

Atchison-Holt Ambulance District

Prehospital Medical Protocols & Standing Orders

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**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

DEFINITIONS

The following is a definition of frequently used terms:

EMT-B – (Emergency Medical Technician Basic) Person currently registered/licensed/certified as an EMT-Basic by the Department of Health- Bureau of EMS

EMT-P – (Emergency Medical Technician Paramedic) Person currently registered/licensed/certified as an EMT-Paramedic by the Department of Health – Bureau of EMS

R.N. – (Registered Nurse) Person currently registered/licensed/certified as an R.N. by the Department of Health

CCEMT-P- (Critical Care Emergency Medical Technician Paramedic) Person currently registered/licensed/certified as an EMT-Paramedic by the Department of Health – Bureau of EMS who has completed an approved Critical Care EMT-P course.

Standing orders - Advanced life support interventions which may be undertaken before contacting on line medical control.

Protocols - Guidelines for prehospital patient care. Only the portion of the guidelines which are designated “standing orders” may be undertaken before contacting on-line medical control.

On-line medical control - Medical direction of prehospital [ALS](#) activities by direct radio or telephonic communications with an on-line medical control physician.

AHAD- Atchison-Holt Ambulance District

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**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

APPLICATION OF THESE PROTOCOLS

These protocols are to be used for routine and emergency advanced life support care. Routine advanced life support care is directed by the “PARAMEDIC MEDICAL PROTOCOLS AND STANDING ORDERS.”

PURPOSE

The primary purpose of these protocols is to serve as guidelines for out-of-hospital (prehospital and interhospital) care. Quality out-of-hospital care is the direct result of comprehensive education, accurate patient assessment, good judgement, and continuous quality improvement. All [EMS](#) personnel are expected to know the protocols and understand the reason for their use. [EMS](#) personnel should not perform any step or steps in a standing order or protocol if they have not been trained to perform the procedure or treatment in question.

PROTOCOLS AND STANDING ORDERS-WHO MAY USE

These protocols may only be used by Atchison-Holt Ambulance District personnel . These protocols may also be used by agencies that are contracted with Atchison-Holt Ambulance Districts Medical Control System. [EMS](#) personnel who are authorized to operate under the Medical Control System may not utilize these standing orders outside of their work with the contracted agency or company unless such work is with another agency or company contracted with the system. All [EMS](#) personnel must adhere to the standards defined in these protocols, or face revocation of medical control if these standards are violated.

COMMUNICATION PROBLEMS

In the event an ambulance cannot contact medical control (i.e. mass casualty or radio/telephone problem), all protocols become standing orders. Likewise, in the event that a medical control physician cannot respond to the radio/telephone within two minutes of the call, all protocols are considered standing orders. An emergency department nurse at the medical control hospital may relay orders from the emergency physician in cases where it is impractical for him/her to come to the radio/telephone. It is not necessary to speak with a medical control physician concerning treatment modalities that are considered to be standing orders except if a question arises concerning the planned treatment. In the event medical control cannot be contacted, and treatment protocols were carried out as standing orders, the record should be pulled for review by the medical director. Following review, the record will be signed by the medical record indicating retroactive approval.

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ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

PATIENT DESTINATION

- 1 . It shall be the right of all patients to make the determination as to their ambulance destination unless:
 - The patient is critically unstable in the opinion of the EMS crew based upon mechanism of injury, nature of illness, initial and ongoing vital signs
 - The patient is unable to make a rational decision because of impairment of judgment because of medical or psychological problems.
 - The patient is under the legal age of consent,
- 2 . In those situations where a patient cannot make a destination determination, the EMS crew on scene will determine destination based upon:
 - Closest appropriate facility
 - Availability of air transport
 - Overall condition of the patient
- 3 . For those patients who cannot be stabilized on-scene or en-route, destination determinations will be to the following:
 - Community Hospital Association – Fairfax, MO**
 - All unstable patients (medical or trauma) who are at least within an estimated twelve(12) minute travel time
 - St. Francis Hospital – Maryville, MO**
 - All unstable patients (medical or trauma) who are over an estimated twelve (12) minute travel time from Community Hospital Association – Fairfax, MO and on the east side of the District
 - Nemaha County Hospital – Auburn, NE**
 - All unstable patients (medical or trauma) who are over an estimated Twelve (12) minute travel time from Community Hospital Association – Fairfax, MO and on the west side of the District
 - Grape Community Hospital – Hamburg, IA**
 - All unstable patients (medical or trauma) who are over an estimated twelve (12) minute travel time from Community Hospital Association – Fairfax, MO and on the north side of the District
 - Heartland Regional Medical Center – St. Joseph, MO**
 - All unstable patients (medical or trauma) who are over an estimated twelve (12) minute travel time from Community Hospital Association – Fairfax, MO and on the south side of the District
- 4 . If at any time EMS personnel are unsure of where to deliver a patient. They must contact medical control and receive medical direction.

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**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

GENERAL GUIDELINES FOR PROTOCOL USAGE

- The patient history should not be obtained at the expense of the patient. Life-threatening problems detected during the primary assessment must be treated first.
- Cardiac arrest due to trauma is not treated by medical cardiac arrest protocols. Trauma patients should be transported promptly with [CPR](#), control of external hemorrhage, cervical spine immobilization, and other indicated procedures attempted en route.
- In patients with non-life-threatening emergencies who require IVs, only two attempts at IV insertion should be attempted in the field. Further attempts must be approved by medical control.
- Patient transport, or other needed treatments, must not be delayed for multiple attempts at endotracheal intubation.
- Verbally repeat all orders received prior to their initiation.
- Any patient with a cardiac history, irregular pulse, unstable blood pressure, dyspnea, or chest pain should be placed on a cardiac monitor.
- If the patient's condition does not seem to fit a protocol or protocols, always contact medical control.
- NEVER HESITATE TO CONTACT MEDICAL CONTROL FOR ANY PROBLEM, QUESTION, OR FOR ADDITIONAL INFORMATION.

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ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

SPECIAL CONSIDERATIONS

IV Therapy

All trauma patients should receive at least one, and preferably two, IV's of lactated [Ringer's](#) or 0.9% Normal Saline via large bore (14 or 16 gauge) catheters.

Trauma patients with a systolic blood pressure <90 mmHg should be receive wide open fluids until the systolic blood pressure is >90 mmHg.

Trauma patients with a systolic blood pressure >90 mmHg should receive fluids at a "to keep open (TKO)" rate or as directed in the applicable protocol.

All pediatric peripheral IVs should be started with a minidrip administration set.

All IV attempts are to be peripheral.

The external jugular vein is considered a peripheral vein.

- Only paramedics who have obtained the required education in external jugular vein cannulation and who have been approved by the system Medical Director may place an external jugular IV

Placement of an **EZ IO** intraosseous needle is permitted in children less than 6 years of age who have a life-threatening emergency where immediate fluid or medication administration is necessary.

- Only paramedics who have obtained the required education in **EZ IO** intraosseous needle placement and who have been approved by the system Medical Director may place intraosseous needles.

Each IV bag should be labeled with the following data:

- 5 . Time and date of IV start
- 6 . IV cannula size
- 7 . Initials of paramedic who started the IV.

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Endotracheal Intubation

1. Proper endotracheal tube placement must be documented by at least three different methods.

These include:

1. presence of bilateral breath sounds
 2. absence of breath sounds over the epigastrium
 3. presence of condensation on the inside of the endotracheal tube
 4. end-tidal carbon dioxide monitoring
 5. use of an endotracheal esophageal detector
 6. visualizing the tube passing through the cords
2. All three verification methods must be documented in the medical record!!
 3. Following endotracheal intubation, tube placement should be re-verified every 5-10 minutes by noting bilateral breath sounds and continuing end-tidal carbon dioxide readings.

4. Endotracheal Drug Administration

1. Only the following four drugs can be administered via an endotracheal tube:

L - Lidocaine

E - Epinephrine

A - Atropine Sulfate

N - Naloxone

Note: Diazepam (Valium) should **NOT** be administered via an endotracheal tube.

5. When administering drugs via the endotracheal tube, administer 2.0 - 2.5 times the IV dose.

1. Dilute the drug in enough lactated [Ringer's](#) or normal saline to result in a total volume of at least 10 mL.
2. This will facilitate endotracheal instillation and aid in increased drug delivery to the respiratory tissues.

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**ATCHISON-HOLT AMBULANCE DISTRICT
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RESUSCITATION CONSIDERATIONS

- Do Not Resuscitate ([DNR](#)) orders should be honored when valid.

If a patient's family presents you with a [DNR](#) order written by the patient's physician, the following procedures should be followed:

1. Contact medical control
2. Provide a brief synopsis of the situation. Be sure to include the diagnosis which resulted in the [DNR](#) order (i.e. cancer).
3. Provide a brief report the patient's current status (vital signs, [ECG](#) tracing)
4. Confirm receipt of written [DNR](#). Be sure to note issuing physician's name.
 - The medical control physician will determine whether to accept or deny the [DNR](#) order.
 - If the patient is in cardiac arrest upon [EMS](#) arrival, initiate [BLS](#) while contacting medical control.
 - Resuscitation should not be attempted in the field in cases of:
 1. Rigor mortis
 2. Decapitation
 3. Decomposition
 4. Dependent lividity.
 5. Obvious massive head or trunk trauma which is incompatible with life (provided the patient does not have vital signs.)
 - Consider the potential for organ donation.
 - Patient's who have sustained mortal injuries may still warrant emergent care until a determination can be made whether the patient may be a potential organ or tissue donor.
 - When possible, place the quick look paddles or the [ECG](#) leads to confirm asystole or an agonal rhythm and attach a copy of the strip to the run report.

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Orders from Transferring/Receiving Physicians

- During interhospital transport, medical crews will continue treatment initiated at the transferring hospital.
- Additional orders may be written or verbal.
- Verbal orders must be written by the Paramedic or EMT-B attendant and attached to the record.
- The transferring physician shall sign these orders.
- If, at any time the Transport Crew questions orders from a referring or receiving physician,
- On-line medical control MUST be contacted.
- Anytime a transferring or receiving physician asks the Transport crew to carry out medical treatment for which they have not been trained, or which appears to be in conflict with established treatment protocols On-line medical control MUST be contacted before initiating care.

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**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

SCENE RESPONSES / ON-SCENE PHYSICIANS

1. [EMS](#) personnel functioning under Medical Control System may not accept orders from an on-scene physician. **Except when:**
 1. The patient is being retrieved from a physician's office.
 2. The on-scene physician proves licensure or is known to the EMS crew
 3. The on-scene physician accepts responsibility for care of the patient and accompanies the patient to the destination

 2. Any care which differs significantly from protocol must be approved by the on-line medical control physician prior to initiation.

 3. If a controversy arises with an on-scene physician,
- 8 . Place the on-scene physician in contact with the on-line medical control physician via cellular telephone or radio.

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**ATCHISON-HOLT AMBULANCE DISTRICT
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Attending Patients and Patient Care Reports

- As a general rule, the highest level trained (EMT-P, RN) person of the ambulance crew shall attend and be the primary caregiver of the patient or patients during transport
- In those cases where no ALS caregivers are present and there are two (2) EMT-B's, the more experienced EMT-B shall assume the role of primary caregiver.
- The attendant who provides primary care during patient contact and transport shall be responsible for the Patient Care Report and shall be listed on the PCR as crew member #1.
- A separate Patient Care Report shall be written for each patient contact.

EMT-B Attendant/Primary Caregiver Assessment/Treatment Criteria

There will be times where ALS primary care and attendance of the patient may not be necessary or warranted. Criteria for those cases are listed below.

- A patient in which a non-emergent response and transport to the Hospital, Nursing Home, Patient residence or other destination for further medical evaluation and/or treatment.
- A patient NOT requiring ALS care

Standing Orders

- If an EMT-P or RN is on scene, they must perform an ALS primary assessment to determine the patient's immediate needs.
- Application of any ALS device/equipment (EKG) requires the device to be left in place and on the patient and requires ALS attendance and primary care.
- **If any ALS treatment or any other AHAD ALS protocol applies, the EMT-B must discontinue this protocol and refer to the appropriate ALS protocol and ALS caregiver.**

Protocol

- Perform a focused exam based on the patient's chief complaint.
 - Deliver appropriate BLS treatments upon the patient illness or injury.
 - Transport the patient in a position of comfort and safety.
 - Vital signs prior to transport (Vital signs must be within ranges for the EMT-B to attend)
1. Blood Pressure – not to be less than 100/60 or greater than 200/100
 2. Heart Rate – not less than 60 or greater than 100 resting BPM
 3. Respiratory Rate – not less than 10 or greater than 30 resting breaths per minute
 4. Glucose level less than 60 mg/dl or greater than 250 mg/dl or demonstrating signs/symptoms of a diabetic emergency.

