100-22 ACAD Emergency Medical Responder

Requirements for Patient Care:

- Must hold a current issued Andrew County Ambulance District First Responder Card or EMR Card
- Must adhere to the guidelines set forth in the Andrew County Ambulance District EMR Guidelines
- Must adhere to the guidelines set forth in the Andrew County Ambulance District EMS Treatment Guidelines.

Requirements to Operate an Ambulance in an Emergency Situation:

- Meet Requirements above for Patient Care.
- Valid Missouri Driver's License
- Proof of experience in driving emergency vehicles

EMR's who meet the Requirements for Patient care may perform patient assessment to their level of training and utilize the following EMS Treatment Guidelines:

- 100-02 – General Patient (Treatments indicated with an [EMR])
- 200-02 – Adult Cardiac Arrest
- 200-04 – Pediatric Cardiac Arrest
- 200-26 – Environmental Emergency (Basic Life Support) Only
- 300-02 – Burns (Basic Life Support) Only
- 300-06 – Extremity Injuries (Basic Life Support) Only
- 300-08 – General Trauma (Basic Life Support) Only
- 800 – Any Procedure marked as Emergency Medical Responder or EMR under authorization

Any care rendered at the EMR Level will be documented and sent to the Ambulance District on a EMR Care form

100-02 – Universal Patient Care

Note: All patients begin with this guideline and move to additional appropriate guidelines based on findings during this guideline.

Scene Assessment

- Ensure scene safety for yourself, your partner, your patient, and bystanders.
- Universal precautions for you and your partner(s).
- Assess the need for additional help. (First Responders, Fire Department, law Enforcement, Additional Crews, etc.)
- Assess the number of patients and begin triage if MCI.

Primary Assessment

Consider Associated Trauma:

- Cervical spine precautions, if trauma is suspected, including manual in line immobilization and placement of an appropriately sized cervical collar.

Assess Level of Consciousness:

- Assess AVPU (Alert – Verbal Responsive – Painful Response – Unresponsive)
- Assess GCS
  - Eye Opening (4-Spontaneously 3-To Voice 2-To Pain 1-None)
  - Verbal (5-Oriented 4-Confused 3-Inappropriate Words 2-Incomprehensible 1-None)
  - Motor (6-Obeys 5-Localizes pain 4-Withdraws 3-Flexion 2-Extension 1-None)

Assess Airway

- Ensure a patent airway, if not consider:
  - [EMR/BLS/ALS] Head tilt or Jaw Thrust
  - [EMR/BLS/ALS] Oropharyngeal airway placement
  - [BLS/ALS] Nasopharyngeal airway placement
  - [BLS/ALS] King airway placement or I-Gel airway
  - [ALS] Endotracheal tube placement
  - [ALS] Cricothyrotomy

Assess Breathing

- Ensure adequate rate, depth, and effectiveness of breathing, if not consider:
  - [EMR/BLS/ALS] Assist ventilation with bag valve mask
- Ensure adequate oxygenation, if not consider:
  - [EMR/BLS/ALS] Oxygen Nasal Cannula 2 lpm to 6 lpm
  - [EMR/BLS/ALS] Oxygen via Non Rebreather Mask 10 lpm to 15 lpm
  - [ALS] CPAP
- Assess breath sounds

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Assess Circulation

- Ensure palpable pulse, if not perform immediately:
  - [EMR/BLS/ALS] Manual chest compressions based on current AHA guidelines
  - [EMR/BLS/ALS] Mechanical chest compressions based on current AHA guidelines
- Assess for arterial bleeding or uncontrolled bleeding

Transport Decision:

- If any abnormalities are found in the Primary Assessment, consider rapid transport to closest appropriate Emergency Department

Secondary Assessments:

- Initial Vital Signs with SAO2 monitoring
- Head to toe physical assessment and expanded focused assessment based on complaint or history.
- History of present illness
- SAMPLE history and OPQRST
- [ALS] Consider 4 lead EKG, 12 Lead, Right sided 12 lead or 15 Lead EKG if indicated
- [ALS] Consider ETCO2 monitoring if indicated
- [BLS/ALS] Consider Blood Sugar check if any decreased level of consciousness

Intravenous Access: (Performed by ALS)

- If one of the following conditions are met IV access may be performed:
  - Need for replacement of fluid
  - Need access for medications or anticipated need for medication
  - Traumatic Injuries
  - Discretion of the Paramedic/RN

