Polk, Hickory, Cedar, & St Clair County EMS Protocols

Polk, Hickory, Cedar, & St Clair EMS Protocols

These protocols are designed to provide standing written orders to provide patient care. Refer to Protocol 0-020 - Standing Orders by Agency Type for specific standing order definitions based on the type of agency represented.

Unless specified adult or pediatric, these protocols apply to both adult and pediatric patients. Pediatric is defined as a patient under the age of 16 years, unless otherwise specified.

Parts:

CMH PHS Mission: "*Provide safe, exceptional, and compassionate care to our communities with an emphasis on highly trained and empowered staff.*"

Part 0-000 - Front Matter

Polk, Hickory, Cedar, & St Clair EMS Protocols

Contents:

CMH PHS Mission: "*Provide safe, exceptional, and compassionate care to our communities with an emphasis on highly trained and empowered staff*."

Front Matter 0-010 - Signature Page

Polk, Hickory, Cedar, & St Clair EMS Protocols

This document is only valid for two years after the corresponding signatures dates below. Official copies of signatures are on file with Theron Becker at Citizens Memorial Hospital.

Medical Direction Signatures:

Agencies	Medical Director Name	Medical Director Signature Date	Notes
Bolivar City Fire Department Cedar County First Responders Cedar County Sheriff's Department - Dispatch Central Hickory Fire Rescue Citizens Memorial Hospital - EMS Collins Fire Protection District Halfway Fire and Rescue Humansville Fire Department Iconium Fire Protection District Lowry City Volunteer Fire Department Morrisville Fire Protection District Polk County Central Dispatch Sac Osage Fire Protection District	Andy Nicholes, DO	2020-4-21 0:0 Signature expires in 12 months	View the 340 changes since last approval
Ellett Memorial Hospital - EMS	Paul Kramer, MD	2018-10-15 0:0 Signature is EXPIRED	View the 563 changes since last approval
Pleasant Hope Fire Protection District	Kevin Presley, DO	2018-10-15 0:0 Signature is EXPIRED	View the 563 changes since last approval

Agency Head Signatures:

Agency	Agency Head Name	Agency Head Title	Agency Head Signature Date	Notes
Bolivar City Fire Department	James Ludden	Chief	2018-10-15 0:0 Signature is EXPIRED	View the 563 changes since last approval
Cedar County First Responders	LaDell Heryford	Vice President	2020-7-31 0:0 Signature expires in 16 months	View the 177 changes since last approval
Cedar County Sheriff's Department - Dispatch	Dakota Newman	Communications Supervisor	2020-8-12 0:0 Signature expires in 16 months	View the 145 changes since last approval
Central Hickory Fire Rescue	Jordon Graham	Chief	2021-3-3 0:0 Signature expires in 23 months	View the 8 changes since last approval
Citizens Memorial Hospital - EMS	Theron Becker	PHS Clinical Chief	2021-04-09 01:04 Signature expires in 24 months	View the 0 changes since last approval
Collins Fire Protection District	Abel Smith	Chief	2018-10-15 0:0 Signature is EXPIRED	View the 563 changes since last approval
Ellett Memorial Hospital - EMS	Robert Coskey	Director	2018-10-15 0:0 Signature is EXPIRED	View the 563 changes since last approval
Halfway Fire and Rescue	Eric Schmidt	EMS Captain	2020-9-21 0:0 Signature expires in 17 months	View the 143 changes since last approval
Humansville Fire Department	Emma McAntire	EMS Captain	2020-9-22 0:0 Signature expires in 17 months	View the 143 changes since last approval
Iconium Fire Protection District	Shannon Tucker	Chairman of Board of Directors	2020-12-17 0:0 Signature expires in 20 months	View the 67 changes since last approval
Lowry City	Justin	Chief	2021-3-15	

Volunteer Fire Deparmtent	Norris		10:52 Signature expires in 23 months	View the 8 changes since last approval
Morrisville Fire Protection District	Kirk Jones	Chief	2018-10-15 0:0 Signature is EXPIRED	View the 563 changes since last approval
Pleasant Hope Fire Protection District	Greg Wood	Chief	2018-10-15 0:0 Signature is EXPIRED	View the 563 changes since last approval
Polk County Central Dispatch	Sarah Newell	Director	2020-7-30 0:0 Signature expires in 16 months	View the 177 changes since last approval
Sac Osage Fire Protection District	Cheyenne Smart	Medical Officer	2019-8-1 0:0 Signature expires in 4 months	View the 484 changes since last approval

Refer to Front Matter 0-010-01 - Hard-Copy Signature Form.

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Front Matter 0-010-01 - Signature Page - Hard-Copy Signature Form

Polk, Hickory, Cedar, & St Clair EMS Protocols

Print this page and update the following to renew signatures. Once completed, return the hard-copy signature form to the CMH EMS Clinical Chief to remain on file.

Agencies you represent:	
Your printed name:	
Your title:	
Approval date:	
By signing below, you certify the content of the version and date above are true, correct, and approved by you. You also attest your intension to implement, educate, and enforce the guidelines and protocols that apply to your agency/agencies.	
Your signature:	

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Front Matter 0-020 - Standing Orders by Agency Type

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMS Transport Agencies:

Emergency Medical Technician (EMT), Advanced Emergency Medical Technician (AEMT), Registered Nurse (RN), and Paramedic providers will utilize the following protocols while on scene and during transport to coordinate care, stabilize the patient, and improve their condition where possible. The transporting RN or Paramedic is ultimately responsible to ensure complete patient care, including BLS-level procedures.

First Response Agencies:

Emergency Medical Responders (EMR) and EMT providers will utilize the following protocols while on scene of an illness or injury to coordinate care and stabilize the patient. AEMT, RN, and Paramedic providers responding with a first responder agencies will operate as EMTs using the following protocols.

Community Responders:

Persons in the communities served by Citizens Memorial Hospital using or maintaining Automated External Defibrillators (AEDs) will utilize the following protocols to enhance survivability from cardiac arrest:

- Protocol 2-198 - Cardiac Arrest
- Equipment 8-018 - Automated External Defibrillator (AED)

Dispatch Centers:

Public Safety Dispatchers and Emergency Medical Dispatchers (EMD) will utilize the following protocols while recieving emergency and non-emergency calls where persons may be ill, injured, and/or needing medical transport. Additionally, these protocols shall be used while dispatching ambulances to patients that are ill, injured, or needed medical transport.