Special Instructions

- ALS care includes but not limited to:
1. Any patient that requires any medication therapy or advanced procedure
 2. Any patient that has an IV or Saline lock in place.
 3. Any patient that has received any medication 1 hour prior to transport by any means
 4. Ventilator patient including home ventilators
 5. Any patient with a pain or medication pump
- EMT-B's may not attend any patient which has had a reported syncopal episode or altered mental status change when ALS caregiver is available
 - The EMT-P or RN must review and be charted that the reviewed the Patient Care Report
 - If the EMT-B expresses concern or feels uncomfortable in providing primary care for the patient then the EMT-P or RN must attend

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Quality Assurance Program

In order to provide the highest level of care and to monitor that level of care the District shall conduct a Quality Assurance Program that shall be approved and governed by the District's Medical Director. Guidelines for the program are as follows:

Quality Assurance Coordinator

- The District Administration shall appoint, with the approval of the Medical Director, a QA Coordinator. The position may be temporary or permanent according to the needs of the District and Medical Director.
- The duties of the QA Coordinator shall be as follows:
 1. Have access to Patient Care Reports and gathers such reports to distribute to the person assigned to review the patient care reports (see peer reviewer description and duties)
 2. Have access to and gathers stats from Patient Care Reports or other means for information that may be required by the Medical Director or the District in general.
 3. Once the peer reviewer has completed reviewing those Patient Care Reports assigned to them for review the QA Coordinator shall collect the Patient Care Reports.
 4. Those reports designated as needing Medical Director Review shall be taken to the Medical Director. All other reports shall be kept until the next employee meeting where they shall be given to the employee for signature.
 5. Once the Medical Director is finished reviewing those Patient Care Reports given to them the QA Coordinator shall collect the reports and at the next employee team meeting distribute those reports to those individuals who wrote them.
 6. After the employee reads and signs the Medical Director reviewed reports the QA Coordinator shall collect the reports and file them appropriately at the District office.
 7. The QA coordinator shall serve as a liaison between the District Employees and the Medical Director. This does not mean that the District Employees do not have the right to individually contact the Medical Director if needed.
 8. It shall be understood that all information contained in the Patient Care reports is protected information and cannot be shared with anyone other than the report writer Peer Reviewer and Medical Director.

Quality Assurance Peer Reviewer

9. The District Administration shall appoint one peer reviewer each month.
10. The Peer Reviewer shall review Patient Care Reports given to them by the QA Coordinator in the manner described in the section PEER REVIEW CRITERIA.
11. The Peer Reviewer shall devote such on-duty time as necessary reviewing Patient Care Reports in the timely manner.
12. If at any time Peer Reviewer needs answers or clarification on any particular Patient Care Report they shall have the right to call the report writer, QA Coordinator or Medical Director.
13. It shall be understood that all information contained in Patient Care Reports is protected information and cannot be shared with anyone other than the report writer, QA Coordinator and Medical Director.

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ATCHISON-HOLT AMBULANCE DISTRICT
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Quality Assurance Program (continued)
Peer Review Criteria

- The Peer Reviewer shall read all Patient Care Reports assigned to them and review them for the following:
 1. Completeness of Patient Care Report
 2. Compliance with protocol
 3. Separation of all calls needing Medical Director Review and those not needing Medical Director Review.
- A QA check sheet shall be filled out on each Patient Care Report and attached to the Patient Care Report
- Once all Patient Care Reports are reviewed, the Peer Reviewer shall give the reports to the QA Coordinator for distribution to the Medical Director.

Patient Care Report Criteria For Medical Director Review

Listed below are the criteria for those Patient Care Reports that require the Medical Director review:

- All calls that are identified as **CODE BLUE**. Either respiratory or cardiac in nature.
- All calls identified as critical in nature. **CRITICAL** can be identified as
 1. Calls marked as Priority 1 or 2 transport
 2. Failing life or vital signs
 - All calls that fail time criteria as listed below:
 1. More than **10 minutes** on scene time for calls marked as **Priority 1 transport**
 2. More than **20 minutes** on scene time for calls marked as **Priority 2 transport**
 3. More than 25 minutes on scene time for all other calls unless adequately documented as to why a long scene time was warranted
 4. More than 3 minutes from dispatch to enroute between the hours of 7 am and 10 pm.
 5. More than 5 minutes from dispatch to enroute between the hours of 10 pm and 7am.
 - All calls that involve **medical device failure**.
 - All calls that **involve injury occurring during the call** involving patients, bystanders, rescuers or ambulance crews.
 - All calls where **any medications** were administered to the patient, excluding oxygen and IV drip medications started by hospital staff.
 - All calls that have an obvious **protocol deviation**.
 - All calls marked as **DOA**.
 - All calls that were **diverted from original destination** to another destination for whatever reason.
 - All calls that were written by the **Peer Reviewer**.
 - A **random drawing of 10%** of all the other Patient Care Reports not otherwise marked as needing Medical Director Review.

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Advanced Life Support
Adult- Medical

ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Initial ALS Care

Considerations

In an uncooperative patient, the requirement to initiate full ALS assessment and care may be waived in favor of assuring the patient is transported to an appropriate facility.

- Scene Size-Up:
 1. Assess scene for safety/hazards
 2. Employ standard precautions and transmission based precautions
 3. Note number of patients/mechanism(s) of injury and request additional personnel/equipment/resources and necessary
 4. Consider C-spine stabilization
 - Initial Assessment/General Impression/Identify Priority Patients:
 1. Assess for immediate life threatening conditions.
 2. Determine patient's level of consciousness and orientation
 3. Assess ABC's, perform appropriate airway control and begin Oxygen therapy
 4. If the patient's condition is determined to be of High Priority criteria, consider immediate transport (vital signs, rapid assessment, detailed physical exam, on-going assessment and treatment should be completed en route to the nearest appropriate hospital).
 - Obtain and record initial vital signs and repeat as often as the situation indicates
 - Obtain SAMPLE/Perform Focused History and Physical Exam
 - EMT-P's or RN apply EKG monitor and evaluate cardiac rhythm
 - Initiate IV access (IO access if appropriate), with Normal Saline or Saline Lock as appropriate to protocol
 - Administer appropriate treatment according to specific protocol and contact medical control as indicated in the operations section of the protocols.

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Respiratory Arrest Imminent Respiratory Arrest/Airway Control

Airway Control procedures

- If patient is intubated, secondary confirmation must be performed, at a minimum, End-tidal CO₂ monitoring and Pulse Oximetry.
 - Refer to appropriate protocol for further assessment and treatment.
 - If the patient requires sedation choose the most appropriate medication
1. Diazepam 5-10mg IVP
 2. Morphine Sulfate 2-10mg IVP
 3. Midazolam 0.5-2mg Slow IVP
 4. Lidocaine 1.0-1.5mg/kg slow IVP (as appropriate for increased intracranial pressure)
 5. Naloxone 2mg IVP, may be repeated up to 8mg.

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**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Obstructed Airway, Unconscious

- BLS Procedure.
- Direct laryngoscopy and remove foreign body using Magill Forceps.
- Airway control procedures.
- Refer to appropriate protocol, or contact medical control.
- If unable to ventilate because of obstruction, perform cricothyrotomy with approved device.

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**ATCHISON-HOLT AMBULANCE DISTRICT
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Respiratory Distress Asthma/Bronchospasm/COPD

- Airway control procedures.
- Pulse Oximetry.
- Albuterol 2.5mg/3cc normal saline or Levalbuterol 1.25mg/3cc normal saline, may repeat Albuterol or Levalbuterol once after 10 minutes.
- Albuterol 2.5mg and Ipratropium 0.5mg/3cc normal saline or Levalbuterol 1.25mg/3cc normal saline.
- Additional treatments of Albuterol 2.5mg/3cc normal saline or Levalbuterol 1.25mg/3cc normal saline ONLY, may be administered every 10 minutes.

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**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Cardiopulmonary Arrest (Non-traumatic)

Considerations

Biphasic defibrillation is an acceptable option if used according to the specific manufacturer's instructions. In that adult patient ET dosing of medications is twice the amount of the usual IV dose followed by 10—20cc of normal saline flush. IV medications by bolus are followed by a 20-30cc bolus of normal saline. When practical, elevation of the arm is recommended.

14 . Initiate basic cardiac life support (BCLS).

15 . Follow appropriate sub-protocol:

1. Ventricular fibrillation or pulseless ventricular tachycardia
2. Asystole and Electromechanical dissociation/Pulseless electrical activity

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ATCHISON-HOLT AMBULANCE DISTRICT

PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Ventricular Fibrillation or Pulseless Ventricular Tachycardia

Considerations

If at any point, the rhythm converts to supraventricular, and the patient has not received an anti-arrhythmic, administer Lidocaine 1mg/kg IVP, and then administer an infusion of Lidocaine at 2mg/min.

If at any point after receiving Lidocaine, the rhythm converts to a supraventricular rhythm, administer an infusion of Lidocaine:

- Lidocaine 2mg/min if 1-2mg/kg of Lidocaine was used
- Lidocaine 4mg/min if 2-3 mg/kg of Lidocaine was used

Paramedics may consider Vasopressin 40U IVP in place of Epinephrine; if no acceptable response after 5-10 minutes, you may resume Epinephrine 1:10,000 1.0mg IVP every 3 minutes.

Paramedics may consider Amiodarone 300mg/20cc normal saline or 5mg/kg, IVP in place of Lidocaine; if necessary repeat Amiodarone 150mg/20cc normal saline IVP or 2.5mg/kg

If at any point after receiving Amiodarone, the rhythm converts to a supraventricular rhythm, administer an infusion of Amiodarone at 1mg/min

- Cardiac arrest standing orders
- If arrest is witnessed, administer precordial thump.
- Immediately Defibrillate (at device specific energy (120-200 joules) if biphasic or 360 joules if monophasic) if defibrillator is not immediately available, perform CPR until defibrillator is available to shock.
- After one (1) shock, resume CPR, After 5 cycles of CPR, recheck pulse and rhythm. If rhythm has not converted, continue CPR. Prepare to shock, establish airway control, and establish IV access with normal saline.
- If arrest is unwitnessed, or downtime is over 5 minutes, perform at least 5 cycles of CPR.
- When monitor/defibrillator is available, analyze and deliver **ONE** shock, if indicated.
- Immediately resume CPR. After 5 cycles of CPR, recheck pulse and rhythm. If rhythm has not converted, continue CPR/ Prepare to shock, establish airway control and establish IV access with normal saline.
- Defibrillate at (biphasic device specific energy; monophasic at 360 joules) making certain to continue CPR while defibrillator charges.
- Resume CPR immediately. Continue CPR stopping every 5 cycles to check pulse and rhythm. Shock **ONE TIME** when indicated and immediately resume CPR.

ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Ventricular Fibrillation or Pulseless Ventricular Tachycardia (continued)

- Prepare to administer medications.
- Defibrillate at (biphasic device specific energy; monophasic at 360j) making certain to continue CPR while defibrillator charges.
- Resume CPR immediately
- Epinephrine 1:10,000 1mg IV, may be repeated every 3 minutes.
- If at any point, the rhythm converts to supraventricular rhythm, and the patient has not received an anti-arrhythmic, administer Lidocaine 1mg/kg – 1.5mg/kg IVP, and then administer a drip of Lidocaine at 2mg/min.
- After 5 cycles of CPR, recheck pulse and rhythm. If indicated, defibrillate at (biphasic device specific energy; monophasic at 360j), making certain to continue CPR while defibrillator charges.
- Resume CPR immediately.
- Lidocaine 1mg/kg – 1.5mg/kg IVP, may be repeated at 1mg/kg every 3 minutes to a total dose of 3mg/kg.
- After 5 cycles of CPR, recheck pulse and rhythm, if indicated, defibrillate at (biphasic device specific energy; monophasic at 360j), making certain to continue CPR while defibrillator charges.
- Resume CPR immediately, continue CPR stopping every 5 cycles to check pulse and rhythm. Shock **ONE TIME** when indicated and immediately resume CPR.
- If at any point after administration of Lidocaine, the rhythm converts to a supraventricular rhythm, administer a Lidocaine infusion at
 1. Lidocaine 2mg/min if 1-2mg/kg of Lidocaine was used.
 2. Lidocaine 4mg/min if 2-3mg/kg of Lidocaine was used.