***** Follow Appropriate Protocol based on findings during Primary & Secondary Assessment**

Ongoing Assessments and Transport:

- Unless contraindicated place patient into position of comfort
- Secure for transport
  - Secured with straps to stretcher (Preferred Method)
  - Secured with seatbelt in jump seat, CPR Seat, or Bench seat
- Monitor patient's condition as needed during transport and follow appropriate protocols as needed
- Reassess Vital Signs
  - Unstable patient requires every 5 to 10 minutes
  - Stable require every 15 to 20 minutes with a minimum of 2 total sets
- Contact receiving Emergency Department and give patient report

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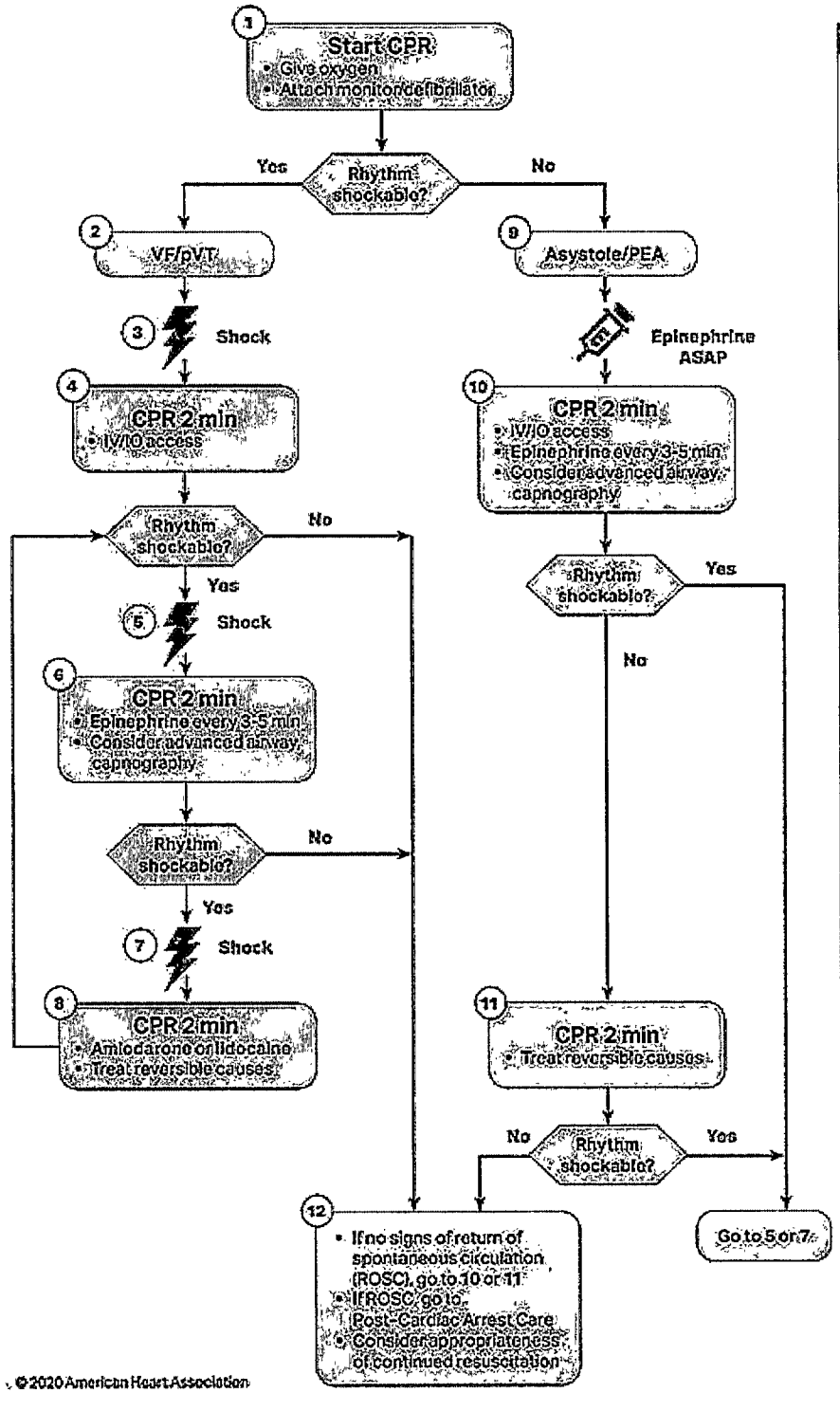
200-02 Adult Cardiac Arrest

Adult Cardiac Arrest Algorithm (VF/pVT/Asystole/PEA)



CPR Quality

- Push hard (at least 2 inches [5 cm]) and fast (100-120/min) and allow complete chest recoil.
- Minimize interruptions in compressions.
- Avoid excessive ventilation.
- Change compressor every 2 minutes, or sooner if fatigued.
- If no advanced airway, 30:2 compression-ventilation ratio.
- Quantitative waveform capnography
  - If $PETCO_2$ is low or decreasing, reassess CPR quality.