Refer to each specific protocol based on the patient's complaint and follow the general guidance found in Guideline 1-200 - Ambulance Dispatch.

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Front Matter 0-100 - Protocol Deviation

Polk, Hickory, Cedar, & St Clair EMS Protocols

No protocol can account for every clinical scenario encountered, and it is recognized that in rare circumstances deviation from these protocols may be necessary and in a patient's best interest. Variance from protocol should always be done with the patient's best interest in mind and backed by documented clinical reasoning and judgement. Whenever possible. Prior approval by direct verbal order from a physician is preferred. Additionally, all variance from protocol should be documented and submitted for review by the agency's medical director in a timely fashion.

Protocols have certain limitations, and not every clinical scenario can be represented. Although these protocols imply a specific sequence of actions, it may often be necessary to provide care out of sequence from that described if dictated by clinical needs. These protocols provide decision-making support, but need not be rigidly adhered to and is no substitute for sound clinical judgement.

Refer to Guideline 1-400 - Communications for further details.

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Front Matter 0-200 - Document Style Standards

Polk, Hickory, Cedar, & St Clair EMS Protocols

The following standardized styles will be used throughout this protocol document:

- **Community Responder** protocol headers are black text on a white background.
- **Emergency Medical Dispatcher** protocol headers are black text on a light sky blue background.
- **Emergency Medical Responder** protocol headers are black text on a aquamarine background.
- **Emergency Medical Technician** protocol headers are black text on a light green background.
- **Advanced Emergency Medical Technician** protocol headers are black text on a yellow background.
- **Registered Nurse** protocol headers are black text on an orange background.
- **Paramedic** protocol headers are black text on a salmon background.
- **Calculated** information and doses are black text on a moccasin background.

  Medical Control protocols are white text on a grey background.
- **Future Revisions (NOT yet approved)** are are grey text on a thistle background.

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Front Matter 0-250 - EMS Research

Polk, Hickory, Cedar, & St Clair EMS Protocols

When available, these protocols are based on evidenced-based research and peer-reviewed journal articles. On occasion, specific studies are done with historical data from CMH EMS. When specifically referenced, these articles and studies are referenced and can be found at the end of each protocol and in Appendix 9-010 - References.

Additional research articles and papers are stored on a shared OneDrive account. These can be found here: http://ozarksems.com/research.php.

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Part 1-000 - Policies & Guidelines

Polk, Hickory, Cedar, & St Clair EMS Protocols

Definitions

- **Policy**: Document that contains mandatory actions for staff of Citizens Memorial Hospital. Policy contents are typically required by law, regulation, or standard. Employees are held accountable to these documents and progressive discipline is used to enforce them. Policies are found here: https://citizensmemorial.policystat.com/. The list of CMH PHS policies with quick links can also be found below the Guidelines on this page.

- **Guideline**: Document that contains requests and suggestions and act as a guide to operations that only applies to signatory agencies to this protocol document. Guideline contents are typically explanations of expected performance and are operational in nature and suggested practice by medical direction and agency leadership. Guidelines are found below.

- **Protocol**: Document to guide patient care that only applies to signatory agencies to this protocol document. EMDs, EMRs, EMTs, AEMTs, RNs, and Paramedics that are members of the signatory agencies and utilizing these protocols will be held accountable for adhering to these protocols by the signing medical director and agency leadership. Protocols are found here: https://emsprotocols.online/cmhems/2-000.php.

Policies

Policy	Notes
PHS01-01 - Ambulance Driving (pdf)	• Need to add Guideline 1-600-50 - Ambulance Driving. • Need to reference Guideline 1-600 - EMS Responder Safety. • Need to move section D to Equipment 8-216 - Cot. • Need to move section F to Guideline 1-600 - EMS Responder Safety. • Need to reference Policy PHS01-23 - Ambulances Passing School Buses. • Need to add Policy PHS02-08 - Driving Program.
PHS01-02 - Emergency Response Requested Outside of the Primary Service Area (pdf)	• Need to move part A to Guideline 1-700 - Ambulance Operations. • Part B has been added to Guideline 1-200 - EMS Dispatch. I think this Policy can be retired after Part A is moved.
PHS01-03 - Acquisition of Medical Control (pdf)	• Need to rename to Ambulance Medical Control. • Need to review and add reference to Guideline 1-400-48 - Medical Control.
PHS01-04 - Documentation Requirements (pdf)	• Need to rename to Ambulance Documentation Requirements. • Need to reference Guideline 1-700-33 - Patient Care Documentation. • Need to add content from Policy PHS01-15 - Electronic Patient Care Report Usage.
• PHS01-05 - Not used • PHS01-06 - Passengers in the Ambulance (pdf)	
PHS01-07 - Helicopter Landing Site Designation (pdf)	• Need to move to Guideline 1-100-50 - Helicpoter Landing Zone.
PHS01-08 - Ambulance Cleaning, Monthly Checks (pdf)	• Need to rename to Ambulance Cleaning and Routine Checks.
PHS01-09 - Vehicle Inventory (pdf)	• Need to move to Equipment 8-001 - Equipment on Vehicles.
PHS01-10 - Basic Life Support Ambulance (BLS) (pdf)	• Need to move part A to Guideline 1-700 - EMS Operations.

	• Need to move part D, E, F to Protocol 2-924 - Universal Patient Care. • Parts B & G have already been moved to Guideline 1-200 - EMS Dispatch. This should be all of this policy and it can be retired.
• PHS01-11 - Ambulance Station Maintenance (pdf)	
PHS01-12 - Storage of Ambulances (pdf)	• Need to rename to "Ambulance Storage."
PHS01-13 - Refueling Ambulances (pdf)	• Need to rename to "Ambulance Refueling." • Need to update WEX card info.
• PHS01-14 - Not used	
PHS01-15 - Electronic Patient Care Report (EPCR) Usage (pdf)	• Need to move parts of this to Policy 01-04 - Documentation Requirements. • Need to rename to "Ambulance Clinical Reviews." • Need to add reference to Guideline 1-800-33 - Clinical Reviews.
• PHS01-16 - Not used	
PHS01-17 - Security of Ambulance Keys (pdf)	• Need to rename to "Ambulance Security."
PHS01-18 - Armed Subject Demanding Narcotics (pdf)	• Need to rename to Ambulance Theft (or similar).
• PHS01-19 - Ambulance Staffing (pdf)	
PHS01-20 - Pre-Hospital Services In-processing of New Employees (pdf)	• Need to rename to "Ambulance Orientation."
PHS01-21 - Accidents Involving Hospital Ambulances (pdf)	• Need to rename to "Ambulance Accidents." • Need to add Policy PHS01-25 - Damage to Ambulances.
PHS01-22 - Oxygen Cylinders (pdf)	• Need to rename to "Ambulance Oxygen" • Need to reference Medication 7-460 - Oxygen
• PHS01-23 - Ambulances Passing	