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ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Asystole and PEA

Considerations

- Dextrose 50% 25 grams (50cc) IVP if clinically indicated. May be repeated once.
- Nalaxone 2mg IVP if clinically indicated, may be repeated up to 8mg.
- Consider underlying causes of hypovolemia, hypoxia, hydrogen ion (acidosis), hypo or hyperkalemia, hypoglycemia, hypothermia, toxins, tamponade, tension pneumothorax, thrombosis and trauma.
- If patient is found upon arrival of EMS in non-traumatic asystole, appears normothermic, has satisfactory IV access and airway control performed and does not respond to all above standing orders, the EMT-P will contact medical control to discuss termination of resuscitative efforts, if indicated.
- Consider using Vasopressin 40U IVP in place of first or second dose of Epinephrine 1:10,000 IVP.

16 . Cardiac arrest standing orders.

17 . The rhythm is checked in more than one lead before the interpretation of asystole is made. If the rhythm is unclear and possibly low amplitude ventricular fibrillation, consider CPR for 5 cycles and then defibrillation.

18 . Airway control procedures, ventilation, and IC access: normal saline at KVO with a large bore catheter.

19 . Epinephrine 1:10,000 1mg IVP, dose may be repeated every 3 minutes.

20 . Id no response to initial dose of Epinephrine, IV infusion of normal saline wide open.

21 . If absolute bradycardia (<60bpm), Atropine 1mg; may be repeated every 3 minutes to a total dose of 0.04mg/kg

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**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Sustained Ventricular Tachycardia with a Pulse, Stable

Considerations

Stable indicates the absence of chest pain, dyspnea, CHF, ischemia, infarction, hypotension (SBP<90), or altered consciousness.

Any sustained wide complex tachycardia should be treated as ventricular tachycardia.

- In the event of communication failure, administer one of the following anti-arrhythmics:
 1. Lidocaine 1.5mg/kg IVP, may be repeated in 5-10 minutes 1 time; Or
 2. Amiodarone 150mg/20cc normal saline IV bolus over 10 minutes, may be repeated every 10 minutes if VT persists up to a maximum dose of 450mg.

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ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Sustained Ventricular Tachycardia with a Pulse, Unstable Considerations

Unstable denotes sustained Ventricular Tachycardia combined with any of the following: chest pain, dyspnea, CHF, ischemia, infarction, altered mental status or hypotension (SBP<90).

Any sustained wide complex tachycardia should be treated as ventricular tachycardia.

Biphasic defibrillation/cardioversion is an acceptable option if used according to the specific manufacturer's instructions.

If conscious, may pre-medicate with Midazolam 2mg slow IVP; may repeat in 2 minutes if needed. If rhythm fails to convert to a supraventricular rhythm AND the patient remains in an unstable ventricular tachycardia, consider Amiodarone 150mg/20cc normal saline over 10 minutes in place of Lidocaine; Amiodarone may be repeated every 10 minutes up to 450mg.

If patient converts to a supraventricular rhythm, prior to anti-arrhythmic drug administration, consider Amiodarone 150mg/20cc normal saline over 10 minutes in place of Lidocaine followed by an infusion of Amiodarone at 0.5mg/min

If at any point after receiving Amiodarone, the rhythm converts to a supraventricular rhythm, administer and infusion of Amiodarone at 0.5mg/min.

- If the patient presents with hypotension, unconsciousness, pulmonary edema or if synchronous cardioversion cannot be accomplished for technical reasons, use asynchronous cardioversion.
- Cardiovert at 100 joules.
 1. If not successful, cardiovert at 200 joules.
 2. If not successful, cardiovert at 300 joules.
 3. If not successful, cardiovert at 360 joules.
- If rhythm fails to convert to a supraventricular rhythm AND the patient remains in an unstable ventricular tachycardia, administer Lidocaine 1.5mg/kg IVP, may be repeated in 5-10 minutes 1 time.
- If patient converts to a supraventricular rhythm, prior to anti-arrhythmic drug administration, administer Lidocaine 1mg/kg, then begin an infusion of Lidocaine 2mg/min.
- If at any point after receiving an anti-arrhythmic drug, the rhythm converts to a supraventricular rhythm, administer an infusion of the effective anti-arrhythmic:
 1. Lidocaine 2mg/min if 1-2mg/kg of Lidocaine was used.
 2. Lidocaine 4mg/min if 2-3mg/kg of Lidocaine was used.

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**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Suspected Myocardial Infarction

22 . If chest pain is present ant the patient is otherwise stable (SBP>100)

1. Oxygen as appropriate
2. Nitroglycerin 0.4mg S.L. or spray. May be repeated every 5 minutes if symptoms are unrelieved and the vital signs remain stable.
3. Aspirin (4) 81mg tablets chewed (total dose of 324mg)
4. Morphine Sulfate 2-10mg, given in increments of 2mg

23 . Obtain 12-lead EKG whenever possible. If 12-lead EKG indicates ST-elevation of 1mm or more in two (2) or more leads, initiate Thrombolytic Checklist as appropriate and contact Medical Control.

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ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Thrombolytic Checklist for ST-elevation Myocardial Infarction

Inclusion Criteria:

- Patient 18 years of age or older
- Patient presents with chest pain or anginal equivalent
- EKG confirmation of Acute Myocardial Infarction (ST-elevation of 1mm or more in two (2) or more leads)
- Duration of symptoms is less than 6 hours

Absolute Contraindications:

- Previous hemorrhagic stroke at any time
- Other stroke or cerebrovascular events within past year
- Known intracranial neoplasm, arteriovenous malformation, or aneurysm
- Active internal bleeding (menses is NOT a contraindication)
- Suspected aortic dissection
- Severe uncontrolled hypertension (Systolic BP greater than 200, diastolic greater than 120 mmHg)
- Intracranial or intraspinal surgery or trauma within previous 2 months

Relative Contraindications:

- Hypertension: systolic BP greater than 180 mmHg and/or diastolic BP greater than 110mmHg
- History of cerebrovascular accident or other intra-cerebral pathology
- Current use of anticoagulants (e.g. Coumadin)
- Known bleeding disorders
- Recent trauma in past 2-4 weeks, including head trauma
- Recent major surgery or puncture or non-compressible vascular site
- Recent internal bleeding in past 2-4 weeks
- Active peptic ulcer
- History of chronic hypertension
- High likelihood of left heart thrombus (e.g. mitral stenosis with atrial fibrillation)
- Acute pericarditis
- Subacute bacterial endocarditis
- Hemostatic dysfunction
- Diabetic hemorrhage retinopathy or other hemorrhagic ophthalmic conditions
- Septic thrombophlebitis or occluded AV cannula at seriously infected site
- Recent administration of GP 2b/3a inhibitors
- Very elderly, e.g. age greater than 75 years, at increased risk of intracranial hemorrhage

High Risk Patients:

- 24 . Patient presents with Tachycardia (≥ 100 bpm)
- 25 . Patient presents with Hypotension (Systolic BP ≤ 100 mmHg)
- 26 . Patient presents with signs of shock
- 27 . Patient presents with signs of Pulmonary Edema

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ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Bradysrhythmia Including 3rd Degree Heart Block

Considerations

This protocol is indicated for any patient with any bradysrhythmia with a ventricular rate less than 60bpm and is hemodynamically unstable.

Unstable denotes bradycardia combined with any of the following: chest pain, dyspnea, CHF, ischemia, infarction, altered mental status or hypotension (SBP<90).

For any patient in a Second Degree Mobitz II or Third Degree Heart Block, omit step one (1), and proceed directly to transcutaneous pacing.

Consider Suspected Myocardial Infarction Protocol

- Atropine 0.5mg IVP. If inadequate response within 3 minutes, administer Atropine 0.5mg IVP.
- If inadequate response to Atropine, consider initiating transcutaneous pacing.

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**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Acute Pulmonary Edema/Congestive Heart Failure

- 28 . Nitroglycerin 0.4mg SL or spray, may be repeated every 5 minutes if the patient's systolic BP is above 100
- 29 . Furosemids (Lasix) 40mg slow IVP
- 30 . Consider Suspected Myocardial Infarction Protocol

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**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Non-Traumatic Shock (Cardiogenic/Septic)

- IV infusion of 250cc normal saline; may be repeated as needed if SBP <100. *Avoid in the presence of pulmonary edema*
- Administer Dopamine 400mg/250cc normal saline,
 1. Initiate drip at 5-10mcg/kg/min. If there is insufficient improvement in status, the infusion rate may be titrated upward every 5 minutes in increments of 5mcg/kg/min until desired
 2. Therapeutic effect to a maximum of 25mcg/kg/min.

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ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Supraventricular Tachycardia

Considerations

- 31. *Any wide complex tachycardia should be treated as ventricular tachycardia.*
- 32. *Unstable denotes Supraventricular Tachycardia combined with any of the following; chest pain, dyspnea, CHF, ischemia, infarction, altered mental status, or hypotension (SBP<90).*
- 33. *This protocol is indicated for patients with Supraventricular Tachycardia (ventricular rate 150-250) with narrow (QRS < .10) complexes who are hemodynamically unstable.*

1. If unconscious, synchronized cardioversion at 100, 200, 300, 360 joules.
2. If possible, ask the patient to perform a Valsalva maneuver (if necessary, this may be repeated).
 1. If rhythm regular, Adenosine 6mg IVP; if ineffective after 2 minutes, Adenosine 12mg IVP; repeat in two (2) minutes if needed one (1) time. Follow each dose of Adenosine with 20cc saline bolus.
 2. If Adenosine following full dosing is unsuccessful initiate synchronized cardioversion at 100, 200, 300, 360 joules or equivalent biphasic energy.
 3. If conscious, may pre-medicate with Midazolam 2mg slow IVP; may repeat in 2 minutes if needed.

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**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Abdominal Pain

Considerations

- 34 . The ALS provider must consider all abdominal pain to be acute.*
- 35 . If the patient is a female of any age, the potential for an OB-GYN emergency must be considered; the ALS provider should then refer to Special Considerations*
- 36 . (SCP-5) Toxemia of Pregnancy or Special Considerations*
- 37 . Childbirth/Precipitous Delivery, if appropriate.*
- 38 . Transport samples of products of conception, if applicable*

1. Keep patient NPO
2. If patient has evidence of blood loss or signs of shock, refer to Traumatic/Non-traumatic Shock protocol, as appropriate.
3. Prepare for transport.

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ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Systemic Allergic Reactions/Anaphylaxis

Considerations

39. Epinephrine should be used with caution in patients with beta-blockers, cardiac disease, hypertension, or pregnancy.

1. If signs of shock or imminent airway obstruction, administer Epinephrine 1:1,000 0.3mg SQ; may be repeated once after 5 minutes
2. Administer Diphenhydramine 50mg IM or IV.
3. If signs of shock, IV infusion of normal saline run wide open.
4. IV Infusion normal saline (250-500cc rapid infusion),
5. Epinephrine 1:10,000 1mg/250cc normal saline, 1-2cc/min IV infusion, titrated to effect
6. Albuterol 2.5mg/3cc normal saline via nebulizer
7. Ipratropium 0.5mg/3cc normal saline via nebulizer,
8. Levalbuterol 1.25mg/3cc normal saline via nebulizer,
9. Dopamine Infusion 400mg/250cc normal saline and started at 5-10mcg/kg/min. Then titrated to desired BP (maximum of 25mcg/kg/min.).

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**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Altered Mental Status

Considerations

- *Consider neurological, toxicological, or traumatic etiology*
- *For suspected Stroke, refer to Suspected Stroke*

1. Obtain a field glucometer reading.
2. If unable to obtain a field glucometer reading, draw a blood sample for the hospital lab
3. For documented hypoglycemia:
 - 40 . Administer Dextrose 50% 25 grams (50cc) IVP; if no response in 5 minutes, repeat Dextrose 50% 25 grams (50cc) IVP.
 - When an IV route is unobtainable, administer Glucagon 1mg IM.
 - For suspected narcotic overdose, administer Naloxone ET/IV/IM, to be administered in increments of 0.8mg doses until appropriate patient response (if suspected chronic narcotic user, initiate Naloxone at 0.4mg). Naloxone may be repeated up to 8mg.
 - Airway control should be reconsidered if no response to medical interventions above.

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**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Overdose

- 41 . Treat dysrhythmias, hypotension, seizures, or altered mental state according to appropriate protocol.
- 42 . If known or suspected medication overdose, attempt to identify source and bring to hospital.