Shock Energy for Defibrillation

- Biphasic: Manufacturer recommendation (eg, initial dose of 120-200 J); if unknown, use maximum available. Second and subsequent doses should be equivalent, and higher doses may be considered.
- Monophasic: 360 J

Drug Therapy

- Epinephrine IV/IO dose: 1 mg every 3-5 minutes
- Amiodarone IV/IO dose: First dose: 300 mg bolus. Second dose: 150 mg.
  or
  Lidocaine IV/IO dose: First dose: 1-1.5 mg/kg. Second dose: 0.5-0.75 mg/kg.

Advanced Airway

- Endotracheal intubation or supraglottic advanced airway
- Waveform capnography or capnometry to confirm and monitor ET tube placement
- Once advanced airway in place, give 1 breath every 6 seconds (10 breaths/min) with continuous chest compressions

Return of Spontaneous Circulation (ROSC)

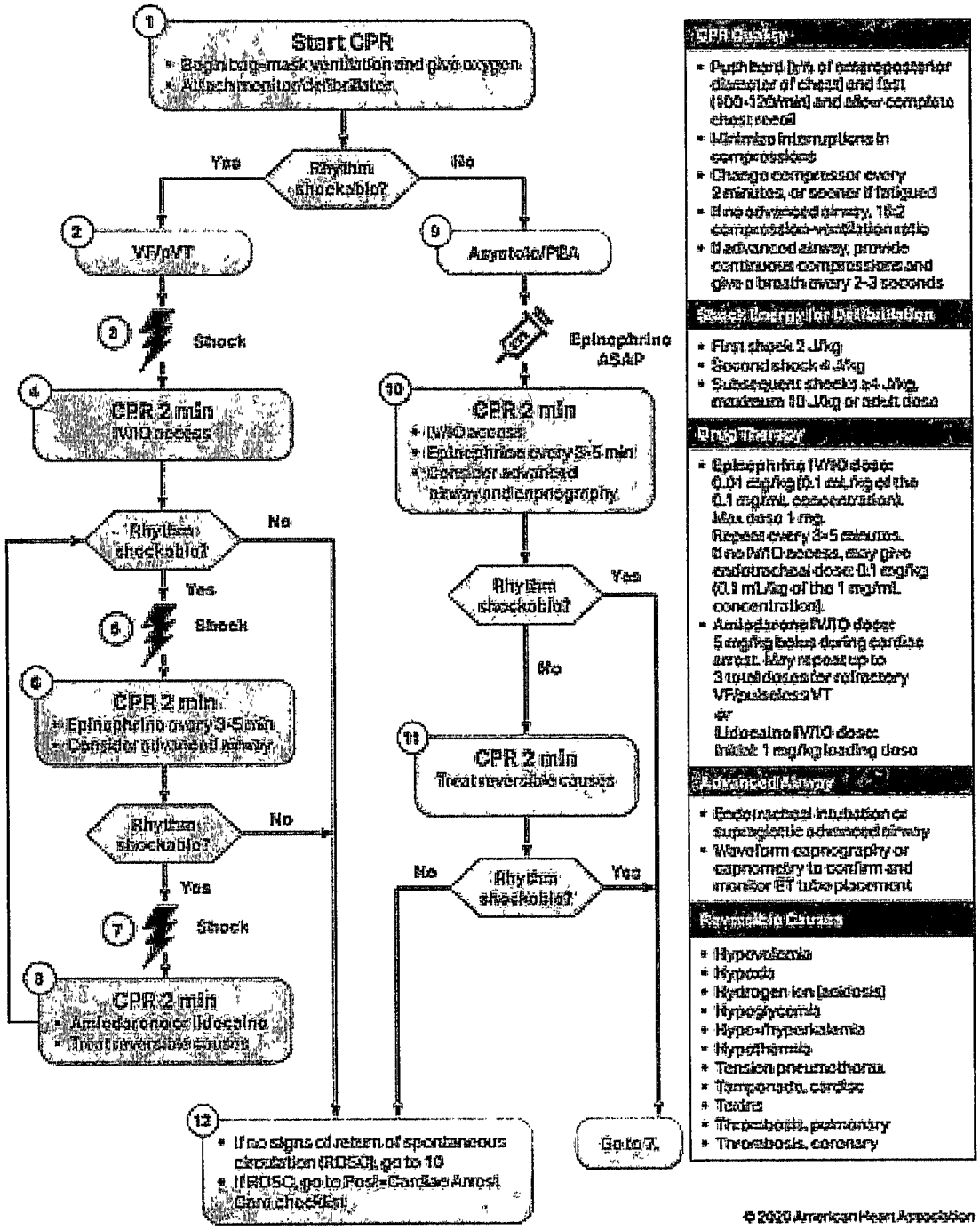
- Pulse and blood pressure
- Abrupt sustained increase in $PETCO_2$ (typically ≥40 mm Hg)
- Spontaneous arterial pressure waves with intra-arterial monitoring