School Buses (pdf)	
PHS01-24 - Controlled Medications in Prehospital Services (pdf)	• Updates made. Waiting for approval.
PHS01-25 - Damage to CMH Ambulance (pdf)	• Need to move to Policy PHS01-21 - Ambulance Accidents.
PHS01-26 - Rescue Squad Supplies (pdf)	• Need to rename to "Ambulances Supplying Rescue." • Need to reference Medication 7-001 - Medications on Vehicles. • Need to reference Equipment 8-001 - Equipment on Vehicles. • Need to reference Policy PHS01-24 - Ambulance Medications. • Need to reference Policy PHS01-28 - Ambulance Equipment.
• PHS01-27 - Ambulance Coverage for Special Events (pdf)	
PHS01-28 - Ambulance Equipment (Powered) (pdf)	• Need to rename to "Ambulance Equipment." • Need to reference Policy PHS01-26 - Ambulances Supplying Rescue. • Need to add Policy PHS03-03 - Lost Ambulance Equipment.
• PHS01-29 - Not used • PHS01-30 - Not used	
PHS01-31 - Daily Operations (pdf)	• Need to rename to "Ambulance Operations." • Need to reference Guideline 1-700 - Ambulance Operations.
• PHS01-32 - Not used • PHS01-33 - Ambulance Transfers (pdf) • PHS01-34 - Not used • PHS01-35 - Not used • PHS01-36 - Not used	
PHS01-37 - Education and Competency (pdf)	• Need to rename to Ambulance Education and Competency. • Need to reference Guideline 1-500 - Education and Competency. • Need to reference Edman Section 3-700 - Onboarding Academy.
PHS01-38 - Emergency Patient Non-	

Discrimination (pdf)	• Need to rename to Ambulance Patient Non-Discrimination.
• PHS01-39+ - Not used	
PHS02-01 - Medical Control of Patient Care (pdf)	• Need to review and rename as something similar to "Management of other healthcare professionals on the scene." • Need to add reference to Guideline 1-700-17 - Off Duty Protocols.
• PHS02-02 - Institution of Ambulance Protocols (pdf)	
PHS02-03 - Air Transport of Patients (pdf)	• Need to move to Guideline 1-100 - Air Transport of Patients.
PHS02-04 - Patients Determined to the Dead at the Scene (pdf)	• Need to move to Protocol 2-198 - Cardiac Arrest.
• PHS02-05 - Scope of Services - Prehospital Services (pdf)	
PHS02-06 - Request for Blood Alcohol Sample for Law Enforcement (pdf)	• Need to move to Equipment 8-036-01 - Blood Draw for Alcohol Analysis.
• PHS02-07 - Not used	
PHS02-08 - Pre-Hospital Service Driving Program (pdf)	• Need to move to Policy PHS01-01 - Ambulance Driving.
• PHS02-09+ - Not used • PHS03-01 - Not used • PHS03-02 - Not used	
PHS03-03 - Lost Ambulance Equipment (pdf)	• Need to move to Policy PHS01-28 - Ambulance Equipment.
• PHS03-04 - Not used • PHS03-05 - Not used • PHS03-06 - Ambulance Maintenance (pdf)	
PHS03-07 - COT Lifting/Lifting of Patients (pdf)	• Need to move to Equipment 8-216 - Cot.

- PHS03-08 - Ambulance Operations and Safety while in the Roadway (pdf)

Guidelines

Guideline	Notes
1-100 - Air Transport of Patients	• Need to add Policy PHS02-03 - Air Transport of Patients.
1-100-50 - Helicopter Landing Zone	• Need to add Policy PHS01-07 - Helicopter Landing Site Designation.
1-200 - Ambulance Dispatch	• Need to rename to "EMS Dispatch."
• 1-200-24 - Call Natures • 1-200-48 - Mutual Aid • 1-200-72 - Transfer Priority Calculator	
1-400 - Ambulance Communications	• Need to rename to "EMS Communications."
• 1-400-12 - Staff Communication Paths • 1-400-48 - Medical Control • 1-400-72 - Patient Handoff Report	
1-450 - Ambulance Leadership	• Need to rename to "EMS Leadership." • Need to add "Supervisor roles and responsibilities" memo from Tom Ryan dated 8/14/20. • Need to add "Operation managers and supervisors guidelines" memo from Neal Taylor.
• 1-450-33 - Documentation Reviews • 1-450-66 - Rounding Form • 1-500 - EMS Education and Competency	
1-600 - Responder Safety	• Need to rename to "EMS Responder Safety." • Need to reference Policy PHS01-01 - Ambulance Driving.

	• Need to reference Policy PHS03-08 - Ambulance Operations and Safety while in the Roadway. • Need to add section F from Policy PHS01-01 - Ambulance Driving.
1-600-50 - Ambulance Driving	• Need to move to Policy PHS01-01
1-700 - Ambulance Operations	• Need to rename to "EMS Operations." • Need to create Guideline 1-700-17 - Off Duty Protocols and move that section out of Guideline 1-700 - Ambulance Operations. • Need to add part A from Policy PHS01-02 - Emergency Response Outside Area. • Need to add part A from Policy PHS01-10 - BLS Ambulance. • Need to reference Policy PHS01-31 - Ambulance Operations.
• 1-700-33 - Patient Care Documentation • 1-700-60 - Hazardous Atmosphere Standby • 1-700-88 - Retired	
1-800 - Quality Improvement	• Need to rename to "EMS Quality Improvement."
1-800-33 - Clinical Reviews	• Need to add reference to Policy PHS01-15 - Ambulance Clinical Reviews.
• 1-800-50 - Just Culture Investigation • 1-800-66 - Employee Remediation • 1-850 - Rescue Task Force • 1-850-25 - Mass Casualty	

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Effective:	*06/1992*
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Review Due:	*03/2023*
Owner:	*Theron Becker: EMT P-CMH HOS EMS Educati*
Policy Area:	*PreHospital*
References:	*Hospital*

Ambulance Driving and Operations, PHS01-01

POLICY:

Citizens Memorial Hospital (CMH) Pre Hospital Service (PHS) vehicles and ambulances shall be operated in a safe manner.