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**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

NAUSEA AND VOMITING

- Assure ABC's
- Oxygen via nasal cannula at 2 liter per minute unless higher concentrations warranted by patient condition.
- Initiate IV of Lactated Ringer or Normal Saline at 100ml/hr.
- Ondansetron (Zofran) 4mg IVP or IM, **Consider lower Dosage of 2mg in Elderly > 65 years of age.**
- **Pediatric Dosage** Ondansetron (Zofran) 0.1mg/kg IV for patients weighing less than 40kg. Given in no less than 30 seconds with a preference of 2-5min.

OR

- If patient nauseated or has vomited, administer Phenergan 12.5 – 25 mg IVP or IM. Do not repeat more frequently than every 4 hours unless ordered by medical control.
- Monitor vital signs, pulse oximetry, and level of consciousness
- Consider intubating patients with altered mental status who are vomiting and do not have the ability to maintain their airway.
- Contact medical control for any problems or if second dose of Ondansetron (Zofran) 4mg is needed.

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**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Hypertensive Crisis

Considerations

This protocol is only indicated if the patient presents with a diastolic BP of 130 or greater in both arms associated with symptoms such as nausea, vomiting, headache, and visual disturbances.

- Administer Furosemide 40mg-80mg IV
- Nitroglycerin 0.4mg SL or spray

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**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Status Epilepticus

Considerations

- *This protocol is indicated for patients in Status Epilepticus (Two or more seizures without a lucid interval or a continuous seizure lasting more than 5 minutes).*
 - *The administration of Diazepam will be discontinued as soon as the seizure stops, whether or not the entire ordered dosage has been administered.*
 - *In pregnant patient, consider Special Considerations Toxemia of Pregnancy.*
1. If the patient is having sustained seizures, administer Diazepam 10mg IV over 1-2 minutes. If IV route not available, give rectally, via syringe without needle up to 10mg.
 2. Either route may be repeated once after 10 minutes.
 3. Obtain a field glucometer reading.
 4. If unable to obtain a field glucometer reading, draw blood sample for the hospital lab
 5. For documented hypoglycemia:
 - Dextrose 50% 25 grams (50cc) IVP or Glucagon 1mg IM, if IV not accessible.
 - If Dextrose 50% or Glucagon administered, administer Thiamine 100mg slow IVP or IM.
 43. If above actions do not terminate seizure, or respirations are depressed, reconsider airway control.

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ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Suspected Stroke

Considerations

- *This protocol is indicated for patients experiencing an acute episode of neurological deficit without any evidence of trauma.*
- *Refer to Protocol, Suspected Stroke.*
- *Do not delay transport to perform ALS procedures.*
- *Determine time of symptom onset.*
- *Contact receiving facility as soon as possible.*

44 . Airway control procedures.

45 . Place patient on cardiac monitor.

46 . Neurological Assessment with the use of the Cincinnati Prehospital Stroke Scale

47 . Establish an IV of Normal Saline.

48 . Suspected stroke patients MUST be transported to closest appropriate hospital emergency department if any of the following apply:

1. Patient is in cardiac arrest;
2. Patient has an unmanageable airway;
3. Patient has another medical condition(s) that warrant(s) transport to the closest appropriate hospital emergency department (ED)

49 . Obtain a field glucometer reading.

50 . Obtain a 12-Lead ECG if possible.

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Adult-Trauma

ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Major Trauma

Considerations

51 .Initiating IV therapy should not delay transport. If transportation is unavoidably delayed, IV therapy may be started prior to transport.

52 . • A high index of suspicion must exist for hidden injuries even if the patient is initially hemodynamically stable.

For patients presenting with any of the following physical findings which are directly attributed to a traumatic event:

1. Glasgow Coma Scale is less than or equal to 13
2. Respiratory rate is less than 10 or more than 29 breaths per minute
3. Pulse rate is less than 50 or more than 120 beats per minute
4. Systolic blood pressure is less than 90mmHg
5. Penetrating injury to the head, neck, torso or proximal extremities
6. Two or more suspected proximal long bone fractures
7. Suspected flail chest
8. Suspected spinal cord injury or limb paralysis
9. Amputation (except digits)
10. Suspected pelvic fracture
11. Open or depressed skull fracture
12. Facial / Airway Burns, Electrical Burns, or Burns >15% BSA

Or, if there is evidence of the following mechanism of injury:

1. Ejection or partial ejection from an automobile
2. Death in the same passenger compartment
3. Extrication time in excess of 20 minutes
4. Vehicle collision resulting in 12 inches of intrusion in to the passenger compartment
5. Motorcycle crash >20 MPH or with separation of rider from motorcycle
6. Falls from greater than 20 feet (or 3 times the patients height)
7. Vehicle rollover (90 degree vehicle rotation or more) with unrestrained passenger
8. Vehicle vs. pedestrian or bicycle collision above 5 MPH

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Traumatic/Hypovolemic Shock

Considerations

- For the purpose of this protocol, shock is defined as:
 1. Systolic BP of 90mmHg or less; Or
 2. Systolic BP above 90mmHg and any of the following;
 1. Altered mental state (restlessness, inattention, confusion, agitation)
 2. Tachycardia (pulse greater than 100)
 3. Pallor
 4. Cold, clammy skin
- Do not allow procedures to delay transport. If transport is unavoidably delayed, IV's may be started prior to transport.

53 . If there is evidence of significant mechanism of injury and/or physical findings meeting Major Trauma criteria but the patient does not present with signs of shock, establish IV access with one (1) large bore IV and run at KVO rate.

54 . If the patient presents with signs of shock, establish IV access with two (2) large bore IV's and initiate infusion of Normal Saline. Infuse at a rate appropriate to keep BP above 90mmHg.

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**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Traumatic/Hypovolemic Cardiopulmonary Arrest

Considerations

Document total fluid infused on the pre-hospital care report.

1. Basic Life Support is initiated
2. Airway control
3. Transportation is initiated. *If the patient is accessible, time on scene should not exceed 10 minutes.*
4. Begin rapid infusion of Normal Saline via large bore catheter. Begin second infusion if possible. *IV attempts should not delay transport from the scene.*
5. Initiate the appropriate cardiac arrest protocol.

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ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Tension Pneumothorax

55 . Airway control procedures

56 . Perform pleural decompression using large bore over-the-needle catheter if there is evidence of the following signs resulting from suspected trauma:

- Respiratory distress with absent lung sounds; AND
- Cardiovascular compromise;
- Cardiopulmonary arrest
- Hypotension

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**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Head Trauma

Considerations

Consider neurological, toxicological, or medical etiology.

- 57 . If unconscious, airway control and ventilate at 12-16 respirations/minute. If signs of cerebral herniation develop, increase ventilation rate to 20 respirations/minute.
- 58 . If signs of shock, refer to Shock Protocol. (Traumatic or Non-traumatic, as appropriate.)
- 59 . If there is clinical documentation of hypoglycemia associated with unconsciousness, administer Dextrose 50% 50cc IV.
- 60 . If there is clinical indication of narcotic use associated with unconsciousness, administer Naloxone ET/IV/IM, to be administered in increments of 0.8mg doses until appropriate patient response (if suspected chronic narcotic user, initiate Naloxone at 0.4mg). Naloxone may be repeated up to 8mg.

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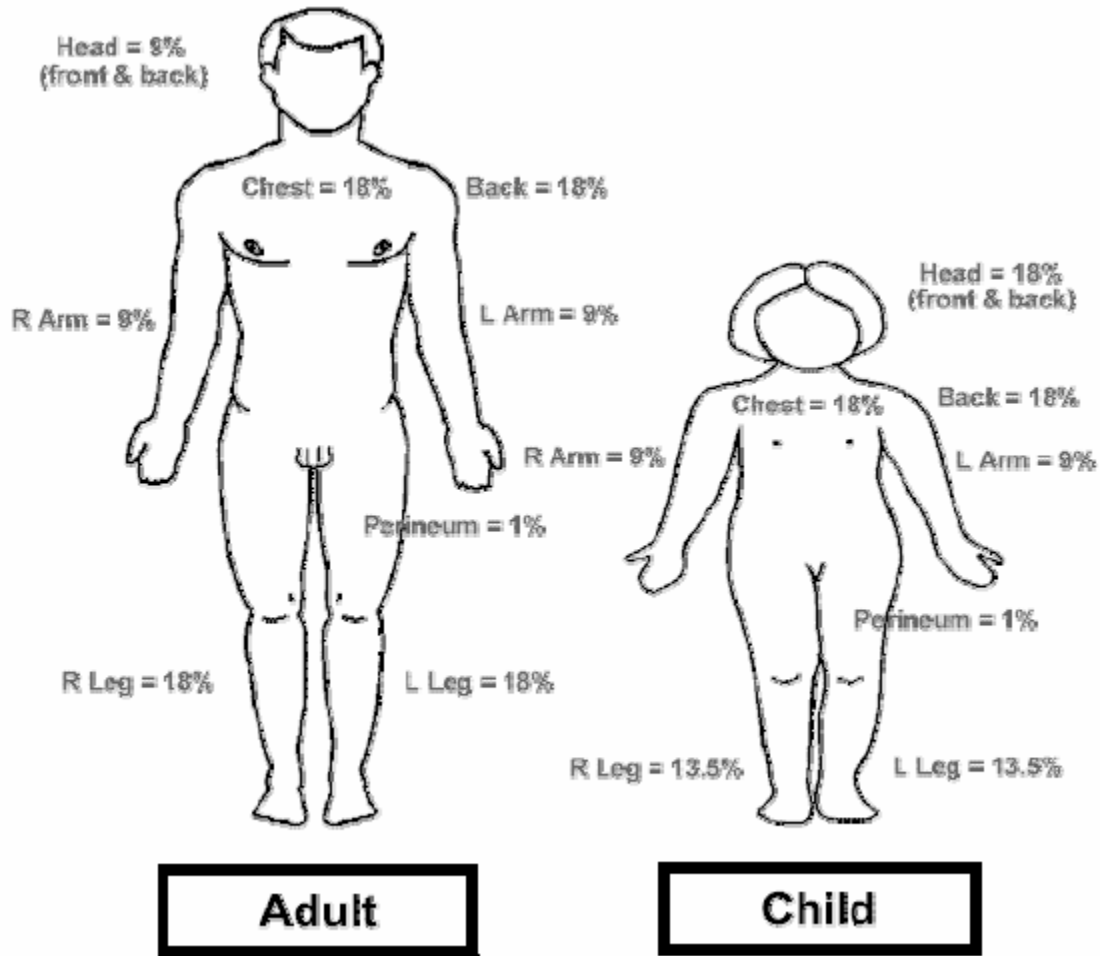
Burns

- 61 . Determine the type of burn and percentage of body surface area (BSA) as soon as possible;
- 62 . For thermal burns, stop the burning process and proceed to step 5.
- 63 . For electrical burns, ensure that the patient is not in contact with the source of current and proceed to step 5.
- 64 . For chemical burns, consider “Toxic Exposure” and proceed to step 5.
- 65 . If there is evidence of smoke inhalation, carbon monoxide poisoning, or airway burns, refer to “Respiratory Distress” or “Imminent Respiratory Arrest” as necessary.
- 66 . Transport. Consider transportation as indicated by “Trauma Transport Protocol”. Consider Air Medical Transport;
- 67 . Initiate IV access with large bore IV (avoid burn tissue if possible) and Normal Saline at KVO; If >15% BSA burn estimate, initiate infusion at 100cc/hr. If transport is delayed, IV access may be obtained prior to transport.

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**ATCHISON-HOLT AMBULANCE DISTRICT
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Burns Estimation of Body Surface Area Involvement



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Isolated Extremity Trauma

Considerations

- *For presenting Crush Injuries:*
- *Medical Control contact should be made as soon as practical;*
- *If prolonged extrication is anticipated, consider initiating two large bore IV's*
- *Consider 12-Lead EKG*

68 . Consider pain management refer to “Pain Management / Analgesia” protocol

69 . Sodium Bicarbonate 50 mEq IV

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ATCHISON-HOLT AMBULANCE DISTRICT

PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Major Trauma Transport Protocol

Considerations

- Patients meeting **Major Trauma** criteria should be transported to the **nearest designated Regional or Area Trauma Center** if the time elapsed between the estimated time of injury and the estimated time of arrival at the Trauma Center is **less than one hour**.
- If the transport time from the scene to the trauma center is more than 30 minutes, **CONTACT MEDICAL CONTROL**.
- Transport the patient to the **nearest hospital emergency department** if the patient is in **cardiac arrest**, has an **unmanageable airway**, or if an **on-line medical control physician** so directs.