Reversible Causes

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

200-04 Pediatric Cardiac Arrest

Pediatric Cardiac Arrest Algorithm



200-26 Hyperthermia / Heat Exposure

Definitions

- **Heat Cramps**: are minor muscle cramps usually in the legs and abdominal wall. Patient temperature is normal.
- **Heat Exhaustion**: has both salt and water depletion usually of a gradual onset. As it progresses tachycardia, hypotension, elevated temperature, and very painful cramps occur. Symptoms of headache, nausea and vomiting occur. Heat exhaustion can progress to heat stroke
- **Heat Stroke**: occurs when the cooling mechanism of the body (sweating) ceases due to temperature overload and/or electrolyte imbalances. Patient temperature is usually
- **Heat Syncope**: is a transient loss of consciousness with spontaneous return to normal mentation attributable to heat exposure

Basic Life Support:

- Move patient to cooler area if possible.
- Remove restrictive clothing.
- Passive cooling techniques
- If alert and oriented small sips of cool liquids

Advanced Life Support:

- If temperature is > 104°F consider active cooling
  - Misting with tepid water and fanning
  - Ice packs to truncal areas (Not directly to skin)
- 250cc to 500cc Fluid bolus if lungs are clear.

300-02 Burns

Basic Life Support:

- Ensure patient is removed from heat source or chemical source – Your safety is first!
- Initiate IMMEDIATE RAPID Transport if any of the following present:
  - Singed nasal hair
  - Soot in or around mouth
  - Hoarseness or stridor
- Chemical burns: Remove clothing and flush with copious amounts of water for 20 minutes.
- Calculate type of burns and amount affected.
- Cover affected areas with burn dressings

Advanced Life Support:

- Fluid replacement is essential on all burns greater than first degree. Use Lactated ringers and ensure that you document how much you give so ED can figure into their fluid replacement.
- Pain control as per Pain Control Guideline

300-06 Extremity Injuries

Basic Life Support

- Evaluate all extremities for potential injury (blunt/open soft tissue injuries, fractures, dislocations, and neurovascular impairment). Monitor the patient for signs/symptoms of shock especially if pelvic or long bone fractures exist.
- Cover wounds with dry, sterile dressing.
- Control external hemorrhage with direct pressure. If direct pressure proves ineffective, consider immediately applying a tourniquet to affected limb.
- Splint obvious/potential fractures in place if time allows and monitor distal neurovascular status. Extremity fractures with vascular compromise require attempted reduction prior to definitive splinting and transport.

Amputations:

- Wound care, hemorrhage control, and splinting per above.
- Amputated or avulsed parts should be wrapped dry in gauze, placed in a sealed plastic bag or wrapped in plastic and kept cool by placing on ice or a cold pack and transported with the patient to the hospital.
- Transport to Trauma Center with re-attachment capabilities.

Advanced Life Support:

- Follow Fluid Replacement from Trauma Guideline.
- Aggressive pain management per Pain Control Guideline

300-08 General Trauma

Includes but not limited to:

- Head Injuries
- Hemorrhagic Shock

Basic Life Support

- Control Major Bleeding
- Cover minor lacerations / Abrasions as needed

Advanced Life Support:

- Follow Fluid Replacement from Trauma Guideline.
- Aggressive pain management per Pain Control Guideline

800-06 Oropharyngeal Airway

 | Created: September 2018

Authorization: All Paramedics, EMT-Basics, and Emergency Medical Responder

Indications: Unconscious, unresponsive patients.