PURPOSE:

To establish procedures that increase crew and patient safety and reduce the risk of an accidents.

PROCEDURE:

A. Seat belts are to be worn by passengers and staff riding in the front seats while vehicle is moving.

B. Staff riding in the patient compartment doing patient care should wear a seat belt as much of the time as practical.

C. Staff providing patient care should ride, if practical, in the rear facing captains chair or if available forward facing curb side captains chair.

D. Patient cot restrains system shall be used when patient is on the cot. Use Pedi Mate when appropriate for size of pediatric patient.

E. Operating the ambulance and general driving habits

1. The driver shall use the 3 and 9 o'clock hand positioning rule.
2. During non-emergency operations, speed limits and traffic laws should be obeyed. Speed should be governed by posted speed limit road, weather and traffic conditions.
3. Cell phones should not be used by driver, unless absolutely necessary, and only for business related to the response or patient transport.
4. Text messaging by the driver shall not be done while vehicle is in motion.
5. When not on an emergency call, the ambulance shall be operated in a courteous manner.
6. When not transporting a patient or not in an emergency driving condition, the ambulance is to follow traffic laws and established parking laws,ordinances, requirements or rules.
7. Speed shall not exceed 5 miles per hour of the posted speed limit during normal operations and when operating on Interstate or Intrastate highways.Speed should be governed by road, weather and traffic conditions.

8. Speed should not exceed 80 mph.
9. Allow a safe following distance. Be prepared for sudden stops.
10. Plan "escape" routes when possible.
11. The ambulance shall be driven in a smooth manner. Avoid sudden starts, stops, and turns. Allow time for reaction and unforeseen movements of traffic.
12. When parking an ambulance when not at an emergency scene, the unit shall be parked in a regularly marked parking space in a courteous manner in the outer area of the parking lot, at night in a well lit area. Security of the the PHS emergency vehicle should be considered.
13. Ambulances and CMH PHS vehicles shall be locked when not in the station and occupied by at least 1 crew member.

F. When parking the ambulance or emergency vehicle on or near a roadway at a scene
   1. The emergency lights or secondary lights shall remain on.
   2. The vehicle shall be parked so traffic is not blocked if possible.
   3. If needed the ambulance can be parked for the security and safety of the crew and scene.
   4. If on a hill, a flagman or an additional emergency vehicle, if available, should be used as a signal to oncoming traffic.

G. Backing of an ambulance
   1. Backing shall be done at a very slow speed. Be prepared to stop.
   2. Shall be done with good rear visibility of direction of backing.
   3. Back up alarm should be used.
   4. Back-up camera should be used.
   5. If available use Fire Department or First Responders personal as safety spotters when backing.
   6. If a patient is not on board, the crew member not driving shall position his/her self a safe distance outside the vehicle in view of driver and act as a safety spotter until backing is complete.
   7. If crew member is with a patient in patient compartment, attain backing assistance through rear windows by the patient attendant if possible and use the back-up camera.
   8. If the second crew member is busy with patient care the driver should do a 360 degree walk around the vehicle to survey the area prior to backing.
   9. When backing into a controlled location such as: ambulance station the back-up camera can be used instead of a second crew member acting as spotter. Backing alarm may be turned off.

H. Emergency response and emergency patient transport.
   1. Both the emergency lights and siren are to be in use while the vehicle is moving to and from the scene as the response or the patient's condition requires.
   2. Speed shall not exceed 10 miles per hour over the posted speed limit when operating Code 3/ Emergency. Speed should be governed by road, weather and traffic conditions.
   3. Speed should not exceed 80 mph when running Code 3/Emergency.
   4. When operating the ambulance in emergency driving condition Code 3/Emergency (lights and siren), the emergency lights and the siren shall both be used.

5. When operating an ambulance in emergency driving conditions, Code 3/Emergency, on multi-lane road and multi-lane highways the left lane should be used.
6. It is the non-driving crew members responsibility to operate the siren and take care of communications. If transporting a patient, the driver shall do so in a careful manner and should use hands free siren setting when running Code 3/Emergency.
7. When operating Code 3/Emergency upon coming to a controlled intersection with a light or stop sign, the emergency vehicle shall slow, if eye contact is made with drivers, and the intersection is safe, proceed through the intersection. If eye contact is not made come to a stop. Check to be sure intersection is clear and all vehicles are stopped. Once your vehicle is identified by drivers at the intersection proceed though the intersection. Traffic should be given right of way. Alternate siren frequency/settings when proceeding though intersection
8. When operating Code 3/Emergency, upon coming to an uncontrolled intersection without a signal or sign, the emergency vehicle shall slow, be sure intersection is clear of traffic and proceed. If vehicles are at the intersection make eye contact, and the intersection is safe to enter, then proceed. Traffic should be given right of way. Alternate siren frequency/settings when proceeding though intersection

I. Ambulance crew duty time.

1. 24 Hour County Stations
    a. 15 hours of constant driving and calls with 2 hour or less at base between calls, the crew shall take a 8 hours mandatory rest period.
        i. Upon reaching 15 hours mark the crew will contact the county operations manager or designee for approval of rest period.
        ii. Operations manager or designee may float a ambulance to the station for coverage during the rest period.
        iii. The County Operations manager will contact the PHS Director or designee any time a station or crew is put on a rest period
    b. 24 hour rest period should be taken between 24 hour shifts. Back to back 24 hour shifts should only be done in extenuating circumstances and should be approved by the PHS Director or designee
2. Polk County
    a. 15 hours on duty time should not be exceeded unless approved by Operations Manager.
    b. Greater than 15 hour on duty time needs approval of Operation Manager. A 10 hours rest period is required prior to the beginning of next shift if 15 hours or greater of duty time is exceeded.
    c. 10 hours rest is recommended between shifts
3. Extenuating Circumstances
    a. Any time there is extenuating circumstances when call volume or miles driven has been high and the crew is concerned about their fatigue they should call the Operations Manager or designee to determine how to manage a rest period.
        i. Operations manager or designee may float an ambulance to the station for coverage during rest period
        ii. The County Operations manager will contact the PHS Director or designee any time a

station or crew is put on a rest period

b. During a declared emergency or during disaster operations, shifts, duty time and rest periods may be altered to meet the needs of the event and support operational periods.