PHYSICAL FINDINGS - Suspected to be Caused by Trauma

- Glasgow Coma Scale is less than or equal to 13
- Respiratory rate is less than 10 or more than 29 breaths per minute
- Pulse rate is less than 50 or more than 120 beats per minute
- Systolic blood pressure is less than 90mmHg

PHYSICAL FINDINGS

- Penetrating injury to the head, neck, torso or proximal extremities
- Two or more suspected proximal long bone fractures
- Suspected flail chest
- Suspected spinal cord injury or limb paralysis
- Amputation (except digits)
- Suspected pelvic fracture
- Open or depressed skull fracture
- Suspected head injury resulting in neurological compromise
- Facial / Airway Burns, Electrical Burns, or Burns >15% BSA

If YES: MECHANISM OF INJURY

- Ejection or partial ejection from an automobile
- 70. Death in the same passenger compartment
- 71. Extrication time in excess of 20 minutes
- 72. Vehicle collision resulting in (12 inches of intrusion in to the passenger compartment, steering wheel displacement, and/or starred windshield
- 73. Motorcycle/ATV/Bicycle crash >20 MPH or with separation of rider
- 74. Falls from greater than 20 feet (or 3 times the patients height)
- 75. Vehicle rollover (90 degree vehicle rotation or more) with unrestrained passenger
- 76. Vehicle vs. pedestrian or bicycle collision above 5 MPH

If NO: Evaluate Mechanism Of Injury

If YES:

The following should be transported directly to the Regional Trauma Center provided the time elapsed between the estimated time of injury and the estimated time of arrival at the Regional Trauma Center is less than one hour.

- Pediatric Trauma Patients < 12 Y/O
- Thoracic Trauma with Respiratory Distress or Signs of Shock
- Limb Amputation / Severe Crushing Injury Requiring Reimplantation or Reconstruction
- Unstable Multi Systems Trauma with Associated Open Pelvic Fracture
- Facial / Airway Burns, Electrical Burns, or Burns >15% BSA

If NO: Transport to Nearest Hospital ER

If a patient does not meet Major Trauma criteria but has sustained an injury and has one or more of the following "High Risk" criteria, CONTACT MEDICAL CONTROL:

- Patients with Bleeding Disorder (Hemophilia, Anticoagulants)
- Cardiac and/or Respiratory Disease
- Insulin Dependant Diabetes, Cirrhosis or Morbid Obesity
- Immunosuppressed Patient (HIV Disease, Transplant Patients and Patients on Chemotherapy Treatment)
- Age >55 Y/O
- Pregnancy

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ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Pain Management / Analgesia

Considerations

This protocol is indicated if the patient is experiencing pain due to fractures/dislocations, burns (without airway involvement), significant crushing injuries to limbs, abdominal pain (without suspected obstruction), renal colic, and cancer pain.

77 . Morphine Sulfate 2-10mg IVP, to be given in 2mg increments

78 . Demerol 25-50 mg IV, and Phenergen 12.5 to 25 mg IVP

Medical Director Approved: _____ Date: _____

**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Eclampsia with Active Seizures

- 79 . Position patient in left lateral recumbent if tolerated.
- 80 . Diazepam 5-10mg IV over 1-2 minutes; may be repeated once.
- 81 . ALS provider to withhold further Diazepam once the seizures have been controlled.
- 82 . Magnesium Sulfate 4gm/250cc in normal saline and run at 250cc/hr.
 - 1. If Blood Pressure 180/100 or over
 - 2. If patient is having active recurrent seizures
 - 3. If patient becomes lethargic or hypotonic, discontinue Magnesium Sulfate infusion.
- 83 . Adjust IV rate if needed
- 84 . Calcium Chloride 5 to 10 mEq IV (*only if respiratory depression is caused by the Magnesium Sulfate*)

Medical Director Approved: _____ Date: _____

ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Childbirth/Precipitous Delivery

- Assure ABCs
- Oxygen via non-rebreather mask
- Secondary survey
- Obtain pertinent history
 - Number of pregnancies/deliveries.
 - History of problems with pregnancy (vaginal bleeding, prior cesarean sections, high blood pressure, premature labor, premature rupture of membranes.
 - Last menstrual period and due date (if known).
 - Current complaints (onset of labor, timing of contractions, rupture of membranes, or urge to push.)
- Perform perineal examination if patient is at end stage labor (do not perform internal vaginal examination) Check for
 1. Vaginal bleeding or leakage of fluid
 2. Presence of meconium
 3. Crowning during a contraction
 4. Presenting part (head, face, foot, arm, cord)
 - If active labor, and no vaginal bleeding or crowning:
 1. Check for fetal heart tones
 2. Transport
 - If vaginal bleeding with no signs of shock (systolic >90mmHg):
 1. Transport
 2. Lactated Ringers or 0.9% Normal Saline at 125 ml/hour
 3. Cardiac monitor
 - If heavy vaginal bleeding with signs of shock (systolic <90 mmHg):
 1. Transport with patient in left lateral recumbent position
 2. Cardiac monitor
 3. IV lactated Ringers wide open.
 - If imminent delivery:
 1. Place mother in lithotomy position
 2. Drape mother
 3. Prepare for neonatal resuscitation
 4. Assist delivery
 5. Suction infant's mouth, then nose with bulb suction (if meconium stained fluid, suction baby's airway until clear before stimulating first breath).

ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

CHILDBIRTH

GUIDELINES FOR CARE (CONTINUED)

- Warm, dry, and stimulate infant
- Wrap infant in sterile drape or dry blanket
- Infuse mother's IV of lactated Ringers or 0.9% Normal Saline at 125 ml/hour
- Transport
- If prolapsed cord
- Place mother on back with hips elevated or place her in knee/chest position
- Place sterile gloved index and middle fingers into the vagina and push the infant up to relieve pressure on the cord
- Check cord for pulse
- Transport and notify receiving hospital of impending arrival
- If abnormal fetal presentation or decreased fetal heart tones
- 85. Place patient in left lateral recumbent position
- 86. Transport and notify receiving hospital of impending arrival
- 87. Attempt IV lactated Ringers or 0.9% Normal Saline en route and run at 125 ml/hour
- If delivery completed before arrival, or in-field:
 - Protect infant from fall and temperature loss
 - Check infant's vital signs (perform CPR or assist ventilations as necessary)
 - Clamp cord in two places, six inches from infant, and cut cord between clamps
 - Suction, warm, dry, and stimulate infant
 - Give infant to mother
 - Do not pull on cord or attempt to deliver placenta
 - Start IV lactated Ringers or 0.9% Normal Saline and run at 125 ml/hour
 - Transport
- Watch for external bleeding, place fundal pressure if placenta delivers
- Contact medical control for any questions or problems

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ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Neonatal Resuscitation

- For newborns requiring resuscitation whose amniotic fluid does not contain thick meconium, proceed to step 3.
- For newborns requiring resuscitation whose amniotic fluid does contain thick meconium and who are limp, apneic, or pulseless:
 88. Clear the airway using endotracheal intubation and directly suction the endotracheal tube.
 89. Repeat procedure until the endotracheal tube is clear of thick meconium up to a maximum of three (3) times.

NOTE: Do NOT replace the endotracheal tube once the airway has been cleared of thick meconium unless the newborn remains limp, apneic, or pulseless.

- Suction airway, followed by drying the baby and maintaining warmth.
- If color is normal or only peripheral cyanosis, no resuscitation indicated;
- If central cyanosis, provide 100% O₂ and assist ventilation as indicated.
- If respiratory rate >30, no resuscitation indicated.
- If respiratory rate <30, tactile stimulation and assist ventilation as indicated with BVM at 40-60/min. and 100% O₂.
- If pulse >100, no resuscitation indicated.
- If pulse 60-100, ventilate with BVM at 40-60/min. and 100% O₂.
- If after 1 minute, the pulse remains less than 80, begin chest compressions.
- If pulse <60, ventilate with BVM at 40-60/min. and 100% O₂, and begin chest compressions.
- If BVM not effective, establish airway control.
- If pulse remains <60 despite ventilation and chest compressions for 1 minute, obtain vascular access and give Epinephrine 1:10,000 0.01mg/kg (0.01cc/kg) IV, ET or IO; may be repeated every 3 minutes if pulse <60.

Medical Director Approved: _____ Date: _____

Pediatric-Medical

**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Respiratory Arrest/Imminent Respiratory Arrest

90 . Airway control procedures

91 . *If patient is intubated, secondary confirmation must be performed, at a minimum with End-tidal CO2 monitoring and Pulse Oximetry. Continuous CO2 monitoring is recommended.*

92 . Refer to appropriate protocol for further assessment and treatment.

Medical Director Approved: _____ Date: _____

**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Obstructed Airway, Unconscious

- 93 . BLS procedure.
- 94 . Direct laryngoscopy and remove foreign body using Magill Forceps
- 95 . Airway control procedures.
- 96 . Refer to appropriate protocol, or contact medical control.
- 97 . If unable to ventilate because of obstruction, perform cricothyrotomy with appropriately sized approved device.

Medical Director Approved: _____ Date: _____

**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Respiratory Distress Asthma/Bronchospasm/Croup/Epiglottitis

Considerations

98. If patient has stridor or drooling, do not initiate IV access without medical control.

99. Administration of bronchodilators may begin prior to IV initiation.

- Airway control.
- Pulse Oximetry.
- IV of normal saline at KVO if clinically indicated.
- Albuterol 2.5mg/3cc normal saline or Levalbuterol 0.63mg/3cc normal saline if less than 6 months of age or Levalbuterol 1.25mg/3cc normal saline if 6 months of age or greater via nebulizer, may repeat once after 10 minutes.
- Albuterol 2.5mg/3cc normal saline or Levalbuterol 0.63mg/3cc normal saline if less than 6 months of age or Levalbuterol 1.25mg/3cc normal saline if 6 months of age or greater via nebulizer, repeated every 10 minutes, as necessary.

Medical Director Approved: _____ Date: _____

**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Cardiopulmonary Arrest (Non-Traumatic)

Considerations

- *Biphasic defibrillation is an acceptable option if used according to the specific manufacturer's instructions.*
- *IV medications by bolus are followed by a 5-10cc bolus of normal saline. When practical, elevation of the arm is recommended.*

1. Initiate basic cardiac life support (BLS).
2. Follow appropriate sub-protocol:
 - 100 . Ventricular fibrillation or pulseless ventricular tachycardia
 - 101 . Asystole/Electromechanical dissociation/Pulseless electrical activity

Medical Director Approved: _____ Date: _____

ATCHISON-HOLT AMBULANCE DISTRICT

PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Ventricular Fibrillation/Pulseless Ventricular Tachycardia

Considerations

• *Paramedics may consider Amiodarone 5mg/kg/20cc normal saline, IVP or IO in place of Lidocaine.*

102 . Cardiac arrest standing orders.

103 . If arrest is witnessed:

- Immediately defibrillate **ONE TIME** at 2 joules/kg. If the defibrillator is not immediately available, do CPR until the defibrillator is available to shock.
- After **ONE** shock, resume CPR. After 5 cycles of CPR, recheck pulse and rhythm. If rhythm has not converted, continue CPR. Prepare to shock, establish airway control, and establish IV or IO access with normal saline.

104 . If arrest is unwitnessed or down time is greater than five minutes, perform at least 5 cycles of CPR.

105 . When defibrillator is available, check pulse, check rhythm, and, if indicated, defibrillate **ONE TIME** at 2 joules/kg making certain to continue CPR while defibrillator charges.

106 . Immediately resume CPR. After 5 cycles of CPR, recheck pulse and rhythm. If rhythm has not converted, continue CPR. Prepare to shock, establish airway control, and establish IV or IO access with normal saline.

107 . Defibrillate at 4 joules/kg making certain to continue CPR while defibrillator charges.

108 . Resume CPR immediately. Continue CPR stopping every 5 cycles to check pulse and

109 . rhythm. Shock **ONE TIME** when indicated and immediately resume CPR.

110 . Prepare to administer medications.

111 . Defibrillate at 4 joules/kg making certain to continue CPR while defibrillator charges.

112 . Resume CPR immediately.

113 . Epinephrine 1:10,000 0.01mg/kg IVP or IO, may be repeated every 3 minutes; ET dose is Epinephrine 1:1,000 0.1mg/kg

114 . If at any point, the rhythm converts to a supraventricular rhythm, and the patient has not received an anti-arrhythmic, administer Lidocaine 1mg/kg IVP, and then administer a drip of Lidocaine at 20mcg/kg/min.

115 . After 5 cycles of CPR, recheck pulse and rhythm. If indicated, defibrillate at 4 joules/kg, making certain to continue CPR while defibrillator charges.

**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Ventricular Fibrillation/Pulseless Ventricular Tachycardia (continued)

116 . Resume CPR immediately

117 . Lidocaine 1mg/kg IVP or IO, may be repeated at 1mg/kg every 3 minutes to a total dose of 3mg/kg

118 . After 5 cycles of CPR, recheck pulse and rhythm. If indicated, defibrillate at 4 joules/kg, making certain to continue CPR while defibrillator charges.

119 . Resume CPR immediately. Continue CPR stopping every 5 cycles to check pulse and rhythm. Shock **ONE TIME** when indicated and immediately resume CPR.

120 . If at any point after the administration of Lidocaine, the rhythm converts to a supraventricular rhythm, administer a Lidocaine infusion at:

- 20mcg/kg/min. if 1mg/kg of Lidocaine was used
- 40mcg/kg/min if 2mg/kg-3mg/kg of Lidocaine was used

Medical Director Approved: _____ Date: _____

ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Asystole/Pulseless Electrical Activity (PEA)

Considerations

- 121 .25% Dextrose 2cc/kg, if clinically indicated.*
- 122 .Naloxone 0.1MG/KG IV/IO/ET if clinically indicated. May be repeated up to 2mg.*
- 123 .Consider underlying causes of hypovolemia, hypoxia, hydrogen ion (acidosis), hypo or hyperkalemia, hypoglycemia, hypothermia, toxins, tamponade, tension pneumothorax, thrombosis, and trauma.*

1. Cardiac arrest standing orders.
2. Rhythm is checked in more than one lead before the interpretation of asystole is made.
3. If the rhythm is unclear and possibly low amplitude ventricular fibrillation, perform 5 cycles of CPR then consider defibrillation at 2 joules/kg making certain to continue CPR while defibrillator charges.
4. Airway control, ventilation, and IV/IO access with normal saline.
5. Resume CPR immediately. Continue CPR stopping every 5 cycles to check pulse and rhythm.
6. Epinephrine 1:10,000 0.01mg/kg IVP/IO; dose may be repeated every 3 minutes until there is a rhythm with a pulse. ET dose is Epinephrine 1:1,000 0.1mg/kg

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ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Bradycardia's Including 3rd Degree Heart Block

Considerations

- *Unstable denotes bradycardia combined with any of the following: chest pain, dyspnea, CHF, ischemia, infarction, age dependant hypotension, or signs of inadequate perfusion, such as; altered mental status (restlessness, inattention, confusion, agitation), weak or absent distal pulses, delayed capillary refill (greater than 2 seconds), pallor, or cold, clammy or mottled skin.*
- *Consider neurological, toxicological, or traumatic etiology.*

124 . Ventilate with 100% O2 and BVM.

125 . Perform chest compressions on infant or child if despite oxygenation and ventilation, heart rate remains less than 60 beats/min and there are signs of poor systemic perfusion.

126 . For patients with any bradycardia (including 3rd degree heart block) with a ventricular rate less than 60 beats/min and unstable;

1. Epinephrine 1:10,000 0.01mg/kg IV; may repeat same dose if inadequate response within 3 minutes.

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ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Non-Traumatic Shock (Cardiogenic/Septic)

Considerations

For the purpose of this protocol, shock is defined as signs of inadequate perfusion, such as:

- *Altered mental state (restlessness, inattention, confusion, agitation)*
- *Tachycardia (see pediatric vital signs supplement)*
- *Weak or absent distal pulses*
- *Delayed capillary refill (greater than 2 seconds)*
- *Pallor*
- *Cold, clammy skin, or mottled skin*

- Consider appropriate sub-protocol
 1. Tachycardia
 2. Altered Mental Status

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ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Tachycardia

Considerations

127. *The standing orders in this protocol are intended for patients with narrow (QRS less than or equal to 0.08 seconds) complexes in supraventricular tachycardia (ventricular rate greater than 180bpm; greater than 220bpm in infants) who are hemodynamically*
128. ***unstable***. *If the patient is hemodynamically stable or presents with a **wide-QRS tachycardia**, contact medical control immediately.*
129. ***Unstable*** *denotes supraventricular tachycardia (ventricular rate greater than 180bpm; greater than 220bpm in infants) combined with any of the following, chest pain, dyspnea, CHF, ischemia, infarction, age dependant hypotension, or signs of inadequate perfusion, such as; altered mental status (restlessness, inattention, confusion, agitation), weak or absent distal pulses, delayed capillary refill (greater than 2 seconds), pallor, or cold, clammy or mottled skin.*

In patients with hemodynamically unstable-SVT:

- If possible, attempt Vagal Maneuvers
- If vascular access is immediately available (<30seconds), administer Adenosine
 1. 0.1mg/kg rapid bolus (maximum single dose is 6mg); if tachydysrhythmia persists,
 2. 0.2mg/kg rapid bolus (maximum single dose is 12mg).
- If vascular access is not immediately available (>30seconds) or if tachydysrhythmia persists following maximum Adenosine dosage, perform synchronized cardioversion at 0.5 joules/kg; if tachydysrhythmia persists, 1.0 joules/kg once.

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ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Abdominal Pain

Considerations

130 . The ALS provider must consider all abdominal pain to be acute.

131 . If the patient is a female of any age, the potential for an OB-GYN emergency must be considered; the ALS provider should then refer to Special Considerations Toxemia of Pregnancy Childbirth/Precipitous Delivery, if appropriate.

132 . Transport samples of products of conception, if applicable

- Keep patient NPO
- If patient has evidence of blood loss or signs of shock, refer to Traumatic/Non-traumatic Shock Protocol, as appropriate.
- Prepare for transport.
- Consider Special Considerations Pain Management/Analgesia

Medical Director Approved: _____ Date: _____

ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Systemic Allergic Reactions/Anaphylaxis

- Fluid bolus of normal saline 20cc/kg IV bolus or IO if signs of shock
- If signs of shock or imminent airway obstruction, administer Epinephrine 1:1,000 0.01mg/kg SQ to a maximum dose of 0.3mg
- Diphenhydramine 1mg/kg slow IVP or IM (Maximum dose is 50mg)
- Albuterol 2.5mg/3cc normal saline via nebulizer
- Ipratropium 0.25-0.5mg/3cc normal saline
- Levalbuterol 0.63mg/3cc normal saline if less than 6 months of age, 1.25mg/3cc normal saline if 6 months of age or greater via nebulizer;
- Dopamine Infusion 400mg/250cc normal saline and started at 5-10mcg/kg/min., titrated to desired BP (maximum of 20mcg/kg/min.).

Medical Director Approved: _____ Date: _____

ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Altered Mental Status

Considerations

133. Consider neurological, toxicological, or traumatic etiology

- Obtain a field glucometer reading.
- If unable to obtain a field glucometer reading, draw a blood sample for the hospital
- For documented hypoglycemia:
 1. Administer Dextrose 25% 2cc/kg IVP, if no response in 5 minutes; repeat
 2. Dextrose 25% 2cc/kg IVP.
- When an IV route is unobtainable, administer Glucagon 0.1mg/kg IM to a maximum dose of 1mg.
- For suspected opioid overdose, administer Naloxone 0.1mg/kg ET, IVP, or IM to a maximum dose of 2mg; may be repeated up to 3 times.
- Airway control should be considered if no response to medical interventions above.

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ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Overdose

- Treat dysrhythmias, hypotension, seizures, or altered mental status according to appropriate protocol.
- If known or suspected overdose, attempt to identify source and bring to hospital
- Naloxone 0.1mg/kg ET, IVP, or IO; to a maximum dose of 2mg; may repeat 4 times
- Dextrose 25% 2cc/kg IV or IO
- Activated Charcoal 1gm/kg PO
- Sodium Bicarbonate 1mEq/kg IVP
- Sodium Bicarbonate 1-2mEq/kg in 250cc Normal Saline, run at 1cc/min
- Glucagon 0.1mg/kg IV or IM, up to 1mg; repeat as directed
- Calcium Chloride 20mg/kg slow IVP

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ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Pain Management / Analgesia

Considerations

This protocol is indicated if the patient is experiencing pain due to fractures/dislocations, burns (without airway involvement), significant crushing injuries to limbs, abdominal pain (without suspected obstruction), renal colic, and cancer pain.

134 .Morphine Sulfate 2-10mg IVP, to be given in 2mg increments **OR**

135 .Demerol 25-50 mg IV, and Phenergen 12.5 to 25 mg IVP

Medical Director Approved:_____ Date:_____

ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Status Epilepticus

Considerations

- *This protocol is indicated for patients in Status Epilepticus (Two or more seizures without a lucid interval or a continuous seizure lasting more than 5 minutes)*
- *The ALS provider will discontinue the administration of Diazepam as soon as the seizure stops, whether or not the entire ordered dosage has been administered.*

If known history of seizure disorder, proceed to step 1.

If hypoglycemia is suspected or history is unknown, proceed to step 2.

- If known seizure disorder, administer Diazepam 0.1mg/kg slow IV over 1 minute to a maximum dose of 10mg; may be repeated after 5 minutes. If IV route not available, give rectally via syringe without needle at dose 0.5mg/kg, up to 10mg; may be repeated after 10 minutes.
- If seizure continues, proceed to step 3.
- Obtain a field glucometer reading.
- If unable to obtain a field glucometer reading, draw blood sample for the hospital and
- For documented hypoglycemia:
 1. Dextrose 25% 2cc/kg IVP or if IV is unobtainable, administer Glucagon 0.1mg/kg IM up to a maximum dose of 1mg.
 2. If seizure continues, proceed to step 1.
 - If above actions do not terminate seizure, or respirations are depressed, reconsider airway control.

Medical Director Approved: _____ Date: _____

Pediatric-Trauma

ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Major Trauma
Considerations

136. *Initiating IV therapy should not delay transport. If transportation is unavoidably delayed, IV therapy may be started prior to transport.*
137. *A high index of suspicion must exist for hidden injuries even if the patient is initially hemodynamically stable.*

Indications

For patients presenting with any of the following **physical findings** which are directly attributed to a traumatic event:

- Pulse greater than normal range for patient's age (see pediatric vital signs supplement)
- Systolic blood pressure below normal range (see pediatric vital signs supplement)
- Respiratory status inadequate (central cyanosis, respiratory rate low for child's age, capillary refill time greater than two seconds)
- Glasgow Coma Scale is less than or equal to 13
- Penetrating injury to the head, neck, torso or proximal extremities
- Two or more suspected proximal long bone fractures
- Suspected flail chest
- Suspected spinal cord injury or limb paralysis
- Amputation (except digits)
- Suspected pelvic fracture
- Open or depressed skull fracture
- Suspected head injury resulting in neurological compromise
- Burns that involve 15% or more of the body surface (10% if associated with other injuries or the child is less than five years old) or facial/airway burns or, if there is evidence of the following **mechanism of injury**:
 1. Ejection or partial ejection from an automobile
 2. Death in the same passenger compartment
 3. Extrication time in excess of 20 minutes
 4. Vehicle collision resulting in 12 inches of intrusion in to the passenger compartment, steering wheel displacement, and/or starred windshield
 - 5.

**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Major Trauma (continued)

6. Motorcycle/ATV/Bicycle crash >20 MPH or with separation of rider
7. Falls from greater than 10 feet
8. Vehicle rollover (90 degree vehicle rotation or more) with unrestrained passenger
9. Vehicle vs. pedestrian or bicycle collision above 5 MPH

Initiate “Pediatric Major Trauma” Protocol

- Initiate transportation as soon as possible
- Consider Air Medical Transport;
- Establish vascular access and initiate infusion of Normal Saline according to the appropriate protocol;
- Refer to appropriate protocol for further treatment as necessary;
- Contact medical control as soon as practical.

Medical Director Approved: _____ Date: _____

ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Traumatic/Hypovolemic Shock

Considerations

○ *For the purpose of this protocol, shock is defined as signs of inadequate perfusion, such as:*

- *Altered mental state (restlessness, inattention, confusion, agitation)*
- *Tachycardia (see pediatric vital signs supplement)*
- *Weak or absent distal pulses*
- *Delayed capillary refill (greater than 2 seconds)*
- *Pallor*
- *Cold, clammy skin, or mottled skin*

1. Do not allow procedures to delay transport. If transport is unavoidable delayed, IV's maybe started prior to transport.

138 . If there is evidence of significant mechanism of injury and/or physical findings meeting Major Trauma criteria but the patient does not present with signs of shock, establish IV access with one (1) IV and run at KVO rate.

139 . If the patient presents with signs of shock, establish IV access, IO access if peripheral access not available and administer fluid bolus of 20cc/kg (*10cc/kg for neonates*) normal saline; repeat bolus as needed if shock persists.

Medical Director Approved: _____ Date: _____

**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Traumatic/Hypovolemic Cardiopulmonary Arrest

Considerations

1. Document total fluid infused on the pre-hospital care report.

140 . Basic Life Support is initiated

141 . Airway control procedures

142 . Transportation is initiated. *If the patient is accessible, time on scene should not exceed 10 minutes.*

143 . Normal Saline at 20cc/kg (*10cc/kg for neonates*) IV or IO bolus. *IV/IO attempts should not delay transport from the scene.*

144 . Initiate the appropriate cardiac arrest protocol.

Medical Director Approved: _____ Date: _____

ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Tension Pneumothorax

- Airway control
- Perform pleural decompression using appropriately sized over-the-needle catheter if there is evidence of the following signs resulting from suspected trauma:
 1. Respiratory distress with absent lung sounds; AND
 2. Cardiovascular compromise;
 3. Signs of inadequate perfusion, such as;
 4. Altered mental state (restlessness, inattention, confusion, agitation)
 5. Tachycardia (see pediatric vital signs supplement)
 6. Weak or absent distal pulses
 7. Delayed capillary refill (greater than 2 seconds)
 8. Pallor
 9. Cold, clammy, or mottled skin
 10. Cardiopulmonary arrest

Medical Director Approved: _____ Date: _____

ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Head Trauma

Considerations

2. *Consider neurological, toxicological, or medical etiology.*

- If unconscious, airway control and ventilate at 20-24 respirations/minute. If signs of cerebral herniation develop, increase ventilation rate to 30 respirations/minute.
- If signs of shock, refer to Shock Protocol. (Traumatic or Non-traumatic, as appropriate.)
- If there is clinical documentation of hypoglycemia associated with unconsciousness, administer Dextrose 25% 2cc/kg IV.
- If there is clinical indication of narcotic use associated with unconsciousness, administer Naloxone 0.1mg/kg IV up to 2mg

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ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

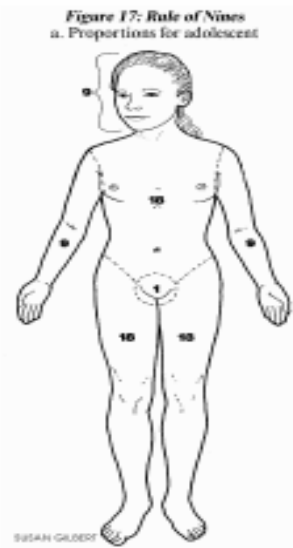
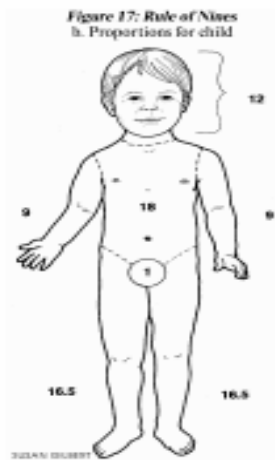
Burns

- Determine the type of burn and percentage of body surface area (BSA) as soon as possible;
- For thermal burns, stop the burning process and proceed to step 5.
- For electrical burns, ensure that the patient is not in contact with the source of current and proceed to step 5.
- For chemical burns, consider “Toxic Exposure” and proceed to step 5.
- If there is evidence of smoke inhalation, carbon monoxide poisoning, or airway burns, refer to “Respiratory Distress” or “Imminent Respiratory Arrest” as necessary.
- Transport. Consider transportation to a Regional Trauma Center as indicated by Major “Trauma Transport Protocol”.
- Consider Air Medical Transport;
- If >15% BSA burn estimate (10% if associated with other injuries or the child is less than five years old), then initiate IV access, or IO access if peripheral access not available (avoid burn tissue if possible) and administer Normal Saline at KVO. If transport is delayed, IV access may be obtained prior to transport.
- Contact medical control for infusion rate

Medical Director Approved: _____ Date: _____

**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

Estimation of Body Surface Area Involvement



Medical Director Approved: _____ Date: _____

ATCHISON-HOLT AMBULANCE DISTRICT

PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Major Trauma Transport Protocol

Considerations

3. Pediatric patients meeting Major Trauma criteria should be transported to the nearest designated Regional or Area Trauma Center capable of receiving pediatric patients if the time elapsed between the estimated time of injury and the estimated time of arrival at the Trauma Center is less than one hour.
4. If the transport time from the scene to the trauma center is more than 30 minutes, CONTACT MEDICAL CONTROL.
5. Transport the patient to the nearest hospital emergency department if the patient is in cardiac arrest, has an unmanageable airway, or if an on-line medical control physician so directs.

PHYSICAL FINDINGS Suspected to be Caused by Trauma

- Pulse greater than normal range for patient's age (see pediatric appendix)
- Systolic blood pressure below normal range (see pediatric appendix)
- Respiratory status inadequate (central cyanosis, rate low for child's age, capillary refill time > 2 seconds)
- Glasgow Coma Scale is less than or equal to 13

PHYSICAL FINDINGS

145. Penetrating injury to the head, neck, torso or proximal extremities
146. Two or more suspected proximal long bone fractures
147. Suspected flail chest
148. Suspected spinal cord injury or limb paralysis
149. Amputation (except digits)
150. Suspected pelvic fracture
151. Open or depressed skull fracture
152. Suspected head injury resulting in neurological compromise
153. Burns that involve 15% or more of the BSA (10% is associated with other injuries or the child is < 5 yrs. Old) or facial/airway burns

If YES:

If NO: Evaluate Mechanism Of Injury

MECHANISM OF INJURY

- Ejection or partial ejection from an automobile
- Death in the same passenger compartment
- Extrication time in excess of 20 minutes
- Vehicle collision resulting in 12 inches of intrusion in to the passenger compartment
- Motorcycle crash >20 MPH or with separation of rider from motorcycle
- Falls from greater than 10 feet
- Vehicle rollover (90 degree vehicle rotation or more) with unrestrained passenger
- Vehicle vs. pedestrian or bicycle collision above 5 MPH

If YES:

If NO: Transport To Nearest Hospital Emergency

Department

The following should be transported directly to the Regional Trauma Center provided the time elapsed between the estimated time of injury and the estimated time of arrival at the Regional Trauma Center is less than one hour.

- Pediatric Trauma Patients < 12 Y/O
- Thoracic Trauma with Respiratory Distress or Signs of Shock
- Limb Amputation / Severe Crushing Injury Requiring Reimplantation or Reconstruction
- Unstable Multi Systems Trauma with Associated Open Pelvic Fracture
- Facial / Airway Burns or Burns >15% BSA or Electrical Burns

If a patient does not meet Major Trauma criteria but has sustained an injury and has one or more of the following "High Risk" criteria, CONTACT MEDICAL CONTROL:

- Patients With Bleeding Disorder (Hemophilia, Anticoagulants)
- Cardiac and/or Respiratory Disease
- Insulin Dependant Diabetes, Cirrhosis Or Morbid Obesity
- Immunosuppressed Patient (HIV Disease, Transplant Patients And Patients On Chemotherapy Treatment)

Medical Director Approved: _____ Date: _____

Appendix A

ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

Helicopter Utilization Guidelines

CRITERIA FOR REQUESTING DIRECT PICKUP OF PATIENTS BY HELICOPTER

Helicopter Transport is an air ambulance and an extension of EMS. It should be considered in situations wherein the transport of critically ill or injured patient(s) to an appropriate facility will be faster by helicopter than by ground ambulance if time is determined to be a factor in patient care.

Police, Fire, or EMS will evaluate the situation or condition and if necessary, request that air medical services be dispatched. This is done anywhere in the District by radio with the **appropriate** Communication Center

- The helicopter can be requested to respond to the scene when:
- 6. ALS personnel request air medical transport. *OR*
- 7. BLS personnel request air medical transport when ALS is delayed or unavailable. *OR*
- 8. In the absence of an EMS provider, any emergency agency may request air medical services.

I M P O R T A N T

WHEN EMS ARRIVES, THEY SHOULD ASSESS THE SCENE. IF IT IS LATER DETERMINED BY THE HIGHEST TRAINED EMS PROVIDER ON THE SCENE THAT THE HELICOPTER IS NOT NEEDED, IT MUST BE CANCELLED AS SOON AS POSSIBLE. IF A HELICOPTER IS ALREADY ON THE SCENE, THE **ONLY** AGENCY THAT MAY CANCEL AN ADDITIONAL HELICOPTER IS THE HELICOPTER AGENCY ON THE SCENE.

OPERATIONAL CRITERIA FOR HELICOPTER TRANSPORT

The following operational criteria **MUST** be met prior to requesting a helicopter for direct pickup of patients:

- Ground transportation to the appropriate critical care facility will exceed **thirty (30) minutes**.
- The helicopter can be airborne and return to the **nearest appropriate** hospital faster than an ambulance can transport the patient(s) to the **nearest appropriate** hospital.
- A proper helicopter-landing site is available

Appropriate utilization of helicopter resources at an emergency scene includes, but is not limited to:

- A patient's condition warrants transportation to a specialty care facility as indicated by specific State or the helicopter can complete such transportation faster than ground transportation.
- A Multiple Casualty Incident (MCI) threatens to overload local capabilities.
- Ground transportation is compromised.
- Difficult access situations such as wilderness rescue, ambulance access or egress impeded at the scene by road conditions, weather or traffic, or other situations cleared by the flight team.
- Ground providers should notify dispatch if more than one patient requires air transport. If available, one helicopter will be dispatched per critical patient requiring air transport.

Note: Patients in cardiac arrest **Will Not** be transported by helicopter - unless a situation exists where air transport would be faster than ground transport to the **Nearest** hospital.

Medical Director Approved: _____ Date: _____

Appendix B

(Special Procedures)

ATCHISON-HOLT AMBULANCE DISTRICT

PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

EZ IO ADULT / PEDIATRIC

Training:

The EZ-IO AD® & EZ-IO PD® infusion systems require specific training prior to use.

INDICATIONS:

EZ-IO AD® (40 kg and over) & EZ-IO PD® (3 – 39 kg)

- Immediate vascular access in emergencies.
- Intravenous fluids or medications are urgently needed and a peripheral IV cannot be established in 2 attempts or 90 seconds **AND** the patient exhibits one or more of the following:
 1. An altered mental status (GCS of 8 or less)
 2. Respiratory compromise (SaO₂ 90% after appropriate oxygen therapy, respiratory rate < 10 or > 40 min)
 3. Hemodynamic instability (Systolic BP of < 90).
 - EZ-IO AD® & EZ-IO PD® should be considered PRIOR to peripheral IV attempts in the following situations:
 1. Cardiac arrest (medical or traumatic)
 2. Profound hypovolemia with alteration of mental status
 3. Patient in extremis with immediate need for delivery of medications and or fluids.

CONTRAINDICATIONS:

Fracture of the bone selected for IO infusion (*consider alternate site*)

Excessive tissue at insertion site with the absence of anatomical landmarks (*consider alternate site*)

Previous significant orthopedic procedures (*IO within 24 hours, prosthesis - consider alternate tibia*)

Infection at the site selected for insertion (*consider alternate site*)

CONSIDERATIONS:

- **Flow rate:** Due to the anatomy of the IO space, flow rates may appear to be slower than those achieved with an IV catheter.
 - a. Ensure the administration of an appropriate rapid **SYRINGE BOLUS (flush)** prior to infusion **NO FLUSH = NO FLOW**
 - b. Rapid syringe bolus (flush) the EZ-IO AD® with 10 ml of normal saline
 - c. Rapid syringe bolus (flush) the EZ-IO PD® with 5 ml of normal saline
 - d. Repeat syringe bolus (flush) as needed
 - e. To improve continuous infusion flow rates always use a syringe, pressure bag or infusion pump
- **Pain:** Insertion of the EZ-IO AD® & EZ-IO PD® in conscious patients has been noted to cause mild to moderate discomfort (usually no more painful than a large bore IV). However, IO Infusion for conscious patients has been noted to cause severe discomfort
 - a. Prior to IO syringe bolus (flush) or continuous infusion in alert patients, **SLOWLY** administer Lidocaine 2% (Preservative Free) through the EZ-IO hub. *Ensure that the patient has not allergies or sensitivity to Lidocaine.*
 - b. EZ-IO AD® Slowly administer 20 – 40 mg Lidocaine 2% (Preservative Free)
 - c. EZ-IO PD® Slowly administer 0.5 mg /kg Lidocaine 2% (Preservative Free)

ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS

PRECAUTIONS:

The EZ-IO AD® & EZ-IO PD® are not intended for prophylactic use

EQUIPMENT:

- EZ-IO® Driver
- EZ-IO AD® or EZ-IO PD® Needle Set
- Alcohol or Betadine Swab
- EZ-Connect® or Standard Extension Set
- 10 ml Syringe
- Normal Saline (or suitable sterile fluid)
- Pressure Bag or Infusion Pump
- 2 % Lidocaine (preservative free)
- EZ-IO® Yellow wristband

PROCEDURE:

If the patient is conscious, advise of EMERGENT NEED for this procedure and obtain informed consent

1. Wear approved Body Substance Isolation Equipment (BSI)
2. Determine EZ-IO AD® or EZ-IO PD® Indications
3. Rule out Contraindications
4. Locate appropriate insertion site (**Proximal Tibia**)
5. Prepare insertion site using aseptic technique
6. Prepare the EZ-IO® driver and appropriate needle set
7. Stabilize site and insert appropriate needle set
8. Remove EZ-IO® driver from needle set while stabilizing catheter hub
9. Remove stylet from catheter, place stylet in shuttle or approved sharps container
10. Confirm placement
11. Connect primed EZ-Connect®
12. Slowly administer appropriate dose of Lidocaine 2% (Preservative Free) IO to conscious patients
13. Syringe bolus (flush) the EZ-IO® catheter with the appropriate amount of normal saline.
14. Utilize pressure (syringe bolus, pressure bag or infusion pump) for continuous infusions where applicable
15. Begin infusion
16. Dress site, secure tubing and apply wristband as directed
17. Monitor EZ-IO® site and patient condition – Remove catheter within 24 hours.

Medical Director Approved: _____ Date: _____

**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

12 Lead ECG Monitoring

Introduction:

Prehospital 12-lead electrocardiograms (ECG's) benefit patient care by alerting receiving physicians to potential thrombolytic candidates, by decreasing the time to in hospital thrombolytic administration, and by providing a baseline ECG for comparison.

Indications:

- o Conscious, stable patients presenting with:
 - a. Chest pain or pressure of presumed cardiac etiology
 - b. Shortness of breath of presumed cardiac etiology

Contraindications:

- f. Patients who have been subjected to trauma

Precautions:

1. Do not significantly delay transport to conduct test.
2. On female patients, always place leads V3-V6 under breast rather than on the breast.
 1. Never use the nipples as reference points for electrode location as nipple locations may vary widely.
 2. A "normal" ECG does not definitively rule out an MI nor should it be justification for non-transport.

Procedure:

- o Whenever possible, attempt to obtain 12-lead with patient in supine position. If patient does not tolerate, place in semi-reclining or sitting position.
- o Input patient name, sex, and age. Leave ECG size at preset x1.
- o Prep skin and shave hair as necessary.
- o Apply electrodes as follows and attach the appropriate lead to an electrode:

Limb (extremity)

Right Arm (RA) – Right Wrist

Right Leg (RL) – Right Ankle

Left Arm (LA) – Left Wrist

Left Leg (LL) – Left Ankle

Leads Precordial (Chest) Leads

V1 – 4th intercostal space to the right of the sternum

V2 – 4th Intercostal space to the left of the sternum

V3 – Directly between leads V2 and V4

V4 – 5th intercostals space at midclavicular line

V5 -- Level with V4 at Left anterior axillary line

V6 – Level with V5 at Left midaxillary line

- o Secure the cable with the cable clasp to an item of the patients clothing.
- o Attempt to obtain the 12-lead while vehicle is not moving. Ask the patient to remain motionless for 10 seconds (it is okay to breathe). Acquire and print 2 copies of the 12-lead ECG report.
- o If the monitor detects signal noise (such as patient motion or a disconnected electrode), the 12-lead acquisition is interrupted until noise is removed. Take appropriate action as required (such as reconnecting leads).
- o Notify receiving hospital immediately upon arrival at hospital that 12-lead has been performed and leave on copy with receiving physician.

Medical Director Approved: _____ Date: _____

**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS
CHEST DECOMPRESSION**

Indications:

- To relieve respiratory compromise associated with one or more of the following:
 3. Absent, or greatly decreased breath sounds
 4. Distended neck veins
 5. Falling systolic blood pressure
 6. Narrowing pulse pressure
 7. Central Cyanosis
 8. Tracheal Deviation to unaffected side
 9. Pulseless electrical activity
 10. Increased tympany
 11. Increased respiratory difficulty
 12. Subcutaneous Emphysema
 13. Multiple rib fractures

Precautions:

- Always insert needle over (cephalic to) rib to avoid neurovascular bundle.
- The 14 gauge 2 inch IV catheter must be used for this procedure

Procedure:

2. This procedure may be preformed on any patient in extremis prior to physician order.
3. On the appropriate side:
 - a. Identify the 2nd intercostals space
 - b. Swab with Provodone Iodine (Betadine) at midclavicular line.
4. Needle insertion
 - a. In adults, use a 14 gauge 2 inch needle through catheter
 - b. Position tip of needle in incision and insert
 - c. Advance needle into chest at 45 degree angle to the chest wall and parallel to sternum. At pleural cavity a slight “give” is felt.
 - d. Advance further into chest until bevel clears pleura. Do not advance the needle any further than is necessary to advance the catheter.
5. Advance the catheter over the needle and then remove needle.
6. Secure catheter to chest.
7. Notify medical control that the procedure has been performed.

Pediatric Considerations:

1. In children < 12 years, use a 14 gauge 1 ¾” needle through catheter instead.

Special Notes:

- Rush of air and/or tube fogging and/or patient improvement indicates correct placement.
- In the majority of circumstances, bilateral decompression will be required.
- Once needle is place, pre-hospital personnel should not remove it.
- Document procedure on Patient Care Report.

Medical Director Approved: _____ Date: _____

**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

SPINAL MOTION RESTRICTION

The following policy and procedure is to be followed for all patients with potential or actual injury to any part of the spine. Airway and ventilation are paramount, and none of the guidelines listed below are intended to compromise or prevent maintenance of these vital functions.

INDICATIONS

- Mechanism of injury sufficient to produce spinal trauma (e.g. significant falls, significant MVA's, direct trauma to head, neck, back, etc.) OR
- Significant acute neck or back pain or tenderness on exam of unclear etiology, OR
- Evidence of acute motor/sensory abnormalities in the extremities

OMISSION CRITERIA

If NONE of the above indications are present and if significant spinal trauma is NOT suspected and if the patient meets ALL of the following criteria, then spinal precautions are not needed.

- Normal neurologic exam
 - a. Alert
 - b. Oriented to person, place, time, and events
 - c. Normal sensory and motor functions
- Absence of neck or spinal pain by patient report
- Absence of Acute Stress Reaction
- Patient is able to communicate and is clearly understood
- Clear of intoxication from alcohol or other intoxicating substances that obviously impairs the patient's ability to make proper judgments
- Absence of any major pain which could distract patient's ability to appreciate neck or spine pain
- No tenderness on palpation of the cervical, thoracic, or lumbar spine

The following procedure is to be used to properly motion restrict the patient when injury to the cervical spine is possible

- The neck must be maintained in a neutral position at all times by direct manual and/or mechanical means. DO NOT APPLY TRACTION AT ANY TIME
- While maintaining the neutral position, you may apply an APPROVED mechanical adjunct to further stabilize the neck prior to or upon placing the patient on a long spine board. The following devices are approved adjuncts for cervical spine motion restriction
 1. Kendrick Extricating Device (KED)
 2. Rigid cervical collar, properly fitted
 3. Rolled Towel, or blanket roll, properly applied
- As soon as practical, the patient will be placed supine on a long spine board. The following such devices are approved.
 1. Scoop stretcher
 2. Long Spine Board (wood or other equivalent radiolucent material)
 3. Stokes litter (high angle rescue, traversing over rough terrain only)
 4. Full body vacuum splint

**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS
SPINAL MOTION RESTRICTION (continued)**

PROCEDURE

- Straps must also be placed across the patient’s chest, pelvis, and legs to secure their body to the long spine board. CAUTION: It is dangerous to secure the head of the BODY I allowed to move on the spine board. This will subject the neck to unacceptable torque and bending. Airway secretions and vomitus are to be cleared using suction devices. If necessary, the patient may be log rolled together with the motion restriction device for the purpose of airway maintenance.
- Once the patient is on the long spine board so they cannot slip around on it lateral neck supports such as towel rolls, headbed, or other equivalent must be applied and the patient’s head taped or otherwise secure across the forehead and collar

The following procedure is to be used to motion restrict the thoracic and lumbar spine when injury to the cervical spine is highly unlikely:

154 . Suspected cervical spine problems are to be managed as above. The spine must be maintained in a neutral position at all times by direct manual and/or mechanical means. If the cervical spine has been cleared, either because of mechanism of injury isolated to the lower spine, such as direct trauma only to the lumbar spine, or because of other factors that make cervical spine injury extremely unlikely, then cervical motion restriction is not necessary

155 . As soon as practical, the patient will be carefully placed on a long spine board. The following such devices are approved:

1. Scoop stretcher
2. Long Spine Board (wood or other equivalent radiolucent material)
3. Stokes litter (high angle rescue, traversing over rough terrain only)
4. Full body vacuum splint

The patient must be securely fastened to the long spine board with straps across the chest, pelvis, and legs to prevent any torque or twisting of any part of the spine. Airway secretions and vomitus are to be cleared using suction devices. If necessary, the patient may be log rolled together with the motion restriction equipment for the purpose of airway maintenance.

Notes:

- A “Mechanism of Injury sufficient to produce spinal trauma” refers to “violent impact forces that are clearly capable of damaging the bony spinal column” such as a high velocity vehicle crash, a fall from three times the height of the patient onto a hard surface, or a high velocity gunshot wound near the spine. All of these patients should be motion restricted regardless of the lack of signs or symptoms.
- An “Acute Stress Reaction” refers to the fight or flight response that the victim of trauma may experience immediately following the incident. There may be a temporary pain masking effect that reduces or eliminates the victim’s ability to perceive the injury. The victim often appears dazed or confused and may not be able to think clearly. An acute stress reaction may last several minutes to an hour or longer.
- The elderly may have altered perception of pain and therefore may not report the same intensity of symptoms as younger patients. Therefore extra caution is in order when assessing elderly patients.

**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

SPINAL MOTION RESTRICTION (continued)

- Keep in mind that patients who are motion restricted properly on a long spine board with cervical motion restriction will not be able to reliably protect their airway in the event that they vomit. Therefore it is imperative that a working suction device be handy to clear vomit from the patient's upper airway.
- The mere smell of alcohol does not mean that the patient is intoxicated. However, if there is any question about whether or not the patient is intoxicated, then the patient should be treated as if he/she has a spine injury, at least until he/she is "calm, cooperative, sober, and alert enough to give a reliable exam.
- When treating injured patients, field personnel must keep in mind that clear, unobstructed x-rays of the spine are essential for proper hospital evaluation of the injured patient. With this in mind and faced with a clear choice between radiopaque (e.g. steel, thick aluminum) and radiolucent (e.g. plastic, wood) motion restriction devices, the latter should be used. On the other hand, proper emergent handling of the patient at the scene may preempt this consideration and require the use of devices of a higher radiodensity.

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**ATCHISON-HOLT AMBULANCE DISTRICT
PRE-HOSPITAL MEDICAL PROTOCOLS & STANDING ORDERS**

EXTERNAL PACEMAKER

INDICATIONS:

- Symptomatic Bradycardia unresponsive to atropine
- Asystole
- Pulseless Idioventricular rhythm

CONTRAINDICATIONS:

- Hypothermia
- Children <14

PROTOCOL:

CONSCIOUS OR SEMI-CONSCIOUS PATIENTS WITH A PULSE:

- 156 . Connect pacing electrodes and cables
- 157 . Contact medical control
- 158 . Sedate patient by administering Versed (Midazolam) in 2mg increments
- 159 . Begin pacing at a rate of 70 with current output at 20 mAmps
- 160 . Increase current output by 20 mAmps every 30 seconds until cardiac capture occurs, the patient complains of significant pain from the pacing, or maximal output is reached.
- 161 . If capture occurs, reassess peripheral pulses and vital signs

PULSELESS OR UNCONSCIOUS PATIENTS:

- If pulseless, interrupt chest compressions briefly to apply pacing electrodes to chest.
- Initiate pacing at a rate of 100 and maximum current output
- Once pacing has begun (as indicated by chest wall twitching), interrupt chest compressions and assess peripheral pulses. If pulse is present, discontinue chest compressions and assess blood pressure. If pulse is absent, resume chest compressions
- Contact medical control

NOTES:

Remove any nitroglycerine patches or pads before pacing or defibrillating

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