Contraindications: Gag reflex present.

Procedure:
1. Pre-oxygenate patient if possible.
2. Measure airway from corner of mouth to earlobe and select proper size.
3. Grasp the tongue and jaw, lifting anteriorly.
4. Insert airway inverted and rotate 180° into place.
5. A tongue depressor may also be used.
6. Ventilate patient and listen for lung sounds.

800-16 Pulse Oximetry

Created: September 2018

Authorization: All Paramedics, EMT-Basics, and Emergency Medical Responder

Indications: Obtaining a complete set of vital signs.

Precautions: Accuracy is dependent on adequate perfusion at probe site. Can also be affected by bright lights, carbon monoxide poisoning, cyanide poisoning, nail polish, and cases of polycythemia. Oxygen administration should not be determined by a pulse oximetry reading. It should be administered based on clinical presentation.

Procedure:
1. Find a suitable place for probe; such as finger tips, toes, or earlobes.
2. Attach probe and record reading.
3. May also be used to monitor circulation in extremities with traumatic injuries.
4. If readings are erratic, try a different probe site.

800-20 Oxygen Delivery

Created: September 2018

Authorization: All Paramedics, EMT-Basics, and Emergency Medical Responder

Indications: Any patient standing to benefit from higher levels of tissue oxygenation. Patients presenting with or at risk for ventilatory compromise.

Procedure:

1. Explain the procedure to the patient.
2. Select appropriate adjunct and connect to oxygen port.
3. Flush the device with oxygen before application.
4. Apply the device to the patient and set the appropriate flow rate:
    a. 2 – 6 lpm for nasal cannula (24 – 44% Fi O_2).
    b. 10 – 15 lpm for nonrebreather mask (80 – 100% Fi O_2).
    c. 15 lpm flush for bag-valve mask device (100% Fi O_2).
5. Monitor patient for effects.

800-30 Automated External Defibrillator

Authorization: All Paramedics, EMT-Basics, EMRs

1. Make sure you, the victim, and any bystanders are safe.
2. If the victim is unresponsive and not breathing normally, send someone for the AED and to call for an ambulance.
3. Start CPR according to the guidelines for BLS.
4. As soon as the defibrillator arrives
5. switch on the defibrillator and attach the electrode pads. If more than one rescuer is present, CPR should be continued while this is carried out.
6. follow the spoken/visual directions
7. Note: ACAD EMT's are allowed to utilize the AED mode of the Lifepak 12 or 15 by pressing the analyze button once the pads are on the patient.
8. ensure that nobody touches the victim while the AED is analyzing the rhythm
9. If a shock is indicated
    1. ensure that nobody touches the victim
    2. push shock button as directed (fully automatic AEDs will deliver the shock automatically)
    3. continue as directed by the voice/visual prompts
10. If no shock indicated
    1. immediately resume CPR, using a ratio of 30 compressions to 2 rescue breaths
    2. continue as directed by the voice/visual prompts
11. Continue to follow the AED prompts until
    1. qualified help arrives and takes over
    2. the victim starts to breathe normally
    3. you become exhausted

Note: There may be outside agencies that are allowed to fall under Andrew County Ambulance District's Automated External Defibrillator guideline as long as there is a written agreement between the ambulance District and the agency. In all cases the person operating the AED must have had training to operate the device.

800-40 Rapid Extrication

 | Created: September 2018

Authorization: All Paramedics, EMT-Basics, and Emergency Medical Responder

Indications: Unstable patients with immediate life threats who also have indications for spinal motion restriction.

Procedure:
1. One rescuer must stabilize the c-spine in neutral position.
2. Do a rapid primary survey and initiate interventions as necessary.
3. Apply the correctly sized c-collar.
4. Slide long backboard under the patient's buttocks.
5. Rescuer standing outside of the vehicle takes control of c-spine stabilization.
6. A rescuer positions themselves on the opposite side of the vehicle ready to rotate the legs around.
7. Another rescuer, positioned beside the patient. By holding the upper torso, works together with the rescuer holding the legs to carefully turn the patient as a unit.
8. The patient is turned so that their back is towards the backboard. The legs are lifted and the back is lowered to the backboard. The neck and back are not allowed to bend during this procedure.
9. Carefully slide the patient to the full length of the backboard and straighten legs.
10. Move the patient to the ambulance stretcher (cot), then remove the long backboard from beneath the patient while limiting movement of the patient. Transport patient secured to the ambulance stretcher.