Attachments

No Attachments

Approval Signatures

Approver	Date
Heather Cline: CORP COMP-CMH SHA CEOS OF	03/2020
JEFF MILLER: COO-CMH HOS Admin	12/2019
Neal Taylor: DIR-CMH HOS Ambulance-Pol	12/2019

Effective:	*03/1999*
Approved:	*09/2019*
Last Revised:	*09/2019*
Review Due:	*09/2022*
Owner:	*Theron Becker: EMT P-CMH HOS EMS Educati*
Policy Area:	*PreHospital*
References:	*Hospital*

Emergency Response Requested Outside of the Primary Service Area, PHS01-02

POLICY:

A Citizens Memorial Hospital (CMH) ambulance will respond to emergency mutual aid requests outside of primary service area when units are available.

PURPOSE:

To provide assistance to adjoining counties in the case of emergency, to provide the quickest response to a request for an ambulance outside CMH ambulance primary service area.

PROCEDURE:

A. CMH will respond to mutual aid requests outside the service area when CMH has adequate ambulance resources available. The request should come from the requesting county's Ambulance Service, Public Safety Answering Point/Dispatch Center.

B. When a call is received from a private party, CMH ambulance dispatch will make arrangements to send the closest appropriate ambulance service to the request for service.

Attachments

No Attachments

Approval Signatures

Approver	Date
Heather Cline: CORP COMP-CMH SHA CEOS OF	09/2019
JEFF MILLER: COO-CMH HOS Admin	08/2019
Neal Taylor: DIR-CMH HOS Ambulance-Pol	08/2019

Effective:	*03/2011*
Approved:	*08/2019*
Last Revised:	*08/2019*
Review Due:	*08/2022*
Owner:	*Theron Becker: EMT P-CMH HOS EMS Educati*
Policy Area:	*PreHospital*
References:	*Hospital*

Acquisition of Medical Control, PHS01-03

POLICY:

Citizens Memorial Hospital (CMH) PreHospital Services will follow protocol and obtain medical control as necessary when transporting a patient.

PURPOSE:

To define the procedure by which CMH PreHospital Services obtains medical control.

PROCEDURE:

A. While transporting a patient, if direct medical control is necessary it should be provided by the Emergency Room physician at the receiving hospital.

B. If contact cannot be established, protocols should be utilized as standing orders including those designated as requiring medical control. Medical control should then be contacted as soon as possible.
   1. Documentation should be provided that attempts to contact medical control were unsuccessful.

C. Medical control should be provided by a physician and not accepted from nurses, family nurse practitioners, physician assistants, midwifes, or other physician extenders.

D. On long distance transfers and inter-facility transports, if the patient's condition deteriorates and diversion to the closest appropriate hospital is necessary, medical control should be established with that facility.
   1. The original destination should be updated on the diversion and current situation as soon as possible.

Attachments

No Attachments

Approval Signatures

Approver	Date
Heather Cline: CORP COMP-CMH SHA CEOS OF	08/2019
JEFF MILLER: COO-CMH HOS Admin	06/2019
Neal Taylor: DIR-CMH HOS Ambulance-Pol	06/2019

Effective:	*03/2011*
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Last Revised:	*10/2019*
Review Due:	*10/2022*
Owner:	*Theron Becker: EMT P-CMH HOS EMS Educati*
Policy Area:	*PreHospital*
References:	*Hospital*

Documentation Requirements, PHS01-04

POLICY:

The electronic Patient Care Report (EPCR) is a legal medical record. It is the document which can reflect the condition and justify treatment/transport of the prehospital patient at the time of accident or illness. It is also the record of patient refusal and no-care-needed

PURPOSE:

To provide guideline for documentation of Emergency Services (EMS) responses.

PROCEDURE:

A. An EPCR should be completed when an ambulance is dispatched, even if canceled.

B. A EPCR will be completed for each patient contact or transport.

C. An EPCR will be completed for Special Event Stand bys, public education events, public relation events.

D. If no care is needed for an individual patient, the following should be documented:

1. Medical screening including the patient's gait, speech, mental status and coordination are functionally normal. Pain and behaviors should be documented.

E. Patient Refusal of Care

1. If the patient refuses care and/or transport, patient should be advised of the medical importance of their signs and symptoms, the potential for further illness or injury, and the need for transport for a more comprehensive evaluation by a physician.
2. Risk of not being treated and transported and benefit of ambulance transport should be explained to the patient.
3. If a family member is present explain the risk of the patient not being treated and transported and benefit of ambulance transport and document family member name and relationship.
4. Patient refusals of transport, the documentation should be completed by the paramedic if the transport would have met criteria for advanced life support (ALS) transport.
5. The patient decision making capacity should be documented

6. The patient should be asked to sign the refusal. If the patient refuses to sign the form, document the patient's refusal to sign. Obtain witness signatures if possible. If no witness is available, EMS personnel can witness the form.

F. Social Events, Stand-bys, public education events, and public relation events.

1. Other: Should be selected in Run Disposition Area Box in HealthEMS
2. Name and address of location of event should be enter in the patient data area
3. Narrative should explain why the ambulance and crew or crew member were.
4. The of crew or crew member should sign the EPCR.

Attachments

No Attachments

Approval Signatures

Approver	Date
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Passengers in the Ambulance, PHS01-06

POLICY:

When the patient's condition warrants, a family member may accompany the patient in the ambulance.

PURPOSE:

To provide guidelines for family members to accompany patients in the ambulance.

PROCEDURE:

A. The paramedic or emergency medical technician (EMT) will make the decision if a family member may accompany the patient in the ambulance. The crew will determine where the family member will ride, i.e., in the patient compartment or in the passenger seat in the front of the ambulance.

B. If the family member is to ride in the ambulance, seat belts should be worn.

C. If the family member has been involved in a motor vehicle accident (MVA) with the patient, a refusal of care will be signed prior to transportation of the family member as other than a patient.

Attachments

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Helicopter Landing Site Designation, PHS01-07

POLICY:

A safe and secure landing area for emergency medical service (EMS) helicopters will be used when it necessary to transfer a patient by helicopter.

PURPOSE:

To provide guidelines for safe and secure landing of EMS Helicopters.

PROCEDURE:

A. The landing area shall be acceptable to the incoming helicopter service pilot.

B. The landing area shall be clear of wires, loose debris, obstructions, or hazards.

C. The landing area shall be a minimum of 100' x 100'. This area shall be level and without dips.

D. Landing Zone Command (LZ Command) shall alert the incoming pilot of the landing scene and possible hazards or problems with the landing site.

E. The ground crews shall not approach the helicopter without direction from the helicopter crew/pilot. When the helicopter is approached, it shall be done from a 45° angle from the front and in full view of the pilot. An approach from another angle shall be done only under the direction and instruction of the flight crew and/or pilot.

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Ambulance Cleaning, Monthly Checks, PHS01-08

POLICY:

The on-duty crew is responsible for the ambulance to be prepared to respond and as well as the cleaning and cleanliness of the ambulance to which they are assigned.

PURPOSE:

To provide a clean, safe environment for patient care and ambulance crews.

PROCEDURE:

A. At the beginning of each shift the ambulances are to be checked for cleanliness.

B. Areas that are noticed to be in need of cleaning will be appropriately cleaned by the ambulance crew.

1. The cab of the ambulance including the steering wheel, switch surfaces, door handles, dashboard, and seats will be cleaned with a disinfectant at the beginning of each shift.
2. Carpets are to be vacuumed; mats and the patient compartment are to be cleaned.
3. Windows are to be cleaned inside and outside.
4. The ambulance cot mattress is to be kept clean and disinfected if needed. The ambulance cot frame is to be kept cleaned and disinfected.
5. Outside storage compartments are to be kept clean and in order.

C. After each run, the ambulance crew will clean the inside of the ambulance including the cot as necessary.

D. Routine washing of the outside of the ambulance will be done on an as needed basis. Ambulances are expected to be kept clean and in good appearance.

E. Exposed surfaces of the patient compartment area of the ambulances shall be cleaned at least once daily with an approved disinfectant cleaner. The vehicles shall also be cleaned with the approved disinfectant cleaner after each patient transport. This cleaning shall include high touch areas areas of the ambulance and the patient cot mattress.

F. In the event that the transport of an infectious patient has taken place, the ambulance shall be taken out of service. The surfaces of the patient compartment shall be cleaned with an approved disinfectant cleaner. The steering wheel, vehicle control handles, etc. should also be cleaned. The vehicle should not

be placed back into service until an appropriate cleaning has been done. Cleaning and getting the ambulance back in service as quickly as possible will be a priority.

1. Many of the disinfectant cleaners approved for patient care areas do leave a residue. The residue may be removed with clean clear warm water. The patient care area may also be cleaned with other commercial cleaners to remove stains or grease, etc.; however, this will not be accepted for disinfectant purposes.

G. Monthly Cleaning and Checks Schedule:

1. The on duty crew is responsible for the cleaning and monthly checks for the ambulance they which are assigned.
2. The director, operations manager, or supervisor will verify each ambulance is cleaned and checked on a monthly basis.
3. On the first day of the month, crews shall check medications on the ambulance for out dated medication.
4. Out dated supplies on the trucks shall be checked and outdated supplies replaced. Supplies packages that are soiled or packages that the integrity has been compromised will be replaced
5. Each month ambulances shall be deep cleaned.
    a. the inside of the Interior compartments are to be cleaned. Supplies taken out and the inside of the cabinet and doors disinfected.
    b. Supply container will be wiped out and cleaned
    c. Interior surfaces are to be cleaned and disinfected including the cab.
    d. The exterior compartments are to be cleaned and equipment stored in the compartments is to be disinfected and cleaned. The contents removed and the cabinets vacuumed and cleaned. Equipment in the outside cabinets will be cleaned and disinfected if appropriate. Check function and make sure equipment is in good repair.
    e. Carpets are to be vacuumed; mats are to be cleaned with soap and water.
    f. Windows are to be cleaned inside and outside. The dashboard, seats, and control panels are to be cleaned.
    g. The ambulance cot mattress is to be cleaned with soap and water and then disinfected. The ambulance cot frame is to be cleaned and disinfected.
    h. The cardiac monitor and plastic kits are to be cleaned with a disinfectant.
    i. Other areas that are noted to be in need of cleaning and/ or maintenance shall be taken care of at that time. Problems shall be reported to the director, operations manager, or supervisor duty officer.
    j. Failure to keep ambulance and equipment clean is subject to disciplinary action.

Attachments

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Vehicle Inventory, PHS01-09

POLICY:

Citizens Memorial Hospital (CMH) ambulances will be appropriately stocked with required equipment and supplies.

PURPOSE:

To ensure adequate stocking of supplies and required equipment is performed in a timely manner on hospital ambulances.

PROCEDURE:

A. At the beginning of a shift and after a call, one or both members of the crew will inventory the ambulance to verify required supplies and equipment are on the ambulance and equipment is in working order. Both crew members are responsible for maintaining the equipment in a clean condition and supplies are at inventory level. See policy: Ambulance Inventory, PHS01-09Att 1 See: **Part 8 - Equipment Protocols Section 8-001 - Equipment Currently on Response Vehicles**

   1. Equipment needing to be replaced will be done so from the EMS supply room.
   2. Outdated and/or soiled supplies will be rotated out with new stock.

B. Medications in need of replacement or stock rotation shall be replaced by the appropriate procedure.

C. Controlled substances in need of replacement shall be replaced by the appropriate procedure.

D. Equipment found to be in need of replacement or repair should be reported to the director, operations manager, or designee. If it is equipment that can be repaired by the hospital bio-medical department that equipment shall be taken to that department for repair and the operations manager or designee shall be notified of the disposition of that equipment. If possible, spare equipment should be placed on board to assure that the ambulance is fully equipped and ready to go.

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Basic Life Support Ambulance (BLS), PHS01-10

POLICY

Dispatching and Operations of a Basic Life Support (BLS) Ambulance

PURPOSE

To provide guidance of the operation, dispatch of a BLS ambulance

PROCEDURE

A. Arriving to work clock in and start truck checks, in service no later than 15 minutes after the start of the shift
   1. Complete inventory check.
      a. Same inventory as if ambulance was to be Advanced Life Support (ALS) ambulance.
   2. Squad and last digit of the 700 number will be the Designated Service Number (DSN) number for the BLS ambulance.(Squad 9)
      a. Provide dispatch with the crew's DSN and shift number

B. Dispatch will utilize the BLS ambulance as follows
   1. Emergency Medical Dispatch (EMD) will prompt for a BLS response, a BLS ambulance will be dispatched (Alpha or Omega)
   2. Priority 4 BLS transfers
   3. Also if a ALS ambulance is not available in the county

C. BLS ambulance is dispatched when ALS ambulance intercept has been dispatched the BLS crew will have the discretion to cancel and/or to use a helicopter as needed.

D. If the BLS ambulance is dispatched to a response and the condition of the patient is found to need a ALS priority response, a ALS intercept may be requested or with transport time as a consideration patients should be transported to the closest facility (15 minute transport to Citizens Memorial Hospital (CMH) ER opposed to waiting 30 minutes on ALS truck)

E. BLS protocol will be followed.

F. Patients requiring ALS care should be transported to the closet facility.

1. 12-lead will be completed and transmitted to medical control if indicated
2. Narcan may be in the PHS protocol may be used if indicated

G. Long Distant Priority 4 transfers can be held at night when there are limited ambulances are on duty at night. The transfer will be carried out the next morning when a BLS truck is available or there are adequate ambulance resources. The Pre-Hospital Services (PHS) Hospital Transfer Decision Tree PHS 01-35 attachment should be used to determine patient's transfer priority

Attachments

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Ambulance Station Maintenance, PHS01-11

POLICY:

The ambulance station shall be kept clean and secured.

PURPOSE:

To provide a safe and secure area for crew members, ambulances, and equipment storage.

PROCEDURE:

A. Ambulance equipment is to be kept clean and ready for service. It shall be stored in the appropriate areas.

B. The floor of the ambulance bay shall be washed and swept as needed. Standing water shall be squeegeed to drain.

C. The water hose used for cleaning the ambulances is to be stored, rolled and out of the traffic area.

D. Maintenance fluids and supplies are to be kept in the appropriate assigned storage areas (oil, brake fluid, bulbs, etc.).

E. Washing and cleaning supplies are to be kept in the appropriate assigned storage area (soap, wax, rags, etc.).

F. Containers, bottles, and other such storage device shall be labeled as to the contents.

G. Extra ambulance equipment is to be kept in the appropriate assigned storage area (spare backboards, battery charger, oxygen tanks, etc.). Storage areas are to be kept clean. It is the crew's responsibility to keep equipment and counters free of dirt and dust.

H. The garage area is to be kept clear of unnecessary items and debris. Items in the garage should be kept in their proper storage area when not in use.

I. Trashcans shall be dumped and a new liner installed when it is 2/3 full.

J. The dirty linen barrel shall be taken care of when it reaches 2/3 full.

K. The ambulance garage should remain locked when unattended by ambulance personnel.

L. Personnel should be sure station duties are completed during shift.

M. Station duties for each shift include, but are not limited to the following. Crew Leaders may create shift duty assignments as needed.

1. Clean crew room - Sweep floor, dust surfaces, clean behind furniture, keep room free of empty cups and food containers, empty trash if 2/3 full
2. Clean bath room - sweep floor, pick up towels, clean shower if used, put away personnel items, empty trash if 2/3 full
3. Clean crew office - Keep counters clean and dust free, sweep floor, keep dishes washed and put away. Each crew is responsible for their own dishes.
4. Soiled utility room - Sweep floor, keep sinks clean, surfaces dusted, and supplies put away.

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Storage of Ambulances, PHS01-12

POLICY:

To assure security of ambulances when not in use and to the assure that out of service units are ready to be put in service.

PURPOSE:

To provide guidelines for the storage of back-up units.

PROCEDURE:

A. The ambulances are to be kept in the garage when not in use.

B. The ambulance shore line power shall be plugged in when the ambulance is not in use.

C. In cold weather the patient compartment shall be kept warm. The medications and intravenous (IV) fluids shall be kept warm.

D. When taken out or service the crew and patient compartment shall be left clean.

E. The ambulance shall be fully stocked and ready for service.

F. The fuel tank shall be full.

G. If the ambulance is not ready for service, an 8 x 11 note/memo shall be left taped to the steering wheel noting the reason/deficiencies that need to be corrected prior to putting the unit back in service.

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Refueling Ambulances, PHS01-13

POLICY:

Ambulances will maintain adequate fuel in tanks in order to remain ready for a call.

PURPOSE:

To set guidelines for maintaining fuel in tanks.

PROCEDURE:

A. WEX Fleet Card is provided in Citizens Memorial Hospital (CMH) Ambulances for purchasing of fuel for ambulances.

B. It is preferred that fuel is purchased from MFA Oil Company whenever possible.

C. Ambulances will be fueled when gauge indicates fuel tank level at less than 3/4 tank

D. The ambulance fuel level should be checked at the beginning of the shift and after each ambulance transport, response, and at the end of shift.

E. Ambulances should be left at the end of shift with greater than 3/4 tank of fuel.

Attachments

No Attachments

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Electronic Patient Care Report (EPCR) Usage, PHS01-15

POLICY:

Citizens Memorial Hospital (CMH) uses Health Emergency Medical Services (EMS) as the electronic patient care report (EPCR). The EPCR is a legal medical record. It is the document which can reflect the condition and justify treatment/transport of the pre-hospital patient at the time of accident or illness. It is also the record of patient refusal and no care needed.

PURPOSE:

To provide guideline for documentation of EMS responses. To adequately and thoroughly record a patient encounter with Prehospital Services (PHS), including patient demographics, medical history and a report of medical problems, treatment, and events involved.

PROCEDURE:

A. An EPCR will be completed for an EMS response. An EPCR shall be completed for each scheduled special event stand by and unscheduled stand by. Each ambulance assigned to the event will complete an EPCR.

B. A EPCR for each EMS response, scheduled special event that a ambulance is present, an stand -by for sporting events shall be completed with in 24 hours of the response or event.

C. The EPCR for Stand bys and special events should include the event name, event address and location of event, and time frame involved. A narrative should be completed to describe the event.

D. The EPCR will be filled out by the attending crew member under the following guidelines.

1. A record of the patient's full name, address, phone number, and date of birth will be recorded as complete as possible.
2. Each part of the EPCR will be filled out regarding the patient's condition and status.
3. Staff will complete a set of vital signs as thoroughly as possible and record. This should be repeated as necessary to update the patient's status.
4. A narrative pertaining to the patient's medical history, time of onset or injury, why ambulance was sent, patient's stated chief complaint, description of event, injuries found or signs and symptoms, treatment done, results of treatment, and changes in the patient condition en route.

E. The ambulance operations manager(s) or education coordinator shall in association with the ambulance physician/advisor, do monthly Quality Improvement (QI) review of the ambulance trip reports. That information shall be reported to the QI Committee of CMH on a regular basis.

1. The specific items to be reviewed shall be outlined in the QI Plan which is submitted to the QI Committee yearly. That plan may be revised as deemed necessary by the QI Committee and/or the Physician Medical Advisor of CMH EMS.
2. The results of the QI review shall be available for inspection by the QI Committee and reported upon their request. The information of the monthly QI review shall be kept on file by the ambulance operations manager(s).

F. Patient Refuses Care against Medical Advice

1. Determine that the patient or the patient's guardian is conscious and alert.
2. Read the refusal form aloud to the patient and requests the patient sign the form in the presence of two witnesses if possible and preferably not the ambulance crew.
3. Obtain patient information (i.e., name and address) and document this on the EPCR.
4. In the event that the patient refuses to sign the EPCR, document the refusal of signature and require that two witnesses also sign the EPCR.
5. If there are questions regarding the patient's ability to refuse care, contact the CMH Emergency Department physician.

G. Downtime Procedures

1. If Health EMS is not available during a call, use a paper trip ticket to document the call.
2. Capture appropriate signatures on the paper trip ticket.
3. Turn in the paper trip ticket along with face sheets and other supporting documentation with the PHS daily log. The paper trip ticket will be scanned by Patient Access personnel and become a permanent part of the patient's medical record.
4. PHS personnel filling out the paper trip ticket will be expected to fill out an EPCR when completing their daily paperwork.
5. If unable to import electrocardiograph (EKG) data into the EPCR, cut and paste or tape the printed EKGs 3 lead, 12 lead, and 15 lead EKGs to a white sheet of paper. Verify the patient's name, date of birth, call number, and date of service is visible. Staple this to the face sheet and turn it in with the daily log. It should be sent to Patient Access to be scanned into the patient's medical record.

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Security of Ambulance Keys, PHS01-17

POLICY:

Care will be taken to protect equipment and personal health information (PHI) in the ambulance.

PURPOSE:

To provide guidelines for security of ambulance keys.

PROCEDURE:

A. Keys for the ambulances are to remain in the possession of the ambulance crew on duty or in the Emergency Medical Services (EMS) key storage area.

B. In the event an employee accidentally takes the ambulance keys home, they will return them within one hour.

C. Exterior doors are to be locked during times that require crew to be away from ambulance for an extended period of time in order to protect equipment and Patient Health Information (PHI) kept in the ambulance.

D. The computers used for charting shall be kept secure in ambulance, both during times of use and while not in use.

Attachments

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Armed Subject Demanding Narcotics, PHS01-18

POLICY:

Guidelines to reduce the risk of bodily harm to the Emergency Medical Services (EMS) crew when facing an armed criminal action are provided.

PURPOSE:

To provide guidelines when EMS staff face an armed criminal action situation.

PROCEDURE:

A. Do not resist.

B. Give the individual(s) whatever he or she demands.

C. Attempt to get description of individual, vehicle information, direction of travel or any other information that may help law enforcement.

D. As soon as the individual has left, advise CMH Ambulance dispatch or call local 911.

E. Contact the Director of EMS and Operations Manager as soon as possible. The Director of EMS and or designee will notify the administrative head of EMS and the Chief Executive Officer.

F. A Event Report will be completed in Meditech.

G. The diversion will be reported to the Missouri BNDD and DEA.

Attachments

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Ambulance Staffing, PHS01-19

POLICY:

Ambulances shall be staffed to meet community and hospital emergency and non-emergency needs.

PURPOSE:

To maintain ambulance staffing to provide coverage in the service area.

PROCEDURES:

A. For general scheduling, refer to Scheduling of Employees, HR08-08.

B. **Ambulance staff may require a rest period during continuous duty.**

1. After 15 hours of continuous duty, the ambulance crew shall take an eight (8) hour mandatory rest period. Continuous duty is defined as driving and/or patient care duties with less than two hours down time.
2. Upon reaching the 15-hour mark, the crew will contact the on-call manager for approval. Dispatch and other on-duty staff shall be notified and coverage adjusted. An event report shall be completed after the rest period by the crew or the on-call manager.
3. A 10-hour rest period should be taken between 10- and 12-hour shifts. Back-to-back 10- or 12-hour shifts should only be done in extenuating circumstances as approved by a manager.
4. A 24-hour rest period should be taken between 24-hour shifts. Back-to-back 24-hour shifts should only be done in extenuating circumstances as approved by a manager.

C. **Ambulance staff may be held over the end of their shift to maintain ambulance coverage for emergency needs.**

1. Hold over may be implemented when the off-going ambulance crew will leave the county status zero (without an ambulance). It is the responsibility for the off-going crew to ensure ambulance coverage before clocking out.
2. Hold over may also be implemented by a Crew Leader, Supervisor, Manager, Chief, or Director at their discretion. The designated dispatch center may contact the on-call manager to request a hold over.
3. Long distance transfers shall not be taken by the hold over crew. A rested crew will be used.

4. Maximum hold over time should be two hours after end of shift. An effort will be made to limit shift time to 14 hours duty time and allow ten hours between shifts.
5. Crews may be released at the end of the two hour period or at the discretion of PHS leadership.

D. **Ambulance staffing during a disaster may be altered to meet the needs of the event and support operational periods.**

1. Maximum shift hours, hold-over, and rest-period between shifts may be altered at the discretion of managers, chiefs, or the director.
2. Future and existing vacations may be not approved or rescinded.
3. The existing schedule and station assignments may be disregarded and staff will be required to work alternate shifts and locations.
4. If posting is required, shifts that are posting for more than a few hours will be limited to 12-hour shifