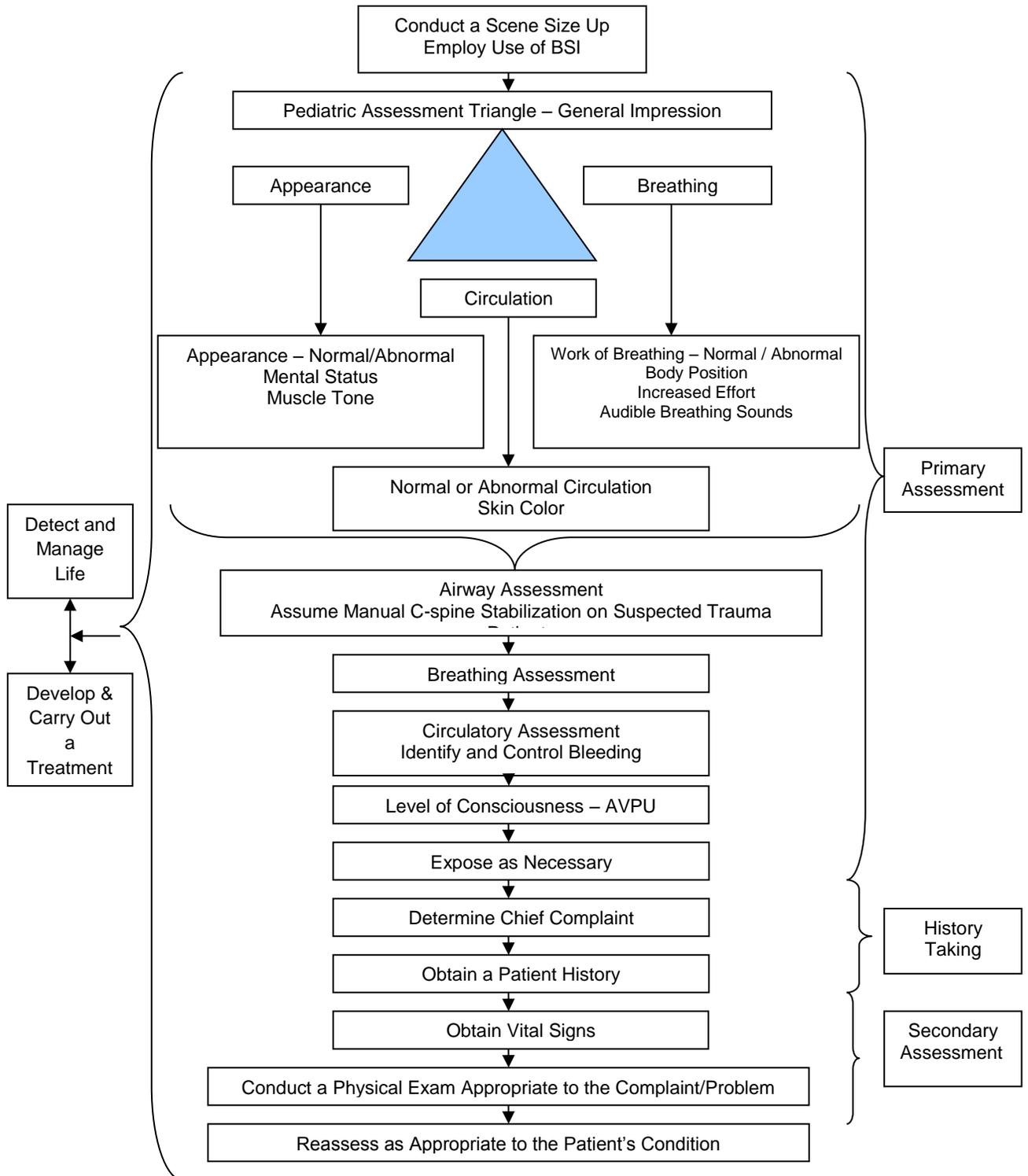
ALS and BLS Equipment Recommendations

- Car Seat Type Device for Safe Transport of Infants and Small Children
- Pediatric Spinal Stabilization Device
- Pediatric C-Collar(s)
- Pediatric Extremity Splints
- Infant Bag Valve Mask
- Child Bag Valve Mask
- Pediatric Sized Oral Airways
- Pediatric Oxygen Mask
- Pediatric Nasal Cannula
- Pediatric Capable AED
- Pediatric Capable Pulse Oximeter
- Selection of BP Cuffs for Children
- IF Approved
  - Pediatric Sized Non-Visualized Advanced Airways
  - 0.15 Epinephrine Auto-Injector

ALS Equipment Recommendations

- Selection Endotracheal Tubes Sizes 3 to 5.5
- Selection of Laryngoscope Blades for Pediatric Patients
- Pediatric ET Tube Holder
- Selection of IV Catheters Sizes 20 to 24
- Devices or Means for Measured Flow of IV Fluids
- Arm Board
- IO Device
- Pediatric Capable Monitoring Equipment

Nebraska EMS Model Protocols  
 Pediatric General Principals  
**PEDIATRIC ASSESSMENT MODEL**



# **Pediatric Routine Assessment and Care**



Nebraska EMS Model Protocols  
 Pediatric Routine Assessment and Care  
**ROUTINE ASSESSMENT AND CARE**

This Protocol applies to every patient contact and is the base from which other treatment protocols build upon.

**Scene Size Up**

- Assess Scene Safety – Use Standard/Universal Precautions – Determine # of Patients – Consider Additional Resources
- Determine Nature of Illness/Mechanism of Trauma
- Determine Age and Estimated or Stated weight
  - Newborn to 1 Year is Defined as an Infant For Resuscitation
  - 1 year to Onset of Puberty is Defined as a Child For Resuscitation

**Primary Assessment, Identify and Treat Immediate Life Threats**

- If Mechanism of Trauma Indicates
  - Consider Manually Stabilizing C-Spine
- Form a General Impression
- Determine Level of Consciousness – Utilize AVPU Scale
- If Infant or Child Presents in Cardiac Arrest Begin Chest Compressions
- Assess Airway
  - Foreign Body Airway Obstruction – Clear Obstruction
  - Decreased LOC and Patient Can Not Maintain Own Airway (No Gag Reflex)
    - Trauma Suspected – Utilize Jaw Thrust Method to Open Airway
    - Medical Patients – Utilize Head Tilt, Chin Left Method to Open Airway
    - ALL LEVELS
      - Consider Oral Airway
    - EMT With Approval, AEMT, EMT-I and Paramedic
      - May Consider Appropriate Sized Advanced Non Visualized Airway
    - EMT-I and Paramedic
      - May Consider Intubation
  - Decreased LOC and Patient Has Decreased Ability to Maintain Own Airway (Gag Reflex Intact)
    - Monitor Closely – Consider One of Simple Airway Maneuvers Above
    - EMT and Above
      - May Consider Nasal Airway
    - Paramedic
      - May Consider RSI
  - Suction Oral Airway as Needed
  - Patient Can Maintain Own Airway and No Suction Needed – No Immediate Intervention
- Assess Breathing
  - Absent or Agonal – Begin Ventilations with BVM Attached to Oxygen
  - Assess Quality of Breathing And Lung Sounds
    - Signs/Symptoms of Severe Respiratory Distress – Impending Respiratory Arrest
      - Consider Oxygen by Non-Rebreather Mask
      - Consider Assisted Ventilations with BVM Attached to Oxygen at 5 to 6 Per Minute
    - Signs/Symptoms of Moderate Respiratory Difficulty
      - Consider Oxygen by Non-Rebreather Mask
    - Signs/Symptoms of Mild Respiratory Difficulty
      - Consider Oxygen by Nasal Cannula
    - No Signs/Symptoms of Respiratory Difficulty
      - Consider Oxygen Appropriate to Nature of Illness/ Mechanism of Trauma
  - Assisted Ventilations Chart

Age	Ventilations/Minute	Ventilations/Second
Newborn	40-60	1 Every Second
Infant	30-40	1 Every 2 Seconds
1-6 Years	20-30	1 Every 3 Seconds
6-12 Years	16-20	1 Every 3 to 4 Seconds
12-16 Years	12-16	1 Every 5 Seconds
Adult	10-12	

- Assess Circulation

Nebraska EMS Model Protocols  
Pediatric Routine Assessment and Care

- Absent or Pulse 60 or Less – Begin CPR – **Follow Cardiac Arrest Protocols**
- Assess For Bleeding
  - Control External Bleeding with Direct Pressure, Pressure Bandage, Pressure Points and/or Tourniquet
- Assess Quality of Pulse
  - Weak – Rapid Pulse, Poor Skin Color, Poor Cap Refill
    - Consider Treating for Shock
    - Consider Assisted Ventilations
  - Weak Slow Pulse
    - 60 or Less Begin Compressions
    - Reassess Airway and Breathing – Consider Assisted Ventilations
    - Assess for Possible Cause
  - Irregular pulse
    - Asses for Possible Cause
    - Strength, Rate, Rhythm Normal, and Skin Normal – No Immediate Intervention
- Assess Disability – Quick Neuro Exam
  - Obtain Glasgow Coma Scale
  - Utilize a Non-Invasive Scales and Scores
  - Check Peripheral Circulation, Movement, and Sensory

**Obtain Patient History**

- Obtain a Chief Complaint
- Obtain SAMPLE History
- Consider Use of OPQRST Pneumonic
- Obtain Pertinent Negatives

**Vital Signs**

- **EMR**
  - Pulse
  - Respiratory Rate
  - Manual Blood Pressure
- **EMT, AEMT, EMT-I, Paramedic**
  - Pulse
  - Respiratory Rate
  - Manual and Automatic Blood Pressure
  - Pulse Oximetry Reading
  - Non-Invasive CO Reading
  - Temperature

Hypotension Guidelines	
Neonates (0 to 28 Days)	Systolic BP Under 60
Infants (1 Month to 12 Months)	Systolic BP Under 70
Child (1 Year to 10 Years)	Systolic BP Under 70 + 2 X Age in Years
Child (Over 10)	Systolic BP Under 90

*Hypotension should be interpreted within the context of the entire Patient Assessment*

**Additional Monitoring as Appropriate to Patient's Illness/Injury**

- EMT-I
  - EtCO<sub>2</sub> including Capnography
  - Cardiac Monitoring Lead I,II, and III
- Paramedic
  - All Non-Invasive Monitoring Devices
  - Device to Monitor Airway/Ventilation Pressures
  - Invasive Monitoring if Already Established

Nebraska EMS Model Protocols  
Pediatric Routine Assessment and Care

**Secondary Assessment**

- Prepare for Patient Transport
- Expose Patient as Needed
- Medical
  - Systematic Assessment of Major Body Systems
- Trauma
  - Systematic Assessment for Injuries

**Reassessment**

- Repeat Assessment of Patient Based On Condition
- Monitor Vital Signs
- Identify Changes in Patient Condition Adjust Treatment As Needed

**Pediatric Normal Vital Signs**

Age	Average Heart Rate	Heart Rate Range	Respiratory Range	Average Systolic BP	Range
Newborn	140	110 – 180	40 – 60	72	52 – 92
1 Month	135	90 – 170	30 – 50	82	60 – 104
1 Year	120	80 – 160	20 – 30	94	70 – 118
2 Years	110	80 – 130	20 – 30	95	73 – 117
4 Years	105	80 – 120	20 – 30	96	65 – 117
6 Years	100	75 – 115	18 – 24	97	76 – 116
8 Years	90	70 – 110	18 – 22	99	79 – 119
10 Years	90	70 – 110	16 – 20	102	82 – 122
12 years	85	60 – 110	16 – 20	106	84 – 128
14 years	80	60 – 105	16 – 20	110	84 – 136

**Glasgow Coma Score**

Criteria	Adult/Child	Score	Infant
<b>Eye Opening</b>	Spontaneous	4	Spontaneous
	To Verbal	3	To Verbal
	To Pain	2	To Pain
	No Response	1	No Response
<b>Best Verbal Response</b>	Oriented	5	Coos, Babbles
	Disoriented/Confused	4	Irritable Cry
	Inappropriate Words	3	Cries Only to Pain
	Incomprehensible – Moans/groans	2	Moans to Pain
	No Response	1	No Response
<b>Best Motor Response</b>	Obeys Commands	6	Spontaneous
	Localizes Pain	5	Withdraws from Touch
	Withdraws from Pain	4	Withdraws from Pain
	Abnormal Flexion	3	Abnormal Flexion
	Abnormal Extension	2	Abnormal Extension
	No Response	1	No Response

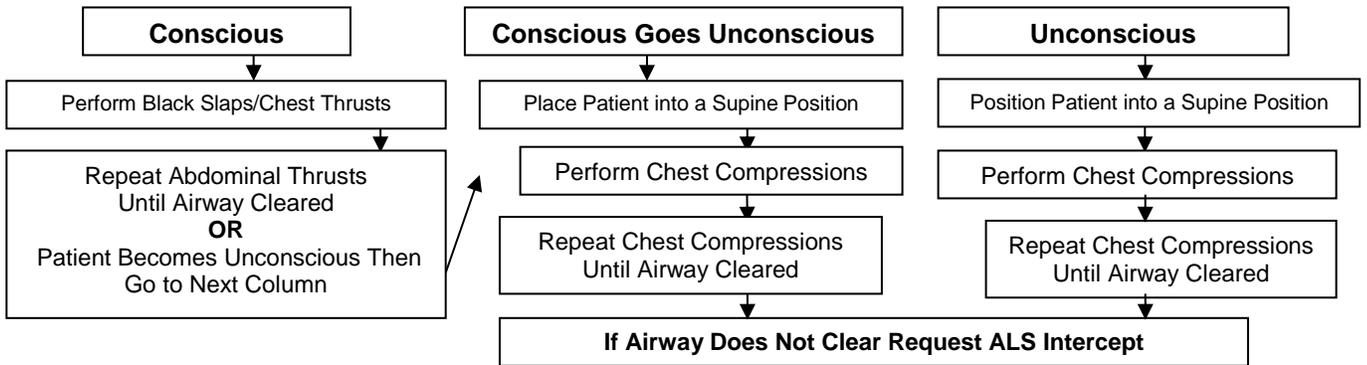
# **Pediatric Medical Protocols**



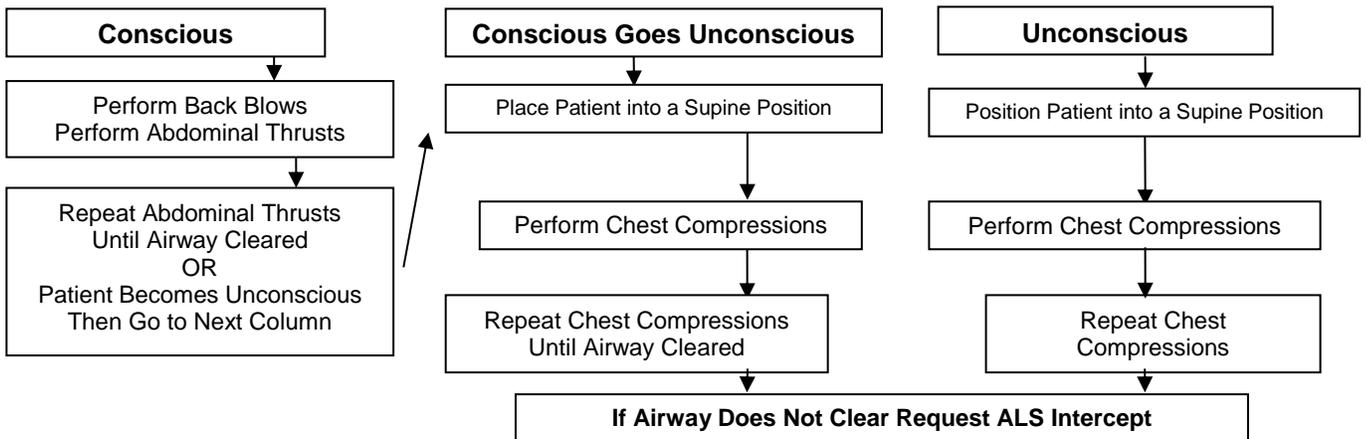
Nebraska EMS Model Protocols  
 Pediatric Medical Protocols  
**AIRWAY – CHOKING – FOREIGN BODY AIRWAY OBSTRUCTION**

**EMR and EMT**

**Complete Airway Obstruction UNDER 1 Year Old**



**Complete Airway Obstruction 1 Year to Adolescent**



**Partial Airway Obstruction**

Monitor Patient Allow Patient to Cough, Be Alert for Complete Obstruction

**EMR Options If Approved**

- Initiate Transport

**EMT**

- Initiate Transport

**EMT Options If Approved**

- Do Not Insert Advanced Airway Unless Airway Cleared And Persistent Decreased Mental Status
- Focus on Clearing Obstructed Airway Prior to Any IV Access Attempts

**AEMT**

- Do Not Insert Advanced Airway Unless Airway Cleared And Persistent Decreased Mental Status
- Focus on Clearing Obstructed Airway Prior to Any IV Access Attempts

**EMT-I**

- Consider Direct Visualization with Laryngoscope and Removal with Forceps

**Paramedic**

- Consider Cricothyotomy

Nebraska EMS Model Protocols  
Pediatric Medical Protocols

**AIRWAY – POST AIRWAY OBSTRUCTION**

**ALL LEVELS**

- Pediatric Routine Assessment and Care

**EMR and EMT**

- Be Alert For Loss of Airway Due to Swelling
- Consider Oxygen
- Considered Assisted Ventilations for Inadequate Breathing
- Positioning
  - Decreased Mental Status Position on Side
  - Alert Patient Allow Patient to Assume Position of Comfort
- Suction as Needed
- Consider ALS

**EMR Options If Approved**

- Initiate Transport
  - Consider Use Of Car Seat Type Restraint Device

**EMT**

- Initiate Transport
  - Consider Use Of Car Seat Type Restraint Device

**EMT Options and AEMT**

- Consider Advanced Airway for Persistent Decreased Mental Status
- Consider IV Access

**EMT-I**

- Consider Advanced Airway for Persistent Decreased Mental Status
- Consider Bronchodilator for Wheezing
- Consider Cardiac Monitoring

**Paramedic**

- Consider RSI For Airway Edema

Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**ABDOMINAL PAIN**

**ALL LEVELS**

- Pediatric Routine Assessment and Care

**EMR and EMT**

- Additional Assessment Concerns
  - Localize Pain to Abdominal Quadrant If Possible
  - Obtain Bowel and Bladder Habits
- Consider OPQRST Pneumonic for Assessment of Pain
- Allow Patient to Assume a Position of Comfort
- Consider ALS

**EMR Options If Approved**

- Initiate Transport
  - Consider Use Of Car Seat Type Restraint Device

**EMT**

- Initiate Transport
  - Consider Use Of Car Seat Type Restraint Device

**EMT Options If Approved**

- Consider Advanced Airway for Persistent Decreased LOC
- Consider IV Access

**AEMT**

- Consider IO Access For Shock and IV Access Can Not Be Obtained
- Consider 0.05 to 0.2 mg/kg to 4 mg Max Morphine IV/IO/IM/MAD

**EMT-I**

- Consider Cardiac Monitoring

**Paramedic**

- Consider Anti-Emetic
- Consider Pain Management

Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**ALLERGIC REACTION – ANAPHYLAXIS**

**ALL LEVELS**

- Pediatric Routine Assessment and Care

**EMR**

- Assess Severity of Reaction
  - Itching and/or Hives
  - No Respiratory Symptoms
- Administer Oxygen
- Consider Assisted Ventilations for Severe Reactions
- Consider ALS

**EMR Options if Approved**

- Consider 0.15mg (Pediatric) Epinephrine Auto Injector For Moderate and Severe Reactions
  - May Repeat in 5 minutes if Symptoms Do Not Improve
- Initiate Transport
  - Consider Use Of Car Seat Type Restraint Device

**EMT**

- Consider Assisting Patient with His/Her Prescribed Meter Dosed Inhaler
- Consider Assisting Patient with His/Her Prescribed Epinephrine Auto Injector
  - May Repeat in 5 minutes if Symptoms Do Not Improve
- Initiate Transport
  - Consider Use Of Car Seat Type Restraint Device

**EMT Options if Approved**

- Consider 2.5mg Unit Dose Albuterol Nebulizer Treatment For Moderate and Severe Reactions
- Patient 30kg and Under
  - Consider 0.15mg (Pediatric) Epinephrine Auto Injector For Moderate and Severe Reactions
    - May Repeat in 5 minutes if Symptoms Do Not Improve
- Patient Over 30kg
  - Consider 0.3mg (Adult) Epinephrine Auto Injector For Moderate and Severe Reactions
    - May Repeat in 5 minutes if Symptoms Do Not Improve
- Consider IV Access

**AEMT**

- Consider 0.01mg/kg (0.01ml/kg) (0.5 ml (0.5 mg) Max Dose) 1:1000 Epinephrine IM For Moderate and Severe Reactions
  - May Repeat in 5 minutes if Symptoms Do Not Improve
- Consider IO Access In Moderate and Severe Reactions

**EMT-I**

- Consider Bronchodilator
- Consider 1 to 2 mg/kg (50 mg Max Dose) Diphenhydramine IV/IO/IM for Mild, Moderate, and Severe Reactions
- Consider 2 mg/kg (125 mg Max Dose) Methylprednisolone IV/IO for Moderate and Severe Reactions
- Initiate Cardiac Monitoring

**Paramedic**

- Consider RSI
- Consider Vasopressor Agent for Anaphylactic Shock with Hypotension

Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**CARDIAC ARREST – DISCONTINUING BYSTANDER CPR AND WITHHOLDING CPR**

The EMR or EMT may be presented with patients in which bystander CPR has been started or the patient presents with certain sign/symptoms of obvious death or a valid DNR.

**Situations where bystander CPR has been initiated OR EMS arrives and no CPR is initiated:**

**Un-Safe Scene**

**If the scene will place the OOHECP “at risk of serious injury or mortal peril”<sup>2</sup> CPR may be discontinued or withheld**

**ALL LEVELS**

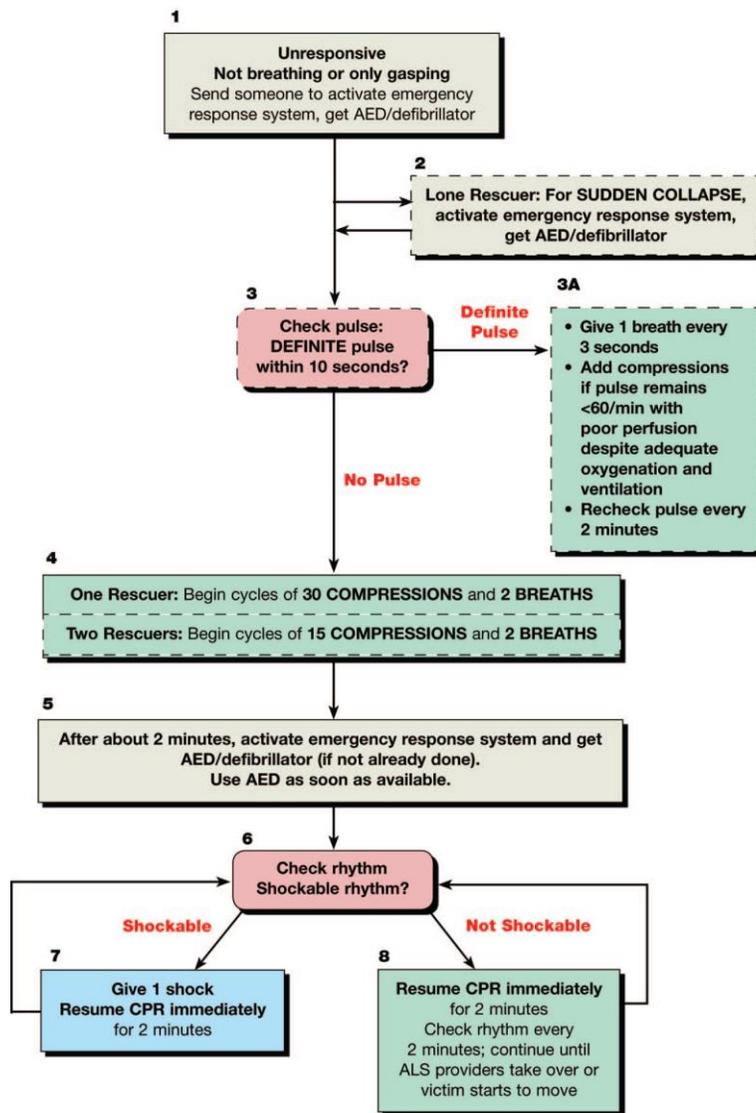
- Confirm the Patient Has
  - No Pulse
  - No Respirations or Attempts at Respirations
- May Stop CPR or Not Initiate CPR IF the Patient Presents with **At Least One** of the Following:
  - Rigor mortis
  - Decapitation
  - Decomposition
  - Dependent lividity
  - Traumatic cardiopulmonary arrest with injuries incompatible with life; Examples
    - Massive blood loss
    - Displacement of brain tissue
    - Blunt Head/Chest Trauma
  - Valid DNR form
  - Physician authorization
- The following will be included in the Patient Care Report;
  - CPR was or was not being performed prior to EMS arrival OR
  - If CPR was being performed the time it was discontinued
  - The patient had No Respirations and No Pulse
  - The additional criteria (from above) use to discontinue or withhold CPR

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<sup>2</sup> Part 3: Ethics: 2010 AHA CPR and EEC Guild lines **Withholding and Withdrawing CPR(Termination of Resuscitative Efforts) Related to Out-of Hospital Cardiac Arrest**

Nebraska EMS Model Protocols  
 Pediatric Medical Protocols  
**CARDIAC ARREST – AED AND CPR**  
**EMR – EMT - AEMT**

**Pediatric BLS Healthcare Providers**



- High-Quality CPR**
- Rate at least 100/min
  - Compression depth to at least 1/3 anterior-posterior diameter of chest, about 1 1/2 inches (4 cm) in infants and 2 inches (5 cm) in children
  - Allow complete chest recoil after each compression
  - Minimize interruptions in chest compressions
  - Avoid excessive ventilation

Note: The boxes bordered with dashed lines are performed by healthcare providers and not by lay rescuers

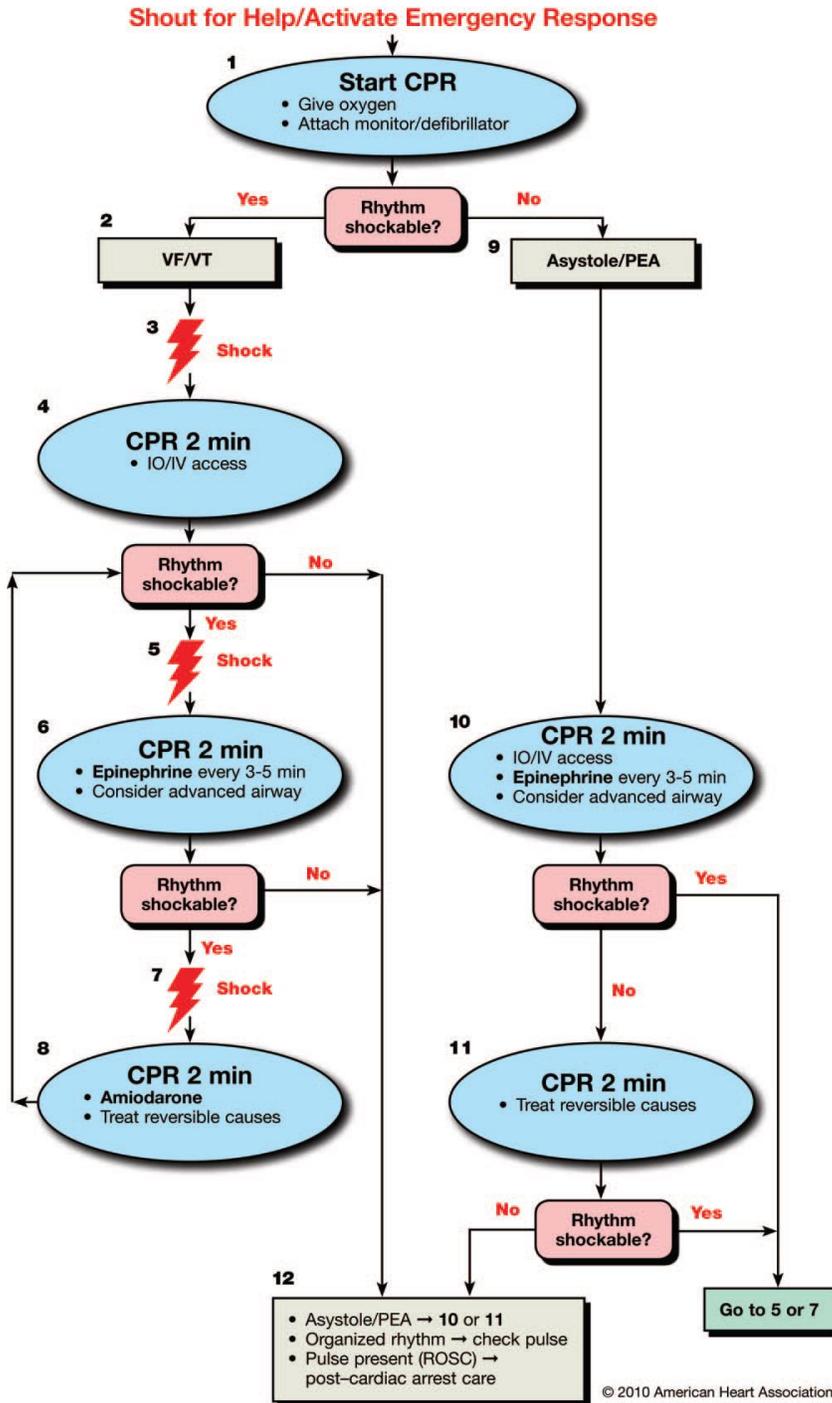
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- EMR Options If Approved**
- Place Patient On Back/CPR Board
  - Initiate Transport
  - Call for Intercept from Backup Service

- EMT**
- Place Patient On Back/CPR Board
- EMT Options if Approved and AEMT**  
 After First Cycle of CPR and Shock or No Shock
- Consider an Advanced Airway
  - Consider IV Access with Normal Saline or LR
- AEMT**
- Consider IO Access

Nebraska EMS Model Protocols  
 Pediatric Medical Protocols  
**CARDIAC ARREST – ADVANCED CARDIAC LIFE SUPPORT**  
**EMT-I and Paramedic**

**Pediatric Cardiac Arrest**



**Doses/Details**

**CPR Quality**

- Push hard ( $\geq 1/3$  of anterior-posterior diameter of chest) and fast (at least 100/min) and allow complete chest recoil
- Minimize interruptions in compressions
- Avoid excessive ventilation
- Rotate compressor every 2 minutes
- If no advanced airway, 15:2 compression-ventilation ratio. If advanced airway, 8-10 breaths per minute with continuous chest compressions

**Shock Energy for Defibrillation**

First shock 2 J/kg, second shock 4 J/kg, subsequent shocks  $\geq 4$  J/kg, maximum 10 J/kg or adult dose.

**Drug Therapy**

- **Epinephrine IO/IV Dose:** 0.01 mg/kg (0.1 mL/kg of 1:10 000 concentration). Repeat every 3-5 minutes. If no IO/IV access, may give endotracheal dose: 0.1 mg/kg (0.1 mL/kg of 1:1000 concentration).
- **Amiodarone IO/IV Dose:** 5 mg/kg bolus during cardiac arrest. May repeat up to 2 times for refractory VF/pulseless VT.

**Advanced Airway**

- Endotracheal intubation or supraglottic advanced airway
- Waveform capnography or capnometry to confirm and monitor ET tube placement
- Once advanced airway in place give 1 breath every 6-8 seconds (8-10 breaths per minute)

**Return of Spontaneous Circulation (ROSC)**

- Pulse and blood pressure
- Spontaneous arterial pressure waves with intra-arterial monitoring

**Reversible Causes**

- Hypovolemia
- Hypoxia
- Hydrogen ion (acidosis)
- Hypoglycemia
- Hypo-/hyperkalemia
- Hypothermia
- Tension pneumothorax
- Tamponade, cardiac
- Toxins
- Thrombosis, pulmonary
- Thrombosis, coronary

Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**CARDIAC ARREST – SPECIAL SITUATIONS**

**ALL LEVELS**

- Follow Cardiac Arrest Algorithm With These Consideration

**Cardiac Arrest in Suspected Narcotic – Benzodiazepine – Beta Blocker – Calcium Channel Blocker Overdose  
– Tricyclic Antidepressant Overdose**

**ALL LEVELS**

- Consider Consultation with Medical Control or PMD
- No Additional Considerations

**CARDIAC ARREST IN HYPOTHERMIA–DROWNING**

**EMR and EMT**

- Remove Wet Clothing and Passively Warm Patient

**EMT Options If Approved**

- Use Warmed IV Fluids

**EMT-I and Paramedic**

- May Use Epinephrine and Vasopressin in Severe Hypothermia (<87° F)
- Avoid Amiodarone and Lidocaine in Sever Hypothermia (<87° F)

**CARDIAC ARREST IN TRAUMA**

**ALL LEVELS**

- If Resuscitation Attempted Follow Appropriate Cardiac Arrest Protocol

Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**CARDIAC ARREST – RETURN OF SPONTANEOUS CIRCULATION**

**ALL LEVELS**

- Pediatric Routine Assessment and Care

**EMR and EMT**

- Keep AED Attached to Patient
- Assist Ventilations
- If Gag Reflex Returns Removal Oral Airway
- Suction as Needed
- Consider Obtaining 12 Lead EKG
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Initiate Transport

**EMT Options If Approved**

- Consider Advance Airway If Not Already In Place During Cardiac Arrest
- Consider Obtaining a Blood Glucose Reading
- Consider IV Access

**AEMT**

- Consider IV or IO Access

**EMT-I**

- Consider Intubation If Not Already In Place During Cardiac Arrest
- Initiate Cardiac Monitoring
- Treat Cardiac Dysrhythmias
- Adjust Ventilations (Rate, Tidal Volume, FiO<sub>2</sub>) To Maintain These Goals
  - O<sub>2</sub> Saturation 94% or Better
  - EtCO<sub>2</sub> 35 to 45 mmHg

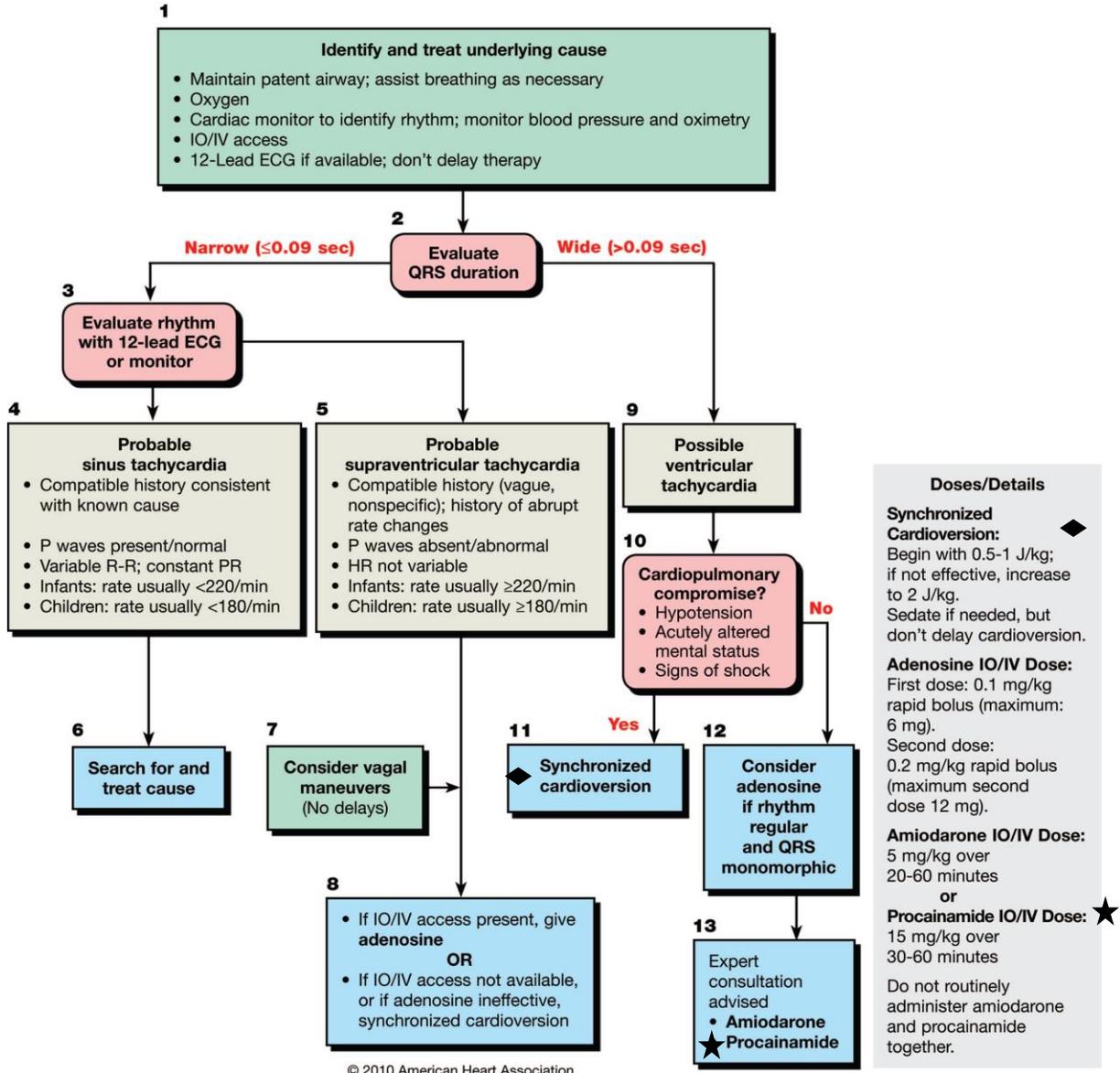
**Paramedic**

- Consider Vasopressor Agent for Sustained Hypotension
- If Patient Intubated
  - Consider Sedative Agent
  - **OR** Consider Sedative Agent First Then a Non-Depolarizing Paralytic

Nebraska EMS Model Protocols  
 Pediatric Medical Protocols  
**CARDIAC DYSRHYTHMIA TACHYCARDIA**

**EMT-I and Paramedic**

**Pediatric Tachycardia**  
 With a Pulse and Poor Perfusion



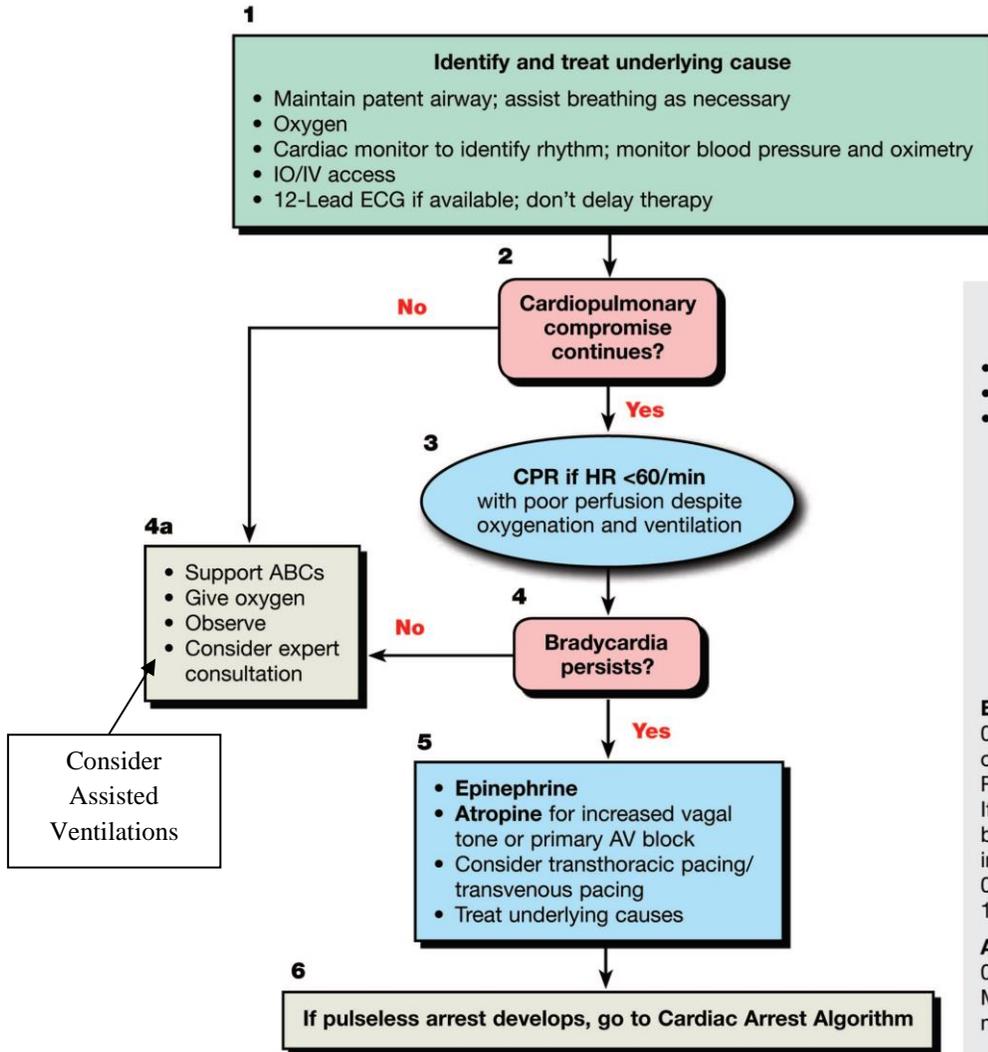
★ **Paramedic Only Medication**  
 Procainamide

♦ **EMT-I Must Have Completed PALS to Perform**  
 Synchronized Cardioversion

Nebraska EMS Model Protocols  
 Pediatric Medical Protocols  
**CARDIAC DYSRHYTHMIA BRADYCARDIA**

EMT-I and Paramedic

**Pediatric Bradycardia**  
 With a Pulse and Poor Perfusion



**Cardiopulmonary Compromise**

- Hypotension
- Acutely altered mental status
- Signs of shock

**Doses/Details**

**Epinephrine IO/IV Dose:**  
 0.01 mg/kg (0.1 mL/kg of 1:10 000 concentration). Repeat every 3-5 minutes. If IO/IV access not available but endotracheal (ET) tube in place, may give ET dose: 0.1 mg/kg (0.1 mL/kg of 1:1000).

**Atropine IO/IV Dose:**  
 0.02 mg/kg. May repeat once. Minimum dose 0.1 mg and maximum single dose 0.5 mg.

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Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**DECREASED LEVEL OF CONSCIOUSNESS – DECREASED MENTAL STATUS**

**ALL LEVELS**

- Pediatric Routine Assessment and Care
- Consider 0.1mg/kg to Max of 2 mg Naloxone IM Auto-Injector/MAD for suspected or known narcotic overdose, or IM/IV/IO/MAD for AEMT and above

**EMR**

- Consider Oral Airway and Assisted Ventilations
- Administer Oxygen
- Utilize A Non-Invasive Stroke Scale
- Obtain Onset Time
- Assess for Medical or Traumatic Cause and Utilize Additional Protocols As Needed
- Consider ALS

**EMR Options if Approved**

- Consider 12 Lead ECG acquisition and transmission
- Initiate Transport

**EMT**

- Consider Nasal Airway in Older Children
- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider IV Access
- Obtain Blood Glucose Reading-If Abnormal Go to Appropriate Protocol
- Consider Advanced Airway for Persistent Decreased Mental Status

**AEMT**

- Consider 0.1 mg/kg to Max of 2 mg Naloxone IV/IM/MAD For Suspected or Known Narcotic Overdose

**EMT-I**

- Consider Intubation for Persistent Decreased Mental Status

**Paramedic**

- Consider RSI

Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**EPIGLOTTITIS**

**ALL LEVELS**

- Pediatric Routine Assessment and Care

**EMR**

- Allow Patient to Assume a Position Where He/She Can Maintain Own Airway
- If Patient Loses Airway Attempt BVM Ventilations
- Administer Oxygen By Blow By or Non-Rebreather Mask Humidified if Possible
- Calm Patient
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved and AEMT**

- Defer Attempts at Advanced Airway
- Defer IV Unless Patient Loses Airway

**EMT-I**

- Initiate Cardiac Monitoring

**Paramedic**

- Consider Cricothyroidotomy

Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**HYPOGLYCEMIA – INSULIN SHOCK**

**ALL LEVELS**

- Pediatric Routine Assessment and Care

**EMR**

- If No Trauma Position Patient to Protect Airway
- Consider Oxygen
- Assess for Stroke
- IF PATIENT CAN FOLLOW SIMPLE COMMANDS AND PROTECT OWN AIRWAY
  - Consider For Children Old Enough to Drink From Glass Having Patient Drink Juice, Non-Diet Pop or Milk
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94 % or Better O2 Saturation
- IF PATIENT CAN PROTECT OWN AIRWAY
  - Consider Oral Glucose Gel
    - Infants Rub Small Amounts of Oral Glucose Gel Along Gums
    - Children 7.5 to 15 Grams Oral Glucose Gel
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Obtain Blood Glucose Reading
- Consider IV Access

**AEMT**

- Consider IO Access when:
  - Blood Glucose Level Indicates Hypoglycemia
  - AND IV Access Can Not Be Obtained
- Consider Dextrose
  - Infant to age 1 year – 4 ml/kg to a Max 6 grams **Dextrose 12.5%**
  - Child to age 8 years – 2 ml/kg to a Max 12.5 grams **Dextrose 25%**
  - Age 8 to Onset Puberty – 1 ml/kg to a Max 25 grams **Dextrose 50%**
- ALTERNATE Treatments
  - IF PATIENT CAN PROTECT OWN AIRWAY
    - Consider Oral Glucose See EMT Above
  - Defer IO and IV and Administer 0.5mg Under 25kg to 1mg Over 25kg Glucagon IM or MAD
    - If Glucagon Fails to Full Resolve Hypoglycemia **See Dextrose Treatment Above**

**EMT-I and Paramedic**

- Consider Intubation for Persistent Decrease Mental Status After Treatment With Dextrose or Glucagon
- Assess for Other Causes of Decreased Mental Status
- Consider Cardiac Monitoring

Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**HYPERGLYCEMIA – DIABETIC COMA**

**ALL LEVELS**

- Pediatric Routine Assessment and Care

**EMR**

- If No Trauma Position Patient to Protect Airway
- Consider Oxygen
- Assess for Stroke
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Obtain Blood Glucose Reading
- Consider IV Access
  - Consider 20ml/kg Fluid Bolus for Dehydration and Shock

**AEMT**

- Consider IO Access When IV Access Can Not Be Obtained
- **OR** Blood Glucose 400 or Greater
- **OR** Dehydration and/or Shock

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Consider Cardiac Monitoring

**Paramedic**

- Assess For DKA

Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**NAUSEA – VOMITING – DIARRHEA**

**ALL LEVELS**

- Pediatric Routine Assessment and Care

**EMR**

- Consider Oxygen
- Be Prepared for Suctioning
- Assess For Cause of Nausea
- Assess for Dehydration
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved and AEMT**

- Consider IV Access For Sign and Symptoms of Dehydration
- Consider 20ml/kg Fluid Bolus

**AEMT**

- Consider IO Access For Sign and Symptoms of Dehydration With Decreased Mental Status

**EMT-I**

- Consider Cardiac Monitoring

**Paramedic**

- Consider Anti-Emetic

Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**NON-TRAUMATIC NOSE BLEED**

**ALL LEVELS**

- Pediatric Routine Assessment and Care

**EMR**

- Consider Oxygen by Non-Rebreather Mask or Blow By – Humidified if Possible
- Position Patient
  - Sitting Upright
  - Head in Neutral Position
  - Avoid Head Tilt Position
  - If Upright Not Possible Consider Lateral Position
- Pinch Nares Together
- Direction to Patient
  - Spit Blood/Clot Out
  - Try Not to Swallow Blood
  - Do Not Rub – Blow Nose or Sniff
- Suction as Needed
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider IV Access For Sign and Symptoms of Shock

**AEMT**

- Consider IO Access For Signs and Symptoms of Shock AND If IV Can Not Be Obtained

**EMT-I**

- Consider Cardiac Monitoring

**Paramedic**

- Consider Anti-Emetic

Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**RESPIRATORY ARREST**

**ALL LEVELS**

- Pediatric Routine Assessment and Care

**EMR**

- Open Airway
  - Trauma Suspected Use Jaw Thrust Method
  - Non-Traumatic Use Head Tilt-Chin Lift Method
- Consider Oral Airway
- Begin Ventilations with Bag-Valve-Mask or Mouth to Mask Device Attached to Oxygen
  - Infants 1 and Under – 30 Ventilations/Min
  - Child 1 to 8 Years – 24 Ventilations/Min
  - Child Over Age 8 to Onset of Puberty – 15 ventilation/Min
- Suction as Needed
- Consider Cause Use Additional Protocols if Needed
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Monitor Oxygen Saturation Adjust Ventilation/Minute to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider IV Access
- Consider Advanced Airway
- Obtain Blood Glucose Reading

**AEMT**

- Consider IO Access If IV Can Not Be Obtained
- Consider Cause Use Additional Protocols if Needed

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Adjust Ventilation (Rate/Tidal Volume/FiO2) to Maintain
  - Oxygen Saturation 94% or Better
  - EtCO2 of 35 to 45 mmHg
- Initiate Cardiac Monitoring
- Consider Cause Use Additional Protocols if Needed

**Paramedic**

- Consider Cause Use Additional Protocols if Needed

Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**RESPIRATORY DISTRESS – ASTHMA**

**ALL LEVELS**

- Pediatric Routine Assessment and Care

**EMR**

- Administer Oxygen
- Consider Assisted Ventilations
- Suction as Needed
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O<sub>2</sub> Saturation
- Consider Assisting Patient with His/Her Prescribed Metered Dose Inhaler
  - Administer Prescribed Number of Puffs Repeat Two Times Every 5-10 Minutes If Distress Continues
  - Consult Medical Control, PMD, or Patient's Physician for Additional Doses
- Consider Assisting Patient with His/Her Prescribed Epinephrine Auto-Injector for Status Asthmaticus\* (**See Below**)
  - Consult Medical Control, PMD, or Patient's Physician for Additional Doses
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider IV Access
- Consider 2.5mg in 3 ml Albuterol Nebulizer Treatment
  - May Repeat Two Times If Symptoms Do Not Improve OR Patient's Condition Deteriorates
- If Albuterol Nebulizer Treatments Fail to Improve Distress
  - Patient 30kg and Under
    - Consider 0.15mg (Pediatric) Epinephrine Auto Injector For Status Asthmaticus\* (**See Below**)
  - Patient Over 30kg
    - Consider 0.3mg (Adult) Epinephrine Auto Injector For Status Asthmaticus\* (**See Below**)

**AEMT**

- Consider IO Access If IV Can Not Be Obtained
- If Albuterol Nebulizer Treatments Fail to Improve Distress
  - Consider 0.01mg/kg (0.01ml/kg) Epinephrine 1:1000 IM for Status Asthmaticus\* (**See Below**)

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Consider Cardiac Monitoring
- If First Line Bronchodilators Nebulizer Treatments Fail to Improve Distress OR Patient Deteriorates
  - Consider 0.01mg/kg (0.01ml/kg) Epinephrine 1:1000 IM
- Consider 2mg/kg to Max 125mg Methylprednisolone IV/IO

**Paramedic**

- If First Line Pharmaceutical Interventions Have Minimal or No Effect
  - Consider 25 mg/kg to Max 2 gram Magnesium Sulfate Infused over 10 minutes
  - **OR** Consider 0.5 to 0.75 ml of a 2.5% Racemic Epinephrine Nebulizer Treatment
  - **OR** Consider 3 to 5 mg 1:1000 Epinephrine Nebulizer Treatment
- Consider RSI with Inline Nebulized Bronchodilator

**\*Status Asthmaticus Means – Sustained Asthma Not Relieved by Oxygen, Meter Dose Inhaler, or Nebulizer Treatment**

Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**RESPIRATORY DISTRESS – CROUP**

**ALL LEVELS**

- Pediatric Routine Assessment and Care

**EMR**

- Administer Oxygen
- Consider Assisted Ventilations
- Suction as Needed
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O<sub>2</sub> Saturation
- Consider Assisting Patient with His/Her Prescribed Metered Dose Inhaler
  - Administer Prescribed Number of Puffs
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider IV Access
- Consider 2.5mg in 3 ml Albuterol Nebulizer Treatment
  - Repeat Two Times If Symptoms Do Not Improve OR Patient's Condition Deteriorates

**AEMT**

- Consider IO Access If IV Can Not Be Obtained

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Consider Cardiac Monitoring

**Paramedic**

- May Consider Racemic Epinephrine OR Epinephrine 1:1000 Nebulized as a First Line Therapy
- Consider 0.5 to 0.75 ml of a 2.5% Racemic Epinephrine Nebulizer Treatment
- **OR** Consider 1:1000 Epinephrine Nebulizer Treatment
  - Age 4 and Under 0.5ml/kg to Max of 2.5ml in 3ml NS Nebulized
  - Age 5 and Older 0.5ml/kg to Max of 5ml in 3 ml NS Nebulized

Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**RESPIRATORY DISTRESS – SPONTANEOUS PNEUMOTHORAX**

**ALL LEVELS**

- Pediatric Routine Assessment and Care

**EMR**

- Administer Oxygen
- Consider Assisted Ventilations
- Suction as Needed
- Assess For Trauma
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider IV Access

**AEMT**

- Consider IO Access If IV Can Not Be Obtained

**EMT-I**

- Consider Needle Decompression for Signs and Symptoms of Tension Pneumothorax
- Initiate Cardiac Monitoring

**Paramedic**

- Consider RSI

Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**RESPIRATORY INFECTIONS**

**ALL LEVELS**

- Pediatric Routine Assessment and Care

**EMR**

- Administer Oxygen
- Consider Assisted Ventilations
- Suction as Needed
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O<sub>2</sub> Saturation
- Consider Assisting Patient with His/Her Prescribed Metered Dose Inhaler for Sign and Symptoms of Distress
  - Administer Prescribed Number of Puffs Repeat Two Times Every 5-10 Minutes If Distress Continues
  - Consult Medical Control, PMD, or Patient's Physician for Additional Doses
- Consider Obtaining a Body Temperature
- Assess for Dehydration
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider 2.5mg in 3 ml Albuterol Nebulizer Treatment
  - Repeat Two Times If Symptoms Do Not Improve OR Patient's Condition Deteriorates
- Consider IV Access
  - Administer 20ml/kg Bolus for Dehydration – Reassess

**AEMT**

- Consider IO Access If IV Can Not Be Obtained

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Consider Cardiac Monitoring

**Paramedic**

- As Alternate for Albuterol In Suspected RSV
  - Consider 0.5 to 0.75 ml of a 2.5% Racemic Epinephrine Nebulizer Treatment
  - **OR** Consider 3 to 5 mg 1:1000 Epinephrine Nebulizer Treatment
- If Albuterol Does Not Improve Symptoms **OR** Patient's Condition Deteriorates
  - Consider 0.5 to 0.75 ml of a 2.5% Racemic Epinephrine Nebulizer Treatment
  - **OR** Consider 3 to 5 mg 1:1000 Epinephrine Nebulizer Treatment
- Consider RSI with Inline Nebulized Bronchodilator

Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**SEIZURE AND POSTICTAL PERIOD**

**ALL LEVELS**

- Pediatric Routine Assessment and Care

**EMR**

- Active Seizure
  - Administer Oxygen (Blow By Acceptable During Seizure)
  - Protect Patient – Pads Around Patient
  - Do Not Restrain Patient
  - Do Not Insert Anything Orally
- Postictal Period
  - Consider Oxygen
  - Consider Assisted Ventilations and Oral Airway for Persistent Decreased Mental Status
  - Suction as Needed
- Assess For Trauma and Stroke
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Nasal Airway for Persistent Decreased Mental Status in Older Children
- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O<sub>2</sub> Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider Obtaining Blood Glucose
- Consider IV Access

**AEMT**

- Consider IO Access
  - If IV Can Not Be Obtained
  - Seizures Reoccur

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Consider Cardiac Monitoring
- Consider 0.04 to 0.2 mg/kg Max Single Dose Diazepam IV/IO/Rectal
  - May Repeat if needed to Maximum of 10mg

**Paramedic**

- Consider Benzodiazepine for Repeat or Continued Seizures

Nebraska EMS Model Protocols  
 Pediatric Medical Protocols  
**TOXINS – AUTO-INJECTOR ANTIDOTE KITS**  
**NERVE AGENT – ORGANOPHOSPHATE EXPOSURE**

**ALL LEVELS**

- Pediatric Routine Assessment and Care

**EMR and EMT and AEMT**

- May administer auto injector antidote kits to a fellow responder or patients in mass numbers when higher level OOHECP are overwhelmed.

**EMT-I and Paramedic**

- May administer the auto injector antidote kits

**Pediatric Auto-Injector Antidote Kit Dosing Chart**

<b>Severity</b>	<b>Mild Symptoms</b>	<b>Moderate Symptoms</b>	<b>Severe Symptoms</b>
<b>Signs And Symptoms</b>	Pinpoint pupils (miosis) Excessive sweating Tearing (lacrimation) Drooling (salivation) Runny nose Mild chest tightness Mild shortness of breath	Severe chest tightness Wheezing Profuse airway secretions Respiratory distress Vomiting, abdominal cramps Diarrhea Muscle weakness	Cyanosis Seizures Coma Flaccid paralysis Respiratory failure Apnea
<b>Treatment</b>	<b>Evacuate to a Safe Area</b>	<b>Do Not Delay</b>	
	<b>Administer</b> One Each – Atropine and Pralidoxime (Mark I) <b>OR</b> One – Atropine/Pralidoxime (DouDote)	<b>Administer</b> 3 – 7 years old – One Each – Atropine and Pralidoxime (Mark I) <b>OR</b> One - Atropine/Pralidoxime (DouDote) 8 – 12 years old – Two Each – Atropine and Pralidoxime (Mark I) <b>OR</b> Two – Atropine/Pralidoxime (DouDote) 12 and over use adult dose	

Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**TOXINS – INHALED**

**ALL LEVELS**

- Pediatric Routine Assessment and Care

**EMR**

- Administer Oxygen
- Consider Assisted Ventilations
- Assess For Trauma
- Suction as Needed
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Assess CO Level by Non-Invasive Monitor
  - If Elevated Begin High Flow Oxygen
  - If within Normal Values Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Consider Assisting Patient with His/Her Prescribed Metered Dose Inhaler
  - Administer Prescribed Number of Puffs Repeat Two Times Every 5-10 Minutes If Distress Continues
  - Consult Medical Control, PMD, or Patient's Physician for Additional Doses
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider 2.5mg in 3ml Albuterol Nebulizer Treatment
  - Repeat Two Times If Symptoms Do Not Improve OR Patient's Condition Deteriorates
- Consider IV Access

**AEMT**

- Consider IO Access If IV Can Not Be Obtained

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Consider Bronchodilator
- Initiate Cardiac Monitoring

**Paramedic**

- Consider RSI with Inline Nebulized Bronchodilator

Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**TOXINS – OVERDOSE – POISONINGS**

**ALL LEVELS**

- Pediatric Routine Assessment and Care

**EMR**

- Consider Oxygen
- Obtain Name of Medication/Drug
  - **See Next Page for Additional Information**
- Consider ALS

**EMR Options if Approved**

- Initiate Transport

**EMT**

- Consider Contacting Destination Facility Via Radio/Phone With Name of Medication/Drug
- Consider Contacting Poison Control
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider IV Access

**AEMT**

- Consider IO Access If IV Can Not Be Obtained

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Consider Cardiac Monitoring

**Paramedic**

- Consider Anti-Emetic

**TOXINS – OVERDOSE**

**SPECIAL INSTRUCTIONS FOR SPECIFIC OVERDOSES**

**IF LEVEL NOT LISTED USE THE TOXIN – OVERDOSE PROTOCOL ABOVE**

Nebraska EMS Model Protocols  
Pediatric Medical Protocols  
**Stimulants – Cocaine – Methamphetamine – Ecstasy**

**EMR-EMT**

- Obtain Temperature
- If Temp Over 102° F An Infection Not Suspected Consider Passive Cooling

**EMT Options if Approved and AEMT**

- Consider Fluid Boluses For Elevated Temps and Signs and Symptoms of Dehydration

**EMT-I**

- For Patients Over 1 Year Old That Present Awake, Alert with Severe Anxiousness/Anxiety and/or Hallucinations
  - Consider 0.04 to 0.2mg/kg Diazepam IV/IO

**Paramedic**

- For Patients Over 1 Year Old That Present Awake, Alert with Severe Anxiousness/Anxiety and/or Hallucinations
  - Consider Benzodiazepine

**Narcotics – Opiates – Barbituates**

**ALL LEVELS**

- Consider 0.1mg/kg to Max of 2 mg Naloxone IM Auto-Injector/MAD for suspected or known narcotic overdose, or IM/IV/IO/MAD for AEMT and above

**AEMT**

- Consider 0.1mg/kg to Max of 2mg Naloxone IV/IO/MAD
- Consider Advanced Airway If Naloxone Fails to Improve Respiratory Status

**EMT-I and Paramedic**

- Consider Intubation If Naloxone Fails to Improve Respiratory Status

**Tricyclic Antidepressant**

**Paramedic**

- For Patients That Present or Develop Decreased Mental Status, Hypotension and Widen QRS
  - Confirmed Tricyclic Antidepressant Overdose/Poisoning
  - Consider
    - Age 8 and Under 1mEq/Kg 4.2% Sodium Bicarbonate Slow IV/IO
    - Over Age 8 1mEq/kg 8.4% Sodium Bicarbonate Slow IV/IO
  - Consider Vasopressor Agent

**Calcium Channel Blocker**

**Paramedic**

- For Patients That Present or Develop Decreased Mental Status, and Hypotension
  - Contact Medical Control/Poison Center for Consult on Calcium Chloride
  - **OR** Calcium Gluconate
  - Consider Vasopressor Agent

**Organophosphates**

**EMT-I**

- Consider 0.02mg/kg Atropine-Minimum Single Dose 0.1mg Max Single Dose 1mg IV/IO
- May Repeat until Symptoms Improve

**Paramedic**

- Consider 20 to 50mg/kg to Max of 1200mg Pralidoxime IV/IO

Nebraska EMS Model Protocols  
 Pediatric Medical Protocols  
**SHOCK**

**ALL LEVELS**

- Pediatric Routine Assessment and Care

**EMR**

- Administer Oxygen
- Assess For Trauma
  - Control External Hemorrhage
  - Manually Stabilize C-Spine and Extremity Deformities
- Assess For Dehydration
- Assess for Potential of Allergic Reaction **\*\*Go to [Allergic Reaction Anaphylaxis Protocol](#)**
- Position Supine Unless Respiratory Status Do Not Allow For This
- Conserve Body Heat
- Consider ALS

**EMR Options if Approved**

- If Trauma Present
  - Consider Spinal Stabilization and Extremity Stabilization
- Initiate Transport

**EMT**

- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Obtain Temperature and If Fever Consider Dehydration/Sepsis
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider IV Access
- Consider Fluid Bolus(es) 20ml/kg Then Reassess and Repeat
  - **EXCEPT Cardiogenic Shock – Consider Fluid Bolus(es) 10 ml/Kg then Reassess and Repeat**

**AEMT**

- Consider IO Access If IV Can Not Be Obtained

**EMT-I**

- Initiate Cardiac Monitoring
- Assess for Potential of Cardiogenic Shock

**Paramedic**

- Assess For Type of Shock
- General Considerations for Shock
  - When Considering Anti-Emetic Choose an Agent With the Least Cardiac Effects
  - When Considering Pain Management Choose an Agent With Least Effect on BP
- Shock Types and Considerations

<b>Hypovolemic</b>	<b>Cardiogenic</b>	<b>Obstructive Shock</b>	<b>Distributive</b>
Consider 20 ml/kg Fluid Boluses With Frequent Reassessments	Consider 10 ml/kg Fluid Bolus(es) Consider Vasopressor Agent Manage Dysrhythmias	Assess for Tension Pneumothorax – Treat with Needle Decompression Assess for Cardiac Tamponade – <b>Alert Destination Facility</b>	Anaphylaxis – <b>Go To Allergic Reaction Anaphylaxis Protocol</b>
			Neurogenic (Spine) Shock – Consider 20 ml/kg Fluid Boluses
			Sepsis – Consider 20 ml/kg Fluid Boluses Consider Vasopressor Agents

# **Pediatric Trauma Protocols**



Nebraska EMS Model Protocols  
 Pediatric Trauma Protocols  
**TRAUMA CARE**  
**HEAD – CHEST – ABDOMEN**

**ALL LEVELS**

- Pediatric Routine Assessment and Care
- Assess For Shock and Treat

	Head/Neck/Spine	Chest	Abdomen
<b>EMR</b>	Administer Oxygen Consider Assisted Ventilations Consider Oral Airway Consider OPQRST Pneumonic for Assessment of Pain Suction as Needed Manually Stabilize Head and Neck Control External Bleeding Stabilize Impaled Objects In Place Assess CMS Consider Trauma Team – Trauma System Activation		
	Open Trauma <ul style="list-style-type: none"> <li>• *Bandage Open Wounds</li> <li>• *Consider Occlusive Dressing for Open Neck Wounds</li> </ul> Closed Trauma <ul style="list-style-type: none"> <li>• * Consider Cold Pack to Areas of Edema</li> </ul>	Open Chest Trauma – Sucking Chest Wound <ul style="list-style-type: none"> <li>• *Seal Wound With Occlusive Dressing</li> </ul> Closed Chest Trauma <ul style="list-style-type: none"> <li>• *Consider Stabilizing Fail Sections With Bulky Dressings</li> </ul>	Open Abdominal Trauma – Eviscerations <ul style="list-style-type: none"> <li>• *Do Not Attempt to Replace Contents</li> <li>• *Place Contents On Top of Abdomen</li> <li>• *Cover With Thick Moist Dressing</li> </ul> Closed Abdominal Trauma <ul style="list-style-type: none"> <li>• *Attempt to Localize Pain to an Abdominal Region/Quadrant</li> </ul>
<b>EMR Options</b>	Consider Spinal Stabilization with Pediatric Sized Device Consider Extremity Stabilization with Pediatric Sized Device Initiate Transport		
<b>EMT</b>	Defer Nasal Airways	May Consider Nasal Airway	May Consider Nasal Airway
	Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation For Signs and Symptoms of ICP <b>AND</b> GCS of 6 and Under – Consider Hyperventilation Of Patient Initiate Transport		
<b>EMT Options</b>	Consider Advanced Airway for Persistent Decrease Mental Status Consider IV Access Assess For Shock and Administer Appropriate Fluid Boluses		
<b>AEMT</b>	Consider IO Access As First Access Route in Unstable Pediatric Patients Assess For Shock and Administer Appropriate Fluid Boluses Consider Morphine 2 – 4 mg IV/IO/MAD		
<b>EMT-I</b>	*Consider Cardiac Monitoring	*Initiate Cardiac Monitoring	*Consider Cardiac Monitoring
		*Needle Decompress Patient For Sign* and Symptoms of Tension Pneumothorax	
<b>Paramedic</b>	Consider RSI Consider Anti-Emetic Consider Pain Management		
<b>Special Consideration for Extremity Injuries in Multi-Systems Trauma</b>			
<ul style="list-style-type: none"> <li>• *Consider Utilizing a Full Body Stabilization Device and Splint Injured Extremities to the Device and/or Patient to Allow For Rapid Scene Time and then Splint Extremities Enroute to Destination</li> <li>• *Stabilization of Suspected Pelvic and Femur Fractures is a High Priority</li> </ul>			

Nebraska EMS Model Protocols

Pediatric Trauma Protocols

**TRAUMA CARE**

**AMPUTATIONS – EXTREMITY – SOFT TISSUE TRAUMA**

**ALL LEVELS**

- Pediatric Routine Assessment and Care
- Assess For Shock and Treat

	<b>Amputations</b>	<b>Extremity</b>	<b>Soft Tissue</b>
<b><u>EMR</u></b>	Administer Oxygen Consider Assisted Ventilations Consider Oral Airway Consider OPQRST Pneumonic for Assessment of Pain Suction as Needed Manually Stabilize Head and Neck Control External Bleeding Stabilize Impaled Objects In Place Assess CMS Consider Trauma Team Activation		
	<ul style="list-style-type: none"> <li>• *Wrap Amputated Part in Dressing and Keep Cool</li> <li>• *Do Not Place Tissue Directly On Ice</li> </ul>	<ul style="list-style-type: none"> <li>• *Manually Stabilize Painful and/or Deformed Extremity</li> <li>• *Apply Cold Pack</li> </ul>	<ul style="list-style-type: none"> <li>• *Return Avulsion type flaps to anatomic position if possible.</li> <li>• *Bandage Open Wounds</li> <li>• Consider Removing Impaled Objects Through the Cheek into the Mouth</li> <li>• *For Eye Injuries – Cover Both Eyes</li> </ul>
<b><u>EMR Options</u></b>	Consider Spinal Stabilization with Pediatric Sized Device Consider Extremity Stabilization with Pediatric Sized Device Initiate Transport		
		<ul style="list-style-type: none"> <li>• *Consider Traction Type Splint For Femur Injuries</li> <li>• *Consider Pelvic Splint For Pelvic Injuries</li> </ul>	
<b><u>EMT</u></b>	Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation Initiate Transport		
<b><u>EMT Options</u></b>	Consider Advanced Airway for Persistent Decrease Mental Status Consider IV Access Assess For Shock and Administer 20ml/kg Fluid Boluses (Max Single Bolus 500ml)		
<b><u>AEMT</u></b>	Consider IO Access As First Access Route in Unstable Pediatric Patients Assess For Shock and Administer Appropriate Fluid Boluses Consider Morphine 0.05 to 0.2mg/kg IV/IO/MAD		
<b><u>EMT-I</u></b>	*Consider Cardiac Monitoring		
<b><u>Paramedic</u></b>	Consider RSI Consider Anti-Emetic Consider Pain Management Consider Reduction of Deformed Fractures or Dislocations <b>ONLY</b> if there is Loss of Signs of Circulation, Loss of Sensation Distal to the Deformity, or if it is Necessary in Order to Otherwise Care For and Transport the Patient *For Stable Patient's Consider On Scene Pain Management to Ease Pain of Movement/Splinting Defer Insertion of NG AND OG Tube in Any Patient with Gastric Bypass or Gastric Banding Consider 100 mg Thiamine IV/IO for Adolescent Patients with Gastric Bypass or Gastric Banding		
<p><b>Special Consideration for Extremity Injuries in Multi-Systems Trauma</b></p> <ul style="list-style-type: none"> <li>• *Consider Utilizing a Full Body Stabilization Device and Splint Injured Extremities to the Device and/or Patient to Allow For Rapid Scene Time and then Splint Extremities In-Route to Destination</li> <li>• *Stabilization of Suspected Pelvic and Femur Fractures is a High Priority</li> </ul>			

Nebraska EMS Model Protocols  
Pediatric Trauma Protocols  
**BITES AND ENVENOMATION**

**ALL LEVELS**

- Pediatric Routine Assessment and Care
- Assess For Shock and Treat

**EMR**

- Consider Oxygen
- Consider OPQRST For Assessment of Pain
- Control Any External Bleeding
- Consider Manual Stabilization of Affected Extremity
- Human Bites and Animal Bites
  - Bandage Wound
- Snake Bite
  - Attempt to Identify Breed of Snake
  - Slow Venous Return
- Insect Bites
  - Remove Stinger/Venom Sac
- Spider Bites
  - Consider Cold Pack
- Assess for Allergic Reaction **Go to [Allergic Reaction – Anaphylaxis Protocol](#)**
- Consider ALS

**EMR Options if Approved**

- Consider Extremity Stabilization
- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider IV Access
  - \*\*Minor Bites Without Associated Sign and Symptoms IV Should be Deferred

**AEMT**

- Consider IV Access for Pain Management
- Consider IO Access If IV Can Not Be Obtained
- Consider 0.05 to 0.2mg/kg to max 4mg Morphine IV/IO/MAD

**EMT-I**

- Consider Cardiac Monitoring

**Paramedic**

- Consider Anti-Emetic
- Consider Pain Management

Nebraska EMS Model Protocols  
Pediatric Trauma Protocols  
**BURNS**

**ALL LEVELS**

- Pediatric Routine Assessment and Care
- Assess For Shock and Treat

**EMR**

- Administer Oxygen
- Consider Assisted Ventilations
- Consider Oral Airway
- Consider OPQRST For Assessment of Pain
- Consider Manually Stabilize Head/Neck

**Burn Type and Treatment Chart**

Thermal Burns	Electrical Burns	Radiation Burns	Chemical Burns
<b>THINK SAFETY</b>			
<b>Remember Scene Safety And Appropriate PPE</b>			
Stop Burning Process	Verify the electrical source is de-energized	Patient and Radiation Source Need to be Separated	Brush Dry Chemicals From Skin Flush with Water
			Wet Chemicals – Flush with Water
			Flush Eyes Continuously
<b>Do Not Apply Any Ointments or Creams</b>			
Do Not Intentionally Rupture Blisters	Assess for Entrance and Exit Wounds	Decontaminate Patient Prior To Transport	Decontaminate Patient Prior To Transport
Cover Burns/Wounds with Dry Dressings			Wrap Patient with Dry Sheet

- Consider Trauma System Activation
- Consider ALS

**EMR Options if Approved**

- Consider Spinal Stabilization
- Consider Extremity Stabilization
- Initiate Transport

**EMT**

- Defer Nasal Airway in Facial Burns and Inhalation of Super-Heated Air
- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Estimate Body Surface Area Burned and Extend of Burn
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider IV Access

**AEMT**

- Consider IO Access If IV Can Not Be Obtained
- Consider 0.05 to 0.2mg/kg to Max Morphine IV/IO/MAD

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Initiate Cardiac Monitor for All Electrical Burns – Consider For All Other Burns

**Pediatric Modified Parkland Formula for Fluid Resuscitation in Thermal Burn Patients**

3 ml X Body Surface Area Burned X Patient Weight in Kg = Total Fluid Over 24 Hours  
Half Given In 1<sup>st</sup> Eight Hours

**Paramedic**

- Consider RSI For Burns to Airway – Inhaled Superheated Gases – Inhaled Chemicals
- Consider Anti-Emetic
- Consider Pain Management

Nebraska EMS Model Protocols  
Pediatric Trauma Protocols  
**CRUSH INJURY**

**All Levels**

- Routine Assessment and Care
- Assess For Shock and Treat

**EMR**

- Administer Oxygen
- Manually Stabilize Head/Neck
- Consider Oral Airway
- Consider Assisted Ventilations
- Consider OPQRST For Assessment of Pain
- Control External Bleeding
- Consider Trauma System Activation
- Consider ALS

**EMR Options if Approved**

- Consider Spinal Stabilization
- Consider Extremity Stabilization
- Initiate Transport

**EMT**

- Consider Nasal Airway
- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport Once Freed

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Pre – Release
  - Consider Two IV Access Points
  - Administer Fluid 20ml/kg Bolus(es) To Maintain BP within 5 to 10 Points of Normal for Age
- Release – During Process to Free Patient
  - Administer Fluid 20ml/kg Bolus(es) To Maintain BP within 5 to 10 Points of Normal for Age
- Post Release
  - Administer Fluid 20ml/kg Bolus(es) To Maintain BP within 5 to 10 Points of Normal for Age

**AEMT**

- Single IO Access if Unable to Obtain IO Access
- Consider 0.05 to 0.2 mg/kg to 4 mg Max Morphine if BP Stabilizes with Normal Systolic Range for Patient's Age

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Initiate Cardiac Monitoring

**Paramedic**

- Consider RSI
- Consider Anti-Emetic
- Consider Pain Management
- Consider Consult with Medical Control for Entrapment over 60 minutes
  - 1mEq/kg Sodium Bicarbonate
- Consider Diagnostic Mode 3 lead or 12 Lead and Evaluate for Tall Spiked T Waves Indicating Hyperkalemia
  - Consider Continuous Albuterol Nebulizer Treatments Age 1 and under Total Dose 2.5mg
  - Consider Continuous Albuterol Nebulizer Treatments Age 1 to Adolescent Total Dose 5mg
  - Consider Continuous Albuterol Nebulizer Treatments Adolescent Total Dose 15mg

Nebraska EMS Model Protocols  
Pediatric Trauma Protocols  
**ENVIRONMENTAL TRAUMA – EXPOSURE TO HEAT AND COLD**

**ALL LEVELS**

- Pediatric Routine Assessment and Care
- Assess For Shock and Treat

**EMR**

- Administer Oxygen
- Manually Stabilize Head/Neck
- Consider Assisted Ventilations
- Consider OPQRST For Assessment of Pain
- Exposure to Cold – Hypothermia
  - Gently Move Patient to Warm Area If No Spinal Injury Suspected
  - Remove Wet Clothing
  - Frozen/ Near Frozen Extremities
    - Expose to Warm Surroundings
    - Consider Dry Dressing to Pad
  - Body Wide Hypothermia
    - Passively Warm Patients With Warm Packs and Blankets
- Exposure to Heat
  - Gently Move Patient to Cool Area If No Spinal Injury Suspected
  - Remove Excessive Clothing
  - Normal Mental Status and Perspiration Intact
    - Passive Cool Patient with Fanning and Cool Dressing
  - Decrease Mental Status and/or No Perspiration
    - Aggressive Cooling with Wet Sheet, Fanning and Col Packs
- Consider Trauma System Activation
- Consider ALS

**EMR Options if Approved**

- Consider Spinal Stabilization
- Consider Extremity Stabilization
- Initiate Transport

**EMT**

- Consider Nasal Airway
- Administer Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider Advanced Airway for Persistent Decrease Mental Status
- Consider IV Access

**AEMT**

- Consider IO Access If IV Can Not Be Obtained

**EMT-I**

- Consider Intubation for Persistent Decrease Mental Status
- Initiate Cardiac Monitoring

**Paramedic**

- Consider RSI
- Consider Anti-Emetic
- When Passive Warming Frozen Extremities Consider Pain Management

Nebraska EMS Model Protocols  
Pediatric Trauma Protocols  
**CHILD ABUSE**

**ALL LEVELS**

- Routine Assessment and Care
- Assess For Shock and Treat
- Document
  - Factually Injuries
  - Patient Statements
- Report Suspicions to Destination Facility and Law Enforcement

**EMR**

- Consider Oxygen
- Consider OPQRST For Assessment of Pain
- Manage Open Wounds
- Stabilize Impaled Objects in Place
- Consider Trauma System Activation
- If Possible Have EMS Provider of Same Sex as Patient Provide Assessment and Treatment
- Consider ALS

**EMR Options if Approved**

- Consider Spinal Stabilization
- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options if Approved**

- Consider IV Access
- Consider Advanced Airway for Persistent Decrease in Mental Status

**AEMT**

- Consider IO Access If IV Can Not Be Obtained
- Consider 0.05 to 0.2mg/kg to Max Morphine IV/IO/MAD

**EMT-I**

- Consider Cardiac Monitoring

**Paramedic**

- Consider Anti-Emetic
- Consider Pain Management

# **Special Situations**



Nebraska EMS Model Protocols  
Special Situations  
**BLOOD AND BLOOD PRODUCTS**

**EMR, EMT, AEMT, and EMT-I**

- Not Approved for this protocol

**Paramedic**

- Field Administration – Emergency Administration Due to A Delay in Transport
  - Must Have Medical Control Approval
  - Must Have Type O Negative Blood
  - **OR** in Cases of Extreme Entrapment Have Type and Matched Blood Delivered to Scene
- Inter-Facility Administration
  - Obtain Order For Transport
  - Obtain Blood – Blood Product
- Blood – Blood Product Administration
  - Obtain Order
  - Obtain Consent for Blood-Blood Product Administration
  - Obtain Blood/Blood Product Verify Type and Assignment to Patient
  - Utilize Blood Y with Filter Administration Set
  - Set up Administration with One Port to Normal Saline and Other Port to Blood
  - Flush Administration Set with Normal Saline
  - Obtain Baseline Vitals Including Temperature
  - Ensure a Patent IV Line Size 18 or Larger
  - Attach Administration Set and Start Flow of Normal Saline to Verify IV is Patent
  - Stop Normal Saline Begin Blood
  - Set Rate
  - Monitor Vital Signs Every 15 Minutes Until 30 Minutes After Blood Completed
  - If Patient Develops Transfusion Reaction
    - Stop Blood
    - Flush IV Site
    - Consider 25 to 50mg Diphenhydramine
  - When Blood Complete Flush Administration Set with Normal Saline

Nebraska EMS Model Protocols  
Special Situations  
**ELECTRONIC CONTROL DEVICES (TASER) AND  
REQUESTS TO MEDICALLY CLEAR A PATIENT**

Electronic Control Devices (Taser) is a device that uses an electrical shock to render an individual incapable for a short time to continue physical activity.

Electronic Control Devices may use probes that only have to be placed against the skin or devices in which probes are discharged and impaled into the skin.

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Consider Oxygen
- Assess For Trauma
  - Consider Manual Stabilization of Head/Neck
  - Consider Manual Stabilization of Painful/Deformed Extremities
  - Care for Open Wounds
- For Impaled Probes in Breast Face/Neck or Genitals
  - Stabilize in Place
- For Impaled Probes NOT in Breast Face/Neck or Genitals'
  - Place Finger On Each Side Of Probe
  - Pull Probe Straight Outward
  - Control Bleeding and Bandage
- Consider ALS

**EMR Options If Approved**

- Consider Spinal and/or Extremity Stabilization
- Initiate Transport

**EMT**

- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- Initiate Transport

**EMT Options and AEMT**

- No Additional Guidance in absence Of Other Signs and Symptoms

**EMT-I and Paramedic**

- Consider Cardiac Monitoring

**REQUESTS TO MEDICALLY CLEAR A PATIENT**

The OOHECP may be approached by law enforcement to medically clear a patient so the officer may transport a patient to a facility other than a hospital.

The OOHECP may be approached at a sports event standby to medically clear a patient for return to play.

**ALL LEVELS**

- May Not Medically Clear a Patient
- When Confronted With These Situations the OOHECP
  - Should Encourage the Patient to Seek Evaluation At the Hospital
  - Conduct an Appropriate Assessment and Care
  - May Obtain a Refusal – **See Refusal Guide Lines**

Nebraska EMS Model Protocols  
Special Situations  
**EMR TRANSPORT WITH PMD APPROVAL**

The EMR may initiate transport of a patient. HOWEVER, for the EMR to transport the EMR and the Service must meet certain criteria prior to the call, AND must follow specific criteria during a call AND complete defined criteria after the call

**CRITERIA THAT MUST BE IN PLACE PRIOR TO THE CALL**

- The individual EMR Must Have the Appropriate Training Including at a Minimum
  - Spinal Stabilization Devices
  - Extremity Stabilization Devices
  - Patient Transport Devices
- The Individual EMR Must Have the Approval of the PMD
  
- The Service Must Have
  - The Approval of the PMD
  - A Recruitment and Retention Plan with a Budget
  - An Active Schedule Updated Not Less Than Monthly
  - An Automatic Aid Plan
- \*\*See Nebraska Rules and Regulations Title 172 NAC 11 and 12

**CRITERIA AT THE TIME OF THE CALL**

- An EMT or Higher Level Responder Does Not Respond to The Call
- An EMT or Higher Level Responder Who Responds to the Call MAY **NOT**:
  - Delegate Transport to an EMR;
  - Drive the Ambulance During the Transport Leaving Only an EMR in the Patient Compartment
- The Automatic Aid Plan has been Initiated and an EMT or Higher Level Responder Staffed Unit Has Been Dispatched
- The EMR Intends to Intercept with the EMT or Higher Level Staffed Service
- The EMR Follows the Protocol Appropriate for the Patient's Condition/Situation
- The EMR Will Reassess Patient Including Vital Signs
  - Stable Patients Every 15 – 20 Minutes
  - Unstable Patients Every 5 – 10 Minutes
- The EMR Will Provide Intercepting Unit with a Verbal and/or Written Report

**CRITERIA AFTER COMPLETION OF THE CALL**

- The EMR Will Complete a Patient Care Report Compliant with Nebraska Rules and Regulations Title 172 NAC 12
- The Service Must Submit a Report Compliant with Nebraska Rules and Regulations Title 172 NAC 12

Nebraska EMS Model Protocols  
Special Situations  
**EMS STUDENT PRACTICE GUIDELINES**

An EMS student enrolled in an approved training agency EMS course defined in titled 172 NAC 13 may perform the practices and procedures of the level of licensure for the EMS course the student is enrolled in.

Student Status means the status when the approved training agency releases the student to begin field clinical hours. Student status ends when the student is terminated from the course by the training agency (Examples; student fails, expelled, drops out, exceeds the time allowed for course completion) OR receives a Certificate of Completion from the training agency.

Supervision of the EMS Student means that a student must be supervised by a licensed OOECF at the same level or higher level of the course the EMS student is enrolled in.

EMR Student Guidelines:

EMR Students may under field supervision perform the Practices and Procedures of an EMR as defined in Title 172 NAC 11-009.01A.

EMT Student Guidelines:

EMT Students may under supervision perform the Practices and Procedures of an EMT as defined in Title 172 NAC 11-009.02A.

AEMT Student Guidelines:

AEMT Students may under supervision perform the Practices and Procedures of an AEMT as defined in Title 172 NAC 11-009.03A

Paramedic Student Guidelines:

Paramedic Students may under supervision perform the Practices and Procedures of a Paramedic as defined in Title 172 NAC 11-009.05A

Nebraska EMS Model Protocols  
Special Situations  
**EMS TEMPORARY LICENSEE PRACTICE GUIDELINES**

Field Experience means a period of direct supervised experience when a student is mentored by a field supervisor while operating with an emergency medical service that responds to an emergency/medical request and proceeds from observation to providing care commensurate with the student's training.

Field Supervision means a period of direct supervision or indirect supervision of a temporary licensee by a field supervisor.

Field Supervisor means an individual who is a licensed OOHECP, with an unencumbered license and is the same or higher level of OOHECP as the temporary licensee or same or higher level as the student's course of study.

Direct Supervision means the field supervisor is present with the patient visually monitoring, providing verbal direction, and overseeing patient care that is being provided by a temporary licensee or student. The field supervisor must visually monitor the practices and procedures of the temporary licensee or student.

Indirect Supervision means the field supervisor is present at the scene and during transport. The field supervisor is located in proximity of the patient and must approve all practice and procedures being performed by the temporary licensee. The field supervisor does not need to witness the procedures as they are performed.

Temporary Licensed EMR:

The temporary licensed EMR must have direct supervision for 10 patient contacts. After 10 patient contacts this individual may have indirect supervision. The temporary licensed EMR may perform all the practices and procedures of an EMR defined in 11-009.01A. **\*\*See Temporary Licensee Examination Failure Supervision Below**

A temporary licensed EMR DOES NOT qualify for EMR Transport.

Temporary Licensed EMT:

The temporary licensed EMT must have direct supervision for 20 patient contacts. After 20 patient contacts this individual may have indirect supervision. The temporary licensed EMT may perform all the practices and procedures of an EMT defined in 11-009.02A. **\*\*See Temporary Licensee Examination Failure Supervision Below**

Temporary Licensed AEMT:

The temporary licensed AEMT must have direct supervision for 40 patient contacts. After 40 patient contacts this individual may have indirect supervision. The temporary licensed AEMT may perform all the practices and procedures of an AEMT as defined in 11-009.03A. **\*\*See Temporary Licensee Examination Failure Supervision Below**

Temporary Licensed Paramedic:

The temporary licensed Paramedic must have direct supervision for 70 patient contacts. After 70 patient contacts this individual may have indirect supervision. The temporary licensed AEMT may perform all the practices and procedures of a Paramedic as defined in 11-009.05A. **\*\*See Temporary Licensee Examination Failure Supervision Below**

Temporary Licensee Examination Failure Supervision:

Any temporary licensee who fails the licensure examination must have direct supervision for all patient contacts until the licensee has successfully completed the examination process.

Nebraska EMS Model Protocols  
Special Situations  
**EXTRA PAIR OF HANDS CONCEPT**

The Nebraska Board of Emergency Medical Services issued this guideline for out-of-hospital emergency care providers (OOHECP) when using assistive personnel as their “extra-pair of hands”. The purpose of this guideline is to give direction to the OOHECP when he/she deems it necessary to request assistance from other individuals in rendering emergency care.

An assistive person means a firefighter, law enforcement officer, ambulance driver or any other available person who is requested to provide assistance in an emergency and who is **not** licensed/certified as an OOHECP or other health care provider.

When such assistance is needed an OOHECP may use this extra pair of hands if the:

- Assistive person is physically present and in the same proximity or visual field as the OOHECP;
- OOHECP instructs and directs the activity that the assistive person is to perform;
- Ultimate responsibility for assessment, care, and treatment remains with the OOHECP;
- Activity provided by the assistive person does not require such person to exercise knowledge of the nature or to the degree required to initiate, modify or discontinue the emergency care; and
- Activity provided by the assistive person does not require such person to assess the condition of the patient.

Examples of activities an assistive person may perform include but are not limited to:

- Assisting with lifting a patient;
- Holding an IV bag;
- Spiking an IV bag;
- Assist with CPR;
- Applying pressure to a wound;
- Placing straps on transport boards and cots;
- Pumping up a vacuum splint-air splints;
- Assisting with log rolling;
- Holding emesis basin; and
- Obtaining equipment.

When an OOHECP uses an “extra pair of hands”, he/she must remember:

- The OOHECP is accountable for the emergency treatment provided;
- The OOHECP cannot delegate to the assistive person the performance of any skills that requires EMS certification;
- The ultimate responsibility for identification of emergency care must remain with the OOHECP; and
- No task may be given to an assistive person that will cause injury or harm to the patient.

**EMR and EMT Assisting AEMT, EMT-I or Paramedic**

A licensed EMR or EMT may assist the AEMT, EMT-I or Paramedic with patient care and perform care within the practices and procedures of the EMR or EMT including any PMD authorized additional skills.

The EMR and EMT may assist the AEMT, EMT-I or Paramedic under direction with;

- Spiking an IV Bag;
- Retrieving medications, and other ALS supplies from box/bags/cabinets;
- Witness the waste of controlled medications; and
- The ultimate responsibility any assisted procedure remains with the AEMT, EMT-I or Paramedic

Nebraska EMS Model Protocols  
Special Situations  
**INTER-FACILITY TRANSPORTS**

**ALL LEVELS**

- Routine Assessment and Care Adult or Pediatric

**EMR**

- May Assist the EMT, AEMT, EMT-I, Or Paramedic During Inter-Facility Transport

**EMR Options if Approved**

- EMR May Transport from A Nursing Home to Hospital In Emergent Situations
- EMR May Not Transport
  - Hospital to Hospital
  - Hospital to Nursing Home or Patient Residence
  - Nursing Home to Nursing Home

**EMT**

- Obtain Patient Report From Sending Facility Staff and Confirm the Following;
  - Reason For Transport and Destination Facility
  - Any Patient Orders for Care During Transport
  - Patient Orders Do Not Exceed The OOHECP's Scope of Practice
- Consider Oxygen and Adjust Delivery Device and LPM Flow to Achieve 94% or Better O2 Saturation
- May Monitor But Not Establish
  - Urinary Catheters
  - Gastric Tubes
- Provide Monitoring As Appropriate to Level of Licensure and Patient Conditions
  - Consider Vitals
    - Once For Baseline at Initiation of Transport
    - Every 30 to 60 Minutes for Stable Patients
    - Every 5 to 15 Minutes for Unstable Patients
    - Once At Or Near the End of Transport
- **See Appropriate Protocol For Patients That Develop Additional Complaint or Have Changes**

**EMT Options if Approved and AEMT**

- Monitor IV At Ordered Rate

**EMT-I**

- Consider Cardiac Monitoring

**Paramedic**

- Consider Anti-Emetic
- Monitor and Adjust Ventilator Settings as Needed
- Administer Ordered Medications By Ordered Route Unless Contraindicated
- Monitor and Adjust Medication Infusions As Needed Examples (Not All Inclusive)
  - Adjust Nitroglycerin Infusion to Maintain Chest Pain/Pressure Control AND Blood Pressure
  - Adjust Vasopressor Agents to Maintain Blood Pressure
  - Generally Anti-coagulants/Anti-platelets Will Not Need Adjustment
- Monitor and Re-dose Sedation, Pain Management and Paralytic Agents
- Administer and/or Monitor Blood/Blood Products

Nebraska EMS Model Protocols  
Special Situations  
**PAIN MANAGEMENT**

**ALL LEVELS**

- Routine Assessment and Care

**EMR**

- Consider Applying Cold Pack to Painful/Deformed Extremity

**EMR Options if Approved and EMT**

- Consider Stabilization

**EMT Options if Approved**

- Consider IV Access

**AEMT and EMT-I**

- Consider

<b>AEMT and EMT-I Pain Management Procedure</b>
<p>Assess and Monitor</p> <ul style="list-style-type: none"> <li>• Vital Signs               <ul style="list-style-type: none"> <li>○ Pulse, BP, Respiratory Rate</li> <li>○ Pulse Oximetry</li> <li>○ Consider                   <ul style="list-style-type: none"> <li>▪ Electronic EtCO2and Cardiac Monitor</li> </ul> </li> </ul> </li> <li>• Pain Level</li> </ul>
<p>Preparation</p> <ul style="list-style-type: none"> <li>• Evaluate patient for potential of difficult airway</li> <li>• Have Intubation Equipment and Supplies Available</li> <li>• Have Alternate Non-Visualized Advanced Airway Available</li> <li>• Have Suction Available</li> <li>• Have Naloxone Available</li> </ul>
<p>Oxygenation</p> <ul style="list-style-type: none"> <li>• Deliver Oxygen to Maintain O2 Saturations of 94% to 99%</li> </ul>
<p>Medication Administration</p> <ul style="list-style-type: none"> <li>• Administer Morphine               <ul style="list-style-type: none"> <li>○ Adult – 2 – 4mg IV/IO/ IM or MAD</li> <li>○ Pediatric – 0.05 – 0.2mg/kg to Max 2mg IV/IO/ IM/MAD</li> </ul> </li> </ul>
<p>Reassess</p> <ul style="list-style-type: none"> <li>• Vital Signs               <ul style="list-style-type: none"> <li>○ Pulse, BP, Respiratory Rate</li> <li>○ Pulse Oximetry</li> <li>○ Consider – EMT-I                   <ul style="list-style-type: none"> <li>▪ Electronic EtCO2and Cardiac Monitor</li> </ul> </li> </ul> </li> <li>• Pain Level</li> </ul>
<p>Re- Dose For Desired Effect</p> <ul style="list-style-type: none"> <li>• Titrate Morphine               <ul style="list-style-type: none"> <li>○ Adult – 2mg IV/IO/ IM or MAD</li> <li>○ Pediatric – 0.05 – 0.2 mg/kg to Max 2mg IV/IO/ IM/MAD</li> </ul> </li> </ul>
<p>Reassess and Re-Dose</p>
<p><b>Goal – Reduction of Pain Not Necessarily Elimination of Pain</b></p>

Nebraska EMS Model Protocols  
Special Situations

**Paramedic**

The Paramedic may consider minimal to moderate sedation in conjunction with an analgesic to manage the patient's pain OR analgesic only to manage the pain's pain. THE PARAMEDIC IS EXPECTED TO RECEIVE TRAINING ON THE MEDICATIONS CARRIED BY THE SERVICE.

**Minimal Sedation means** the patient responds normally to verbal commands. Cognitive function and coordination may be impaired, but respiratory and cardiovascular functions are unaffected.

**Moderate Sedation means** the patient responds purposefully to verbal commands alone or when accompanied by light touch. Protective airway reflexes and adequate ventilation are maintained without intervention. Cardiovascular function remains stable.

<b>Sedation and Analgesic Option Procedure</b>	<b>Analgesic Only Option Procedure</b>
Assess and Monitor <ul style="list-style-type: none"> <li>• Vital Signs                             <ul style="list-style-type: none"> <li>○ Pulse, BP, Respiratory Rate</li> <li>○ Pulse Oximetry</li> <li>○ Electronic EtCO<sub>2</sub></li> <li>○ Cardiac Rhythm</li> </ul> </li> <li>• Pain Level</li> </ul>	Assess and Monitor <ul style="list-style-type: none"> <li>• Vital Signs                             <ul style="list-style-type: none"> <li>○ Pulse, BP, Respiratory Rate</li> <li>○ Pulse Oximetry</li> <li>○ Consider                                     <ul style="list-style-type: none"> <li>▪ Electronic EtCO<sub>2</sub>and Cardiac Monitor</li> </ul> </li> </ul> </li> <li>• Pain Level</li> </ul>
Preparation <ul style="list-style-type: none"> <li>• Evaluate patient for potential of difficult airway</li> <li>• Have Intubation Equipment and Supplies Available</li> <li>• Have Alternate Non-visualized Advanced Airway Available</li> <li>• Have Suction Available</li> <li>• Have Naloxone Available</li> </ul>	Preparation <ul style="list-style-type: none"> <li>• Evaluate patient for potential of difficult airway</li> <li>• Have Intubation Equipment and Supplies Available</li> <li>• Have Alternate Non-visualized Advanced Airway Available</li> <li>• Have Suction Available</li> <li>• Have Naloxone Available</li> </ul>
Oxygenation <ul style="list-style-type: none"> <li>• Deliver Oxygen to Maintain O<sub>2</sub> Saturations of 94% to 99%</li> </ul>	Oxygenation <ul style="list-style-type: none"> <li>• Deliver Oxygen to Maintain O<sub>2</sub> Saturations of 94% to 99%</li> </ul>
Medication Administration <ul style="list-style-type: none"> <li>• Administer Sedative <b>*See Approved Sedative Chart</b></li> <li>• Administer Analgesic <b>*See Approved Analgesic Chart</b></li> <li>• Consider Anti-Emetic                             <ul style="list-style-type: none"> <li>○ <b><u>Preferred</u></b> <ul style="list-style-type: none"> <li>▪ Ondansetron (Zofran)</li> <li>▪ Dolasetron (Anzemet)</li> </ul> </li> <li>○ <b><u>Acceptable But Monitor For EPR and Cardiac Effects</u></b> <ul style="list-style-type: none"> <li>▪ Promethazine(Phenergan)</li> <li>▪ Prochlorperazine (Compazine)</li> </ul> </li> </ul> </li> </ul>	Medication Administration <ul style="list-style-type: none"> <li>• Administer Analgesic <b>*See Approved Analgesic Chart</b></li> <li>• Consider Anti-Emetic                             <ul style="list-style-type: none"> <li>○ <b><u>Preferred</u></b> <ul style="list-style-type: none"> <li>▪ Ondansetron(Zofran)</li> <li>▪ Dolasetron (Anzemet)</li> </ul> </li> <li>○ <b><u>Acceptable But Monitor For EPR and Cardiac Effects</u></b> <ul style="list-style-type: none"> <li>▪ Promethazine(Phenergan)</li> <li>▪ Prochlorperazine(Compazine)</li> </ul> </li> </ul> </li> </ul>
Reassess <ul style="list-style-type: none"> <li>• Vital Signs                             <ul style="list-style-type: none"> <li>○ Pulse, BP, Respiratory Rate</li> <li>○ Pulse Oximetry</li> <li>○ EtCO<sub>2</sub></li> <li>○ Cardiac Rhythm</li> </ul> </li> <li>• Adjust Oxygen Delivery as Needed</li> <li>• Pain Level</li> </ul>	Reassess <ul style="list-style-type: none"> <li>• Vital Signs                             <ul style="list-style-type: none"> <li>○ Pulse, BP, Respiratory Rate</li> <li>○ Pulse Oximetry</li> <li>○ Consider                                     <ul style="list-style-type: none"> <li>▪ Electronic EtCO<sub>2</sub>and Cardiac Monitor</li> </ul> </li> </ul> </li> <li>• Pain Level</li> </ul>
Re-Dose For Desired Effect <ul style="list-style-type: none"> <li>• Titrate Sedative</li> <li>• Titrate Analgesic</li> </ul>	Re-Dose For Desired Effect <ul style="list-style-type: none"> <li>• Titrate Analgesic</li> </ul>
Reassess and Re-Dose	Reassess and Re-Dose
Goal <ul style="list-style-type: none"> <li>• Obtain Minimal to Moderate Sedation Level Using The Least Amount of Medication</li> <li>• Reduction of Pain</li> </ul>	Goal <ul style="list-style-type: none"> <li>• Reduction of Pain Not Necessarily Elimination of Pain</li> </ul>

Nebraska EMS Model Protocols  
Special Situations

**Paramedic Only**

**APPROVED SEDATIVE CHART**

**\*\*Use lowest dose in the elderly or patients with impaired hepatic and or renal function**

Medication Name Generic (Brand Name)	Adult Dose	Pediatric Dose *Maximum Does Not To Exceed Adult Dose	Special Information
<b>Benzodiazepine – Most Class Preferred Class</b>			
Diazepam (Valium)	2.0- 4.0mg IV/IO/Rectal May repeat to maintain sedation	0.04 -0.2 mg/kg IV./IO/ Rectal (6 Mo to 12 years) May repeat to maintain sedation	Reversal Agent – Flumazenil (Romazicon) Use with caution as rapid reversal may lead to seizures especially in patient with history of seizure disorder
Lorazepam (Ativan)	0.5 - 1.0mg IV/IO May repeat to maintain sedation <b>*Approved to be given by MAD but due to viscosity of may be an ineffective method of administration</b>	0.05 mg/kg (6 Mo to 12 years) May repeat to maintain sedation IV/IO	
Midazolam (Versed)	1.0- 2.0mg IV/IO/MAD May repeat to maintain sedation	0.1 mg/kg (6 Months and Older) May repeat to maintain sedation	
<b>Carboxylated Imidazole Derivative Class – Most Preferred Alternative to Benzodiazepine Class for Adult Sedation Acceptable Alternative to Benzodiazepine Class for Certain Pediatric Patients</b>			
Etomidate	0.1 – 0.15 mg/kg IV/IO 0.05 mg/kg every 3 to 5minutes to maintain sedation	0.1 – 0.2 mg/kg IV/IO 0.05 mg/kg every 3 to 5 minutes to maintain sedation	Avoid if patient 10 years old or younger May cause adrenal suppression
<b>NMDA Receptor Antagonist Class – Most Preferred Alternative to Benzodiazepine Class for Pediatric Sedation Acceptable Alternative to Benzodiazepine Class for Adult Sedation</b>			
Ketamine	1.5 – 2.0mg/kg IV/IO 0.25 – 0.5 mg/kg every 5 to 10 minutes to maintain sedation	For Patient's Over 6 Months Old 2.0 – 4.0 mg/kg IM 1.0 – 2.0 mg/kg IV/IO 0.25 – 0.5 mg/kg every 5 to 10 minutes to maintain sedation	Consider Atropine for increased secretions 0.02 mg/kg with a minimal dose of 0.1 mg and a maximum of 0.5 mg for Pediatric 0.5mg Single Dose for Adults
<b>Phenothiazine Class Least Desirable Alternative – Reserved To Incidents When No Other Alternatives Are Available</b>			
Prochlorperazine (Compazine)	5mg IV/IO May Repeat Once	Not Approved May cause dystonic reactions	Use Lowest possible dose to prevent extra pyramidal reactions For EPR consider Diphenhydramine (Benadryl) 12.5 to25mg Peds 25 to50mg Adults
Promethazine (Phenergan)	25 mg IV/IO May Repeat Once	Not Approved May cause dystonic reactions	

**APPROVED ANALGESIA CHART**

Medication Name Generic (Brand Name)	Adult Dose	Pediatric Dose *Maximum Does Not To Exceed Adult Dose	Special Information
<b>Opioid Class</b>			
Morphine	2 – 4 mg IV/IO/IM/MAD	0.05 – 0.2mg/kg IV/IO/IM/MAD	Reversal Agent – Nalxone (Narcan)
Fentanyl	25 to 100 mcg IV/IO/IM/MAD	1.0 – 2.0 mcg/kg IV/IO/IM/MAD	
Hydromorphone (Dilaudid)	0.2 – 0.6 mg IV/IO	0.03 to0.08mg/kg IV/IO Over 6 Months	
Nalbuphine (Nubain)	10 to 20mg IV/IO	0.05 to 0.1mg/kg IV/IO	
Stadol	0.5mg to 2mg IV/IO	Not Approved Under Age 18	
<b>Opioid Class Least Desirable Alternative – But Acceptable</b>			
Meperidine (Demerol)	50 – 100mg IV/IO/IM	1mg/kg IV/IO/IM	Reversal Agent – Nalxone (Narcan)
<b>NSAID Class</b>			
Ketorolac (Toradol)	15 to 30mg IV/IM <b>*Preferred treatment for suspected Kidney Stone as a single medication or in conjunction with an opioid class medication</b>	0.5mg/kg to maximum dose of 30mg	Defer in suspected CVA, GI Bleeding, or other indications of internal bleeding and external bleeding not easily controlled with direct pressure

Routes of Administration  
IV – Intravenous      IO – Intraosseous      IM – Intramuscular

MAD – Mucosal Atomization Device

Nebraska EMS Model Protocols  
Special Situations  
**RESTRAINT**

**EMR**

- Non-Combative Patients
  - Calm and Reassure Patient
  - Give Clear Explanations and Directions
- Combative Patients
  - Contact Law Enforcement
  - Consider Physically Restraining Patient
    - Supine
    - Physically Restrain One Arm Above Head
      - If Injury or Limited Range of Motion Restrain Arm at Patient's Side
    - Physically Restrain Second Arm at Side
    - Physically Restrain Each Leg Just Above Knee
    - Consider Use of Commercially Available Spit Hood

**EMR Options, EMT, AEMT and Paramedic**

- Combative Patients
  - Restrain Patient
    - Supine On to Transport or Stabilization Device
    - Use Self Adhering Bandage or Commercial Restraint Device
      - Restrain One Arm Above Head
        - If Injury or Limited Range of Motion Restrain at Patient's Side
      - Restrain Second Arm at Side
    - Restrain with a Minimum of Three Straps
      - One Across Upper Chest
      - One Across Waist
      - One Across Lower Thigh Just Above Knees
    - Consider Use of Commercially Available Spit Hood
  - Handcuffs Are Only to be Applied by Law Enforcement and Generally Should Be Avoided

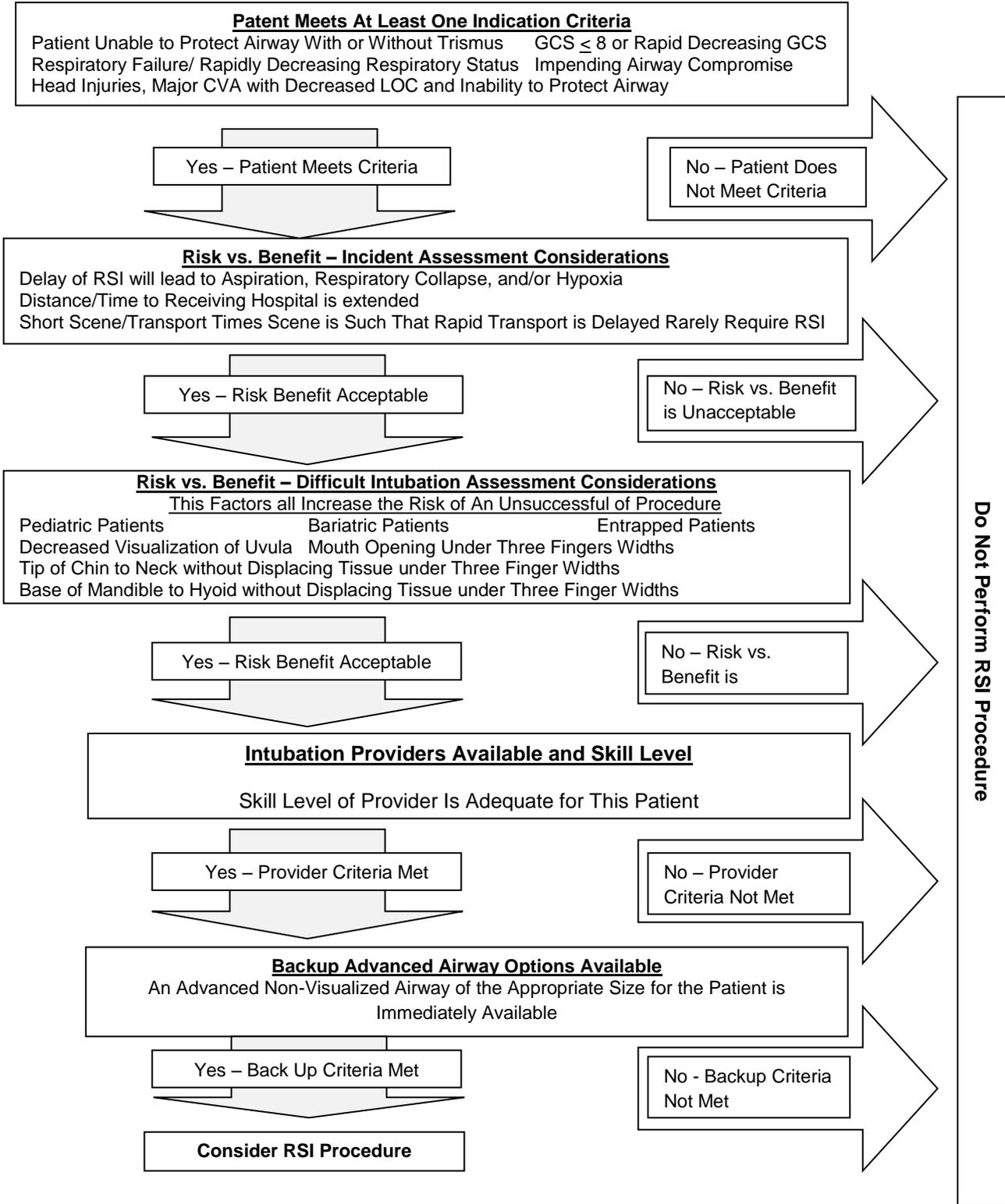
**ALL LEVELS – DO NOT**

- Restrain Patient Prone
- “Hog Tie” Patient and Place Prone
- Place Gauze or Tape Over or In Mouth
- “Sandwich” Patient between Stabilization Devices

Nebraska EMS Model Protocols  
Special Situations  
**RSI**

**Paramedic Only**

**RSI Decision Making Algorithm**



## Nebraska EMS Model Protocols Special Situations

The **Paramedic** may consider RSI for patients of sufficient size and/or age in which the **Paramedic** has immediately available to a correctly sized advanced non-visualized airway to be used in event the intubation procedure fails.

<b>Rapid Sequence Intubation Procedure</b>
<p>Criteria For Procedure</p> <ul style="list-style-type: none"> <li>• GCS <math>\leq</math> 8</li> <li>• Patient Unable to Protect Airway With or Without Trismus</li> <li>• Respiratory Failure/ Rapidly Decreasing Respiratory Status</li> <li>• Head Injuries, Major CVA with Decreased LOC and Inability to Protect Airway</li> <li>• Impending Airway Compromise – Such as Airway Burns, Edema, Trauma to Larynx</li> </ul>
<p>Assess and Monitor</p> <ul style="list-style-type: none"> <li>• For Difficult Airway – Intubation</li> <li>• Risk vs. Benefit of Procedure</li> <li>• Monitor Patient's Vital Signs               <ul style="list-style-type: none"> <li>○ Pulse, BP, Respiratory Rate</li> <li>○ Pulse Oximetry, EtCO<sub>2</sub>, Cardiac Rhythm</li> </ul> </li> </ul>
<p>Prepare</p> <ul style="list-style-type: none"> <li>• Intubation Equipment and Select Tube Size</li> <li>• Alternate Correctly Sized Non-visualized Advanced Airway Available               <ul style="list-style-type: none"> <li>○ If Alternate Advanced Airway is Not Available - DO NOT Attempt Procedure</li> </ul> </li> <li>• Surgical or Needle Cricothyrotomy Equipment Available</li> <li>• Suction Available</li> <li>• Establish IV or IO Access</li> <li>• Consider Anti-emetic</li> </ul>
<p>Oxygenation</p> <ul style="list-style-type: none"> <li>• Pre – Oxygenate with 100% FiO<sub>2</sub> for 2-3 minutes By BVM               <ul style="list-style-type: none"> <li>○ Consider Cricoid Pressure – Sellick's Maneuver</li> </ul> </li> <li>• <b>OR</b> Pre-Oxygenate with 100%FiO<sub>2</sub> for 5 minutes by Non-Rebreather Mask</li> </ul>
<p>Pre-Sedation/Induction Medication Considerations</p> <ul style="list-style-type: none"> <li>• For Signs and Symptoms/ High Index of Suspicion of Increased ICP               <ul style="list-style-type: none"> <li>○ Consider Lidocaine 1.0-1.5mg/kg</li> </ul> </li> <li>• For Pediatric Patients               <ul style="list-style-type: none"> <li>○ Consider Atropine 0.01 to 0.02mg/Kg to a maximum of 0.5mg (Minimum Dose 0.1mg)</li> </ul> </li> <li>• When Using Ketamine as Sedative/Induction Agent               <ul style="list-style-type: none"> <li>○ Consider Atropine 0.01 to 0.02mg/Kg to a maximum of 0.5mg for Pediatric Patients</li> <li>○ Consider Atropine 0.5 mg for Adult Patients</li> </ul> </li> </ul>
<p>Administer Sedation/Induction Agent – <b>MUST HAVE SEDATION/INDUCTION MEDICATION ON BOARD PRIOR TO PARALYTIC AGENT</b></p> <ul style="list-style-type: none"> <li>• Administer Sedative/Induction Agent – <b>See Chart</b></li> </ul>
<p>Administer Paralytic Agent</p> <ul style="list-style-type: none"> <li>• Administer Succinylcholine               <ul style="list-style-type: none"> <li>○ 1.5 mg/kg IV/IO – Adult</li> <li>○ 2.0 mg/kg IV/IO – Small Children</li> </ul> </li> <li>• May Consider Rocuronium 0.6 – 1.0mg/kg When               <ul style="list-style-type: none"> <li>○ Succinylcholine is Contra-indicated</li> <li>○ Succinylcholine is Unavailable</li> <li>○ OR PMD has authorized Rocuronium As Primary Agent</li> </ul> </li> </ul>
<p>Assess</p> <ul style="list-style-type: none"> <li>• For Jaw Relaxation and Apnea</li> <li>• Decreased Resistance to BVM Ventilations</li> </ul>
<p>Intubation</p> <ul style="list-style-type: none"> <li>• Perform Oral Intubation</li> <li>• If NOT Successful in 15 Seconds Perform BVM Ventilation and Reattempt</li> <li>• If Unsuccessful After 3 Attempts Use Alternate Advanced Airway</li> </ul>

## Nebraska EMS Model Protocols Special Situations

<p>Confirm Placement</p> <ul style="list-style-type: none"> <li>• Visualized Tube Pass Through Vocal Cords</li> <li>• Observe Chest Rise and Fall</li> <li>• Auscultate For Lung Sounds – No Epigastric Sounds</li> <li>• Secondary Devices <ul style="list-style-type: none"> <li>○ Free Air Pull/Inflate on Esophageal Detector Device (EDD)</li> <li>○ Positive EtCO<sub>2</sub></li> </ul> </li> </ul>
<p>Ventilate and Secure Tube</p> <ul style="list-style-type: none"> <li>• Ventilate Patient At Appropriate Rate and Depth <ul style="list-style-type: none"> <li>○ Goals – O<sub>2</sub> Sat 94 to 99% and EtCO<sub>2</sub> 35 to 45</li> <li>○ Consider Use of PEEP and PIP If Available</li> </ul> </li> <li>• Secure Tube with Commercial Device or Other Method</li> <li>• Place Rigid C-Collar Even If No Trauma to Assist in Maintaining Neutral Position</li> <li>• Consider Soft Restraints to Patient's Arms to Prevent Unplanned Extubation</li> </ul>
<p>Reassess</p> <ul style="list-style-type: none"> <li>• Vital Signs</li> <li>• Adjust Rate and Depth of Ventilations as Needed <ul style="list-style-type: none"> <li>○ Goals – O<sub>2</sub> Sat 94 to 99% and EtCO<sub>2</sub> 35 to 45</li> <li>○ Consider Use of PEEP and PIP If Available</li> </ul> </li> <li>• Tube Placement after Each Patient Move</li> </ul>
<p>Administer Paralytic</p> <ul style="list-style-type: none"> <li>• If Succinylcholine Used As Initial Paralytic Agent <ul style="list-style-type: none"> <li>○ Consider Vecuronium 0.1mg/kg Initial Dose and Maintain at 0.01 to 0.05mg/kg;</li> <li>○ <b>OR</b> Consider Rocuronium 0.6 – 1.2 mg/kg Initial Dose and Maintain at 0.1 – 0.2 mg/kg;</li> <li>○ <b>OR</b> Consider Pancuronium 0.04 – 0.1 mg/kg</li> </ul> </li> <li>• If Rocuronium Used As Initial Paralytic Agent <ul style="list-style-type: none"> <li>○ Consider Rocuronium 0.6 – 1.2 mg/kg Initial Dose and Maintain at 0.1 – 0.2 mg/kg;</li> <li>○ <b>OR</b> Consider Vecuronium 0.1mg/kg Initial Dose and Maintain at 0.01 to 0.05mg/kg;</li> <li>○ <b>OR</b> Consider Pancuronium 0.04 - 0.1 mg/kg</li> </ul> </li> </ul>
<p>Reassess and Maintain</p> <ul style="list-style-type: none"> <li>• Reassess Vitals</li> <li>• Titrate to Maintain Sedation <b>**It is unethical to chemically paralyze a patient without sedation</b></li> <li>• Consider Pain Management <b>See Chart</b></li> <li>• Consider Bronchodilator Medication For Bronchospasms/ Exacerbation of COPD/Anaphylaxis</li> <li>• Re-dose Non-Depolarizing Paralytic</li> </ul>

Nebraska EMS Model Protocols  
Special Situations

**Approved Sedative/Induction Agents Chart**

Medication Name Generic (Brand Name)	Adult Dose **DOSE FOR RSI	Pediatric Dose *Maximum Dose Not To Exceed Adult Dose	Special Information
<b><i>Benzodiazepine Class</i></b>			
Diazepam (Valium)	5 to 10mg IV/IO May repeat 2 to 4mg IV/IO to maintain sedation	0.04 – 0.2 mg/kg IV./IO (6 Mo to 12 years) May repeat to maintain sedation	Reversal Agent – Flumazenil (Romazicon) Use with caution as rapid reverse may lead to seizures especially in patient with history of seizures
Lorazepam (Ativan)	2.0 – 4.0 mg IV/IO May repeat 1 to 2mg to maintain sedation	0.1 mg/kg to max of 4 mg May repeat ½ initial dose to maintain sedation	
Midazolam (Versed) <b>*Most Preferred of this Class</b>	2.0mg – 6mg IV/IO May repeat 2mg to maintain sedation	0.2 to 0.3mg/kg (6 Mo and Older) May repeat ½ initial dose to maintain sedation	
<b><i>Carboxylated Imidazole Derivative Class – Most Preferred Alternative to Benzodiazepine Class for Adult Sedative/Induction</i></b> <b><i>Acceptable Alternative to Benzodiazepine Class for Pediatric Sedative/ Induction</i></b>			
Etomidate	0.3 mg/kg IV/IO May Repeat 0.1 -0.15 mg/kg to maintain sedation		Avoid if patients 10 years old or younger
<b><i>NMDA Receptor Antagonist Class – Acceptable Alternative to Benzodiazepine Class for Adult and Pediatric Sedative/Induction</i></b>			
Ketamine	2.0 – 4.0mg/kg IV/IO 0.25 – 0.5 mg/kg every 5 to 10 minutes to maintain sedation	For Patient's Over 6 Months Old 2.0 – 4.0 mg/kg IM 1.0 – 2.0 mg/kg IV/IO 0.25 – 0.5 mg/kg every 5 to 10 minutes to maintain sedation	To Prevent Hypersalivation Consider administration of Atropine 0.02 mg/kg with a minimal dose of 0.1 mg and a maximum of 0.5 mg for Pediatric 0.5mg Single Dose for Adults
<b><i>General Anesthesia/ Sedative/Hypnotic Class – Acceptable Alternative to Benzodiazepine Class</i></b>			
Propofol	1 – 2 mg/kg IV/IO 0.05mg – 0.1/kg/min infusion to maintain sedation	1 – 2 mg/kg IV/IO 0.05 – 0.1mg /kg/min infusion to maintain sedation	May cause hypotension – Avoid in hypotensive patients or patients with a high risk of developing hypotension
<b><i>Barbiturate Class – Acceptable Alternative to Benzodiazepine Class</i></b> <b><i>When One of The Above Alternative Are Not Available</i></b>			
Methohexital (Brevital)	1 – 1.5 mg/kg IV/IO – 1% Solution 0.5 mg/kg every 4-7 minutes to maintain sedation	6.6 to 10 mg/kg IM 5% Solution 25MG/Kg Rectal 1% Solution Over 1 Month of Age Consider another agent to maintain sedation	
<b><i>Phenothiazine Class – Least Desirable Alternative – Reserved To Incidents When No Other Alternative Are Available</i></b>			
Prochlorperazine (Compazine)	5 – 10mg IV/IO May Repeat Once	Not Approved	Use lowest possible dose to prevent extrapyramidal reactions For EPR consider Diphenhydramine (Benadryl) 12.5 to25mg Peds 25 to50mg Adults
Promethazine (Phenergan)	25 – 50mg IV/IO May Repeat Once	0.5 – 1.0 mg/kg to max of 25mg IV/IO Single Dose Only	

Nebraska EMS Model Protocols  
Special Situations

**Approved Neuromuscular Blocking Agents Chart**

Medication Name Generic (Brand Name)	Dosage (Paralytic)	Dosage (Defasciculating)	Onset	Duration
<b><i>Depolarizing Class</i></b>				
Succinylcholine (Anectine)	RSI: 1 to 2 mg/kg		30 to 60 seconds	4 to 6 minutes
<b><i>Non-Depolarizing Class</i></b>				
Vecuronium (Norcuron)	RSI: 0.1 mg/kg M: 0.01 – .05 mg/kg	0.01 mg/kg	2.5 to 5 minutes	25 – 40 minutes
Pancuronium (Pavulon)	RSI :0.04 – 0.1 mg/kg M: 0.01 mg/kg		3 minutes	30 – 45 minutes
Rocuronium (Zemuron)	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**

**Approved Pain Management Chart for RSI**

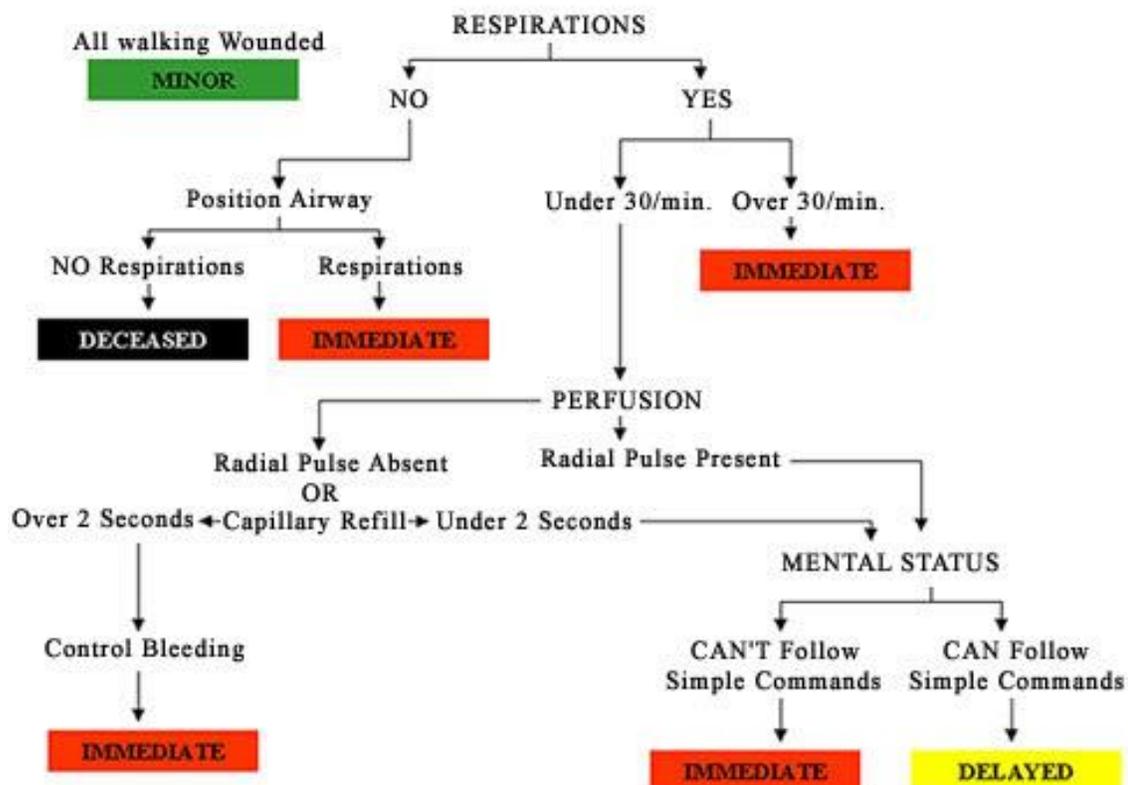
Medication Name Generic (Brand Name)	Adult Dose	Pediatric Dose	Special Information
<b><i>Opioid Class</i></b>			
Morphine	2 – 4 mg IV/IO	0.05 – 0.2mg/kg IV/IO	Reversal Agent – Naloxone (Narcan)
Fentanyl	25 to 100 mcg IV/IO	1.0 – 2.0 mcg/kg IV/IO	
Hydromorphone (Dilaudid)	0.2 – 0.6 mg IV/IO	0.03 to 0.08mg/kg IV/IO Over 6 Months	
Nalbuphine (Nubain)	10 to 20mg IV/IO	0.05 to 0.1mg/kg IV/IO	
<b><i>Opioid Class – Least Desirable Alternative – But Acceptable</i></b>			
Meperidine (Demerol)	50 – 100mg IV/IO/IM	1mg/kg IV/IO/IM	Reversal Agent – Naloxone (Narcan)

Nebraska EMS Model Protocols  
Special Situations  
**TRIAGE**

The START Triage method is the adopted triage method for multiple patient incidents.

Triage Colors:

- Green /Minor – Walking type wounded requiring little or no care
- Yellow/Delayed – Unable to ambulate and require care
- Red/Immediate – Unable to ambulate and require immediate care
- Black – Patient without a pulse or injuries incompatible with life



# **Medication Formulary**



Nebraska EMS Model Protocols

Nebraska EMS Medication Formulary Sorted By Class												
Class	Medication Name	Other Name	EMR	EMT	AEMT	EMT-I	Paramedic	Special Information	Adult Dose	Pediatric Dose Maximum Dose Not to Exceed Adult Dose	Route(s)	
Analgesic	Fentanyl						X	Antidote - Naloxone	25 to 100 mcg	1.0 to 2.0 mcg/kg	IV/IO/IM/MAD	
	Hydromorphone	Dilaudid					X		0.2 to 0.6 mg	ONLY 0.01 mg/kg	IV/IO/IM/MAD	
	Morphine				X	X	X		2 – 4 mg May Repeat	0.05 to 0.2 mg/kg May Repeat	IV/IO/IM/MAD	
	Nalbuphine	Nubain					X		10 to 20 mg	0.05 to 0.1 mg/kg	IV/IO	
	Stadol						X		0.5 to 2 mg	Not Approved Under Age 18	IV/IO	
	Ketorolac	Toradol					X		15 to 30mg	0.5mg/kg	IV/IO	
Anti-Arrhythmic	Adenosine					X	X		6 mg May Repeat at 12 mg	0.1 mg/kg May Repeat at 0.2 mg/kg	IV	
	Amiodarone					X	X		150 mg - Stable Wide Complex Tach	EMT-I May Not Give for Stable Wide Complex Tach	IV/IO	
									300 mg -V-Fib /V-Tach May Repeat at 150mg	5mg/kg - V-Fib/V-Tach May Repeat at same dose to Max 15 mg/kg		
	Amiodarone Infusion						X		1mg/min Infusion	Seek Medical Control /PMD Consult	IV/IO	
	Atropine						X	X		0.5 mg - Symptomatic Bradycardia May repeat to Max 3mg	0.02 mg/kg Minimum Dose 0.1 mg May Repeat Once	IV/IO
										In Suspected Organophosphate Poisoning May use repeated doses Until Symptoms Improve	In Suspected Organophosphate Poisoning May use repeated doses Until Symptoms Improve	
	Diltiazem	Cardizem						X		0.25 mg/kg Over 2 Minutes May Repeat Once After 15 Minutes 0.35 mg/kg Over 2 Minutes - Consult Medical Control, PMD, Or Transport Orders for Infusion	Not Approved	IV/IO
	Lidocaine 2%						X	X		1 to 1.5 mg/kg -V-Fib /V-Tach May Repeat at 1/2 Initial Dose to Max 3mg/kg	1.0 mg/kg -V-Fib /V-Tach May Repeat at 1/2 Initial Dose to Max 3mg/kg	IV/IO
	Lidocaine 2%						X*	X		1 to 4 mg/min Infusion	20 - 50 mcg/min Infusion	IV/IO *EMT-I Must Have ACLS Training
	Metoprolol	Lopressor						X		5 mg IV. May be repeated every 5 minutes for a total of three (3) doses.	Not approved	IV
Procainamide Infusion							X		20 - 50 mg/min to Maximum of 17mg/kg STOP If QRS Widens >50%	Seek Medical Control /PMD Consult	IV/IO	
Sotalol							X		1.5mg/kg IV/IO over 5 minutes	Not Approved	IV/IO	
Verapamil							X		2.5 to 5 mg over 2 minutes - Consult Medical Control, PMD, Or Transport Orders for Infusion	Not Approved	IV/IO	

**\* Special Situations And/or Additional Training and PMD Approval Required**

Nebraska EMS Model Protocols

Nebraska EMS Medication Formulary Sorted By Class												
Class	Medication Name	Other Name	EMR	EMT	AEMT	EMT-I	Paramedic	Special Information	Adult Dose	Pediatric Dose Maximum Dose Not to Exceed Adult Dose	Route(s)	
Antidote	Naloxone	Narcan	#	#	X	X	X		0.4 to 2mg	0.1 mg/kg	IV/IO/MAD AEMT and above; #MAD/auto injector only EMR & EMT	
	Pralidoxime	2-Pam					X		600 to 1200 mg Over 5 Minutes OR as an Infusion Over 15-30 Minutes	20-50 mg/kg Max 1200mg Over 15 to 30 Minutes After 15 Minutes May Consider 10 – 20 mg/kg/hr infusion	IV/IO	
	Atropine - Pralidoxime Separate Auto Injectors	2-Pam	*	*	*	X	X	Antidote Kit Mark I	Mild Symptoms – One Each Moderate Symptoms – Two Each Severe Symptoms – Three Each	Mild Symptoms One Each (All Ages) Moderate and Severe Symptoms Age 3 to 7 years – One Each Age 8 – 12 years – Two Each Over 12 years – Use Adult Dosing	Auto-Injector	
	Atropine-Pralidoxime Auto-Injector	DouDote	*	*	*	X	X	Antidote Kit DouDote Kit	Mild Symptoms – One Moderate Symptoms – Two Severe Symptoms – Three	Mild Symptoms One (All Ages) Moderate and Severe Symptoms Age 3 to 7 years – One Age 8 – 12 years – Two Over 12 years – Use Adult Dosing	Auto-Injector	
	Hydroxocobalamin	Cyanokit					X	Cyanokit	5g in 200mL NS over 15minutes	Physician Order Only	IV/IO	
Anti-Emetic	Dolasetron	Anzemet					X	Preferred Anti-Emetic Agents	12.5 mg May Repeat	Not Approved	IV/IO	
	Ondansetron	Zofran					X		4 to 8 mg May Repeat	Under 40kg 0.1 mg/kg Over 40kg 4.0 mg	IV/IO	
Anti-Emetic - Sedative	Prochlorperazine	Compazine					X	Anti-Emetic	5 mg – Nausea – May Repeat Once	Not Approved	IV/IO **Use With Caution in Patient's with Suspected AMI	
								Least Desirable Class For Sedation	5 mg – Sedative – May Repeat Once Reserved to Incidents When No Other Alternative is Available 5 to 10 mg Induction – May Repeat Once Reserved to Incidents When No Other Alternative is Available			
	Promethazine	Phenergan					X	Anti-Emetic	12.5 to 25 mg May Repeat Once	Not Approved	IV/IO **Use With Caution in Patient's with Suspected AMI	
								Least Desirable Class For Sedation	25 mg – Sedative – May Repeat Once Reserved to Incidents When No Other Alternative is Available 25 to 50mg – Induction – May Repeat Once – Reserved to Incidents When No Other Alternative is Available			

\* Special Situations And/or Additional Training and PMD Approval Required

Nebraska EMS Model Protocols

Nebraska EMS Medication Formulary Sorted By Class												
Class	Medication Name	Other Name	EMR	EMT	AEMT	EMT-I	Paramedic	Special Information	Adult Dose	Pediatric Dose Maximum Dose Not to Exceed Adult Dose	Route(s)	
Antihistamine	Diphenhydramine	Benadryl				X	X		25 to 50 mg	1 to 2mg/kg	IV/IO/IM	
Anti-Psychotic	Haloperidol	Haldol					X		2.5 to 5 mg	Not Approved	IV/IO/IM	
Benzodiazepine	Diazepam	Valium				X	X		2 to 4 mg Seizure May Repeat	0.04 to 0.2 mg/kg May Repeat 1/2 Initial Dose to Maintain Sedation	IV/IO/Rectal **Pediatric Dose are for Ages 6 Months and Older	
									2 to 4 mg Sedation May Repeat			
									5 to 10 mg Induction (Paramedic) May Repeat 2-4mg to Maintain Sedation			
	Lorazepam	Ativan						X		2 to 4 mg Seizures May Repeat	0.05 mg /kg - Seizures May Repeat	IV/IO/MAD **Pediatric Dose are for Ages 6 Months and Older
										0.5 to 1mg Sedation May Repeat	0.05 mg /kg - Sedation May Repeat	
										2 to 4 mg Induction May Repeat 1 to 2 mg to Maintain Sedation	0.1 mg/kg – Induction May Repeat 1/2 Initial Dose to Maintain Sedation	
Midazolam	Versed						X	Preferred Agent for RSI Sedation	2 to 4 mg Seizures May Repeat	0.1 mg/Kg -Seizures 0.2 May Repeat	IV/IO/IM/MAD **Pediatric Dose are for Ages 6 Months and Older	
									1 to 2 mg Sedation May Repeat	0.1 mg/Kg -Sedation 0.2 May Repeat		
									2 to 6 mg Induction May Repeat 2mg to maintain sedation	0.2 to 0.3 mg/kg - Induction May Repeat 1/2 Initial Dose to Maintain Sedation		
Bronchodilator	Albuterol	Proventil		*	X	X	X	Preferred Agent	2.5 mg Unit Dose May Repeat	2.5 mg Unit Dose May Repeat	Nebulized	
	Albuterol For Hyperkalemia					X	X		For Hyperkalemia Confirmed By Diagnostic 3 lead or 12 lead with Tall Spiked T waves 15mg (6 ea. Unit Dose) Nebulized	Physician Order Only	Nebulized	
	Albuterol/ Ipratropium	DuoNeb				X	X		3mg -0.5mg Unit Dose May Repeat	3mg -0.5mg Unit Dose May Repeat	Nebulized	

**\* Special Situations And/or Additional Training and PMD Approval Required**

Nebraska EMS Model Protocols

Nebraska EMS Medication Formulary Sorted By Class											
Class	Medication Name	Other Name	EMR	EMT	AEMT	EMT-I	Paramedic	Special Information	Adult Dose	Pediatric Dose Maximum Dose Not to Exceed Adult Dose	Route(s)
Bronchodilator	Ipratropium	Atrovent				X	X		0.5mg Unit Dose	125 to 250 mcg 1/4 to 1/2 Unit Dose	Nebulized
	Epinephrine 1:1000 Nebulized					X	X	Alternate for Racemic Epinephrine	3 to 5mg Diluted in 1 to 3 ML NS	Age 4 and under 0.5ml/kg to Max 2.5ml Age 5 and Older 0.5ml/kg to Max 5ml	Nebulized
	Metaproterenol 5%	Alupent					X		10 to 15mg in 3 ml NS	Age Under 2 – 0.1 ml in 3 ml NS Age 2 to 9 – 0.2 ml in 3 ml NS Age Over 9 – Use Adult Dose	Nebulized
	Epinephrine - Racemic Epinephrine 2.5%						X	Consider As A First Line Agent For Pediatric RSV and Croup	0.5 to 0.75ml in 3 ml NS	0 -20 kg – 0.25 ml in 3 ml NS 20 to 40kg – 0.5 ml in 3 ml NS Over 40kg 0.5 to 0.75 ml in 3 ml NS	Nebulized
	Terbutaline					X	X		0.25 mg	0.005 to 0.01mg/kg (5 to 10 mcg/kg)	SubQ
	Aminophylline						X	Second Line Therapy For Exacerbations of COPD	5mg/kg added to 50 to 250 NS infused over 20 to 30 minutes	Not Approved	IV/IO
Diuretic	Furosemide	Lasix				X	X		20 to 80 mg	Physician Order Only	IV/IO Slowly
Electrolyte	Calcium Chloride 10%						X		<u>Known Calcium Channel Blocker Overdose</u> 5ml (500mg) over 2-5 Mins <u>Avoid In Mixed</u> <u>Ods OR Situations Where Calcium Channel</u> <u>Blocker OD Can Not be Confirmed</u>	Physician Order Only	IV/IO
									Cardiac Arrest Due to Hyperkalemia (tall Spiked T Waves) 5 to 10ml (500 to 1000mg) Over 2-5 Mins	Physician Order Only	
	Calcium Gluconate 10%						X		<u>Known Calcium Channel Blocker Overdose</u> 15ml over 2-5 Mins <u>Avoid In Mixed Ods OR Situations Where</u> <u>Calcium Channel Blocker OD Can Not be</u> <u>Confirmed</u>	Physician Order Only	IV/IO
									Cardiac Arrest Due to Hyperkalemia (tall Spiked T Waves) 15 to 30ml Over 2-5 Mins	Physician Order Only	
<b>* Special Situations And/or Additional Training and PMD Approval Required</b>											

Nebraska EMS Model Protocols

Nebraska EMS Medication Formulary Sorted By Class											
Class	Medication Name	Other Name	EMR	E/MT	A/EMT	E/MT-I	Paramedic	Special Information	Adult Dose	Pediatric Dose Maximum Dose Not to Exceed Adult Dose	Route(s)
Electrolyte	Magnesium Sulfate						X		Torsades 1 to 2 Grams	Physician Order Only	IV/IO
									Pre-Eclampsia 1 to 2 Grams	N/A	
									Eclampsia 2 to 4 Grams	N/A	
									Bronchospasm 1 to 2 Grams over 10 Mins	25 to 50mg/kg over 10 Minutes	
	Sodium Bicarb 4.2%						X		See Below	Age 8 and Under 1mEq/kg 4.2%	IV/IO
Sodium Bicarb 8.4%						X		50 m Eq 8.4%	Over Age 8 1mEq/kg 8.4%	IV/IO	
Glucose Agent	Dextrose 12.5%				X	X	X		12. 5 to 25 grams OR Consider D50% May Consider Orally if Patient Maintains Own Airway	Age 0 to 1 year – 4ml/kg max 6 Grams	IV/IO
	Dextrose 25%				X	X	X		12. 5 to 25 grams OR Consider D50% May Consider Orally if Patient Maintains Own Airway	Age 1 to 8 years – 2ml/kg Max 12.5 grams May Consider Orally if Patient Maintains Own Airway	IV/IO
	Dextrose 50%				X	X	X		12.5 to 25 grams May Consider Orally if Patient Maintains Own Airway	Age 8 to Onset Puberty 1ml/kg to Max 25 grams May Consider Orally if Patient Maintains Own Airway	IV/IO
	Glucagon				X	X	X		1 mg	Under 25 kg – 0.5 mg 25kg and Over – 1 mg	SubQ/IM/M AD
NSAID	Acetylsalicylic Acid	Aspirin	*	X	X	X	X		4 Each – 81mg Chewed and Swallowed	Not Approved	PO
Oxygen	Oxygen – All Devices						X		As required Per Device / Patient Needs	As required Per Device /Patient Needs	
	Oxygen – BVM		X	X	X	X	X		10 – 15 LPM	10 – 15 LPM	
	Oxygen – Nasal Cannula		X	X	X	X	X		1 to 6 LPM	1/4 to 6 LPM	
	Oxygen – Non-Rebreather		X	X	X	X	X		10 to 15 LPM	10 to 15 LPM	
	Oxygen – Venturi		X	X	X	X	X		Flow By % Required Per Patient	Flow By % Required Per Patient	
<b>* Special Situations And/or Additional Training and PMD Approval Required</b>											

Nebraska EMS Model Protocols

Nebraska EMS Medication Formulary Sorted By Class											
Class	Medication Name	Other Name	EMR	EMT	AEMT	EMT-1	Paramedic	Special Information	Adult Dose	Pediatric Dose Maximum Dose Not to Exceed Adult Dose	Route(s)
Depolarizing Paralytic	Succinylcholine	Anectine					X		RSI: 1 to 2 mg/kg Once Only	RSI: 1 to 2 mg/kg Once Only	IV/IO
Non-Polarizing Paralytic	Pancuronium	Pavulon					X		RSI: 0.04 to 0.1 mg/kg Maintain: 0.01 mg/kg	RSI: 0.04 to 0.1 mg/kg Maintain: 0.01 mg/kg	IV/IO
	Rocuronium	Zemuron					X		RSI: 0.6 to 1.2 mg/kg Maintain: 0.1 to 0.2 mg/kg	RSI: 0.6 to 1.2 mg/kg Maintain: 0.1 to 0.2 mg/kg	IV/IO
	Vecuronium	Norcuron					X		RSI: 0.1 mg/kg Maintain: 0.01 to 0.05 mg/kg	RSI: 0.1 mg/kg Maintain: 0.01 to 0.05 mg/kg	IV/IO
Sedative	Etomidate						X		Induction: 0.3 mg/kg Maintain: 0.1 to 0.15 mg/kg	Above 10 Years Old Induction: 0.3 mg/kg Maintain: 0.1 to 0.15 mg/kg	IV/IO
	Ketamine	Ketalar					X		1.5 to 2 mg/kg sedation and induction 0.25 to 0.5 mg every 5 to 10 minutes to maintain sedation. 1-2 mg/kg IV/IO for sedation and induction. 0.25 to .5 mg every 5 to 10 minutes to maintain sedation.	Age 6 months and older 2 to 4 mg/kg IV/IO for sedation and induction 0.25 to 0.5 mg/kg every 5 to 10 minutes to maintain sedation.	IV/IO/IM
	Methohexital	Brevital					X		1 to 1.5 mg/kg <b>IV/IO</b> of 1% Solution Induction 0.5mg/kg every 4 to 7 Mins to Maintain Sedation	Age 1 Month and Older 6.6 to 10 mg/kg <b>IM</b> (5% Solution) 25mg/kg <b>Rectal</b> (1% Solution) Consider Another Agent to Maintain Sedation	**Approved for RSI and NOT for Pain Mgt And Sedation
	Propofol						X		1 to 2 mg/kg IV/IO Induction 0.05 to 0.1 mg/kg/min Infusion to maintain Sedation Must Be On a Pump	1 to 2 mg/kg IV/IO Induction 0.05 to 0.1 mg/kg/min Infusion to maintain Sedation Must Be On a Pump	**Approved for RSI and NOT for Pain Mgt And Sedation
Steroid	Methylprednisolone	Solu-Medrol				X	X		125 to 250mg	2 mg/kg to Max of 125Mg	IV/IO
<b>* Special Situations And/or Additional Training and PMD Approval Required</b>											

Nebraska EMS Model Protocols

Nebraska EMS Medication Formulary Sorted By Class											
Class	Medication Name	Other Name	EMR	EMT	AEMT	EMT-I	Paramedic	Special Information	Adult Dose	Pediatric Dose Maximum Dose Not to Exceed Adult Dose	Route(s)
Sympathomimetic	Epinephrine - 0.15mg Auto-Injector	EpiPen Jr	*	*	X	X	X		Adults Use 0.30 mg Epinephrine Auto Injector	30 kg and Under Use 0.15 mg Epinephrine Auto Injector	SubQ
	Epinephrine - 0.3mg Auto-Injector	EpiPen	*	*	X	X	X		Adults Use 0.30 mg Epinephrine Auto Injector	Over 30 Kg Use 0.30 mg Epinephrine Auto Injector	SubQ
	Epinephrine 1:10,000					X	X		1 mg Cardiac Arrest 0.3 mg IV/IO Allergic Reaction	0.01 mg/kg Cardiac Arrest	IV/IO and ET in Cardiac Arrest
	Epinephrine 1:1000				X	X	X		0.3mg	0.01 mg/kg	IM
Vasodilator	Nitroglycerin			*	X	X	X		0.4 mg Every 5 mins for Chest Pain. Total dose 3 for EMT, AEMT, and EMT-I. Paramedics may give additional doses 0.4 mg every 5 mins for Chest Pain. Paramedics may give additional doses for CHF in distress with systolic BP 180 and greater – 3 each 0.4 mg *, 140 to 180 – 2 each .04 mb*, 100 to 140 – 1 each 0.4 mg* (Must have IV/IO Access). Nitroglycerin may be mixed in D5W or NS. Begin the nitroglycerin drip at 5 mcg/min and increase IV/IO by 5 mcg/min at 5 min intervals if chest pain persists and systolic blood pressure remains above 100mmHg.	Not Approved	SL IV/IO* *Paramedic Only
Vasopressor	Dobutamine						X		2 to 20 mcg/kg/min	2 to 20 mcg/kg/min	IV/IO
	Dopamine						X		2 to 20 mcg/kg/min	2 to 20 mcg/kg/min	IV/IO
	Norepinephrine	Levophed					X		0.5 to 30 mcg/min	Physician Order Only	IV/IO
Vitamin	Thiamine					X			100 mg IV/IO	100mg For Adolescent Patient with Gastric Bypass or Gastric Banding And Trauma – Otherwise by Physician Order	IV/IO
P2Y12 Platelet Inhibitor	Plavix	Clopidogrel				X*	X		300 mg Loading Dose Patients Age ≤ 75 75 mg for Patients >75	Not Approved	PO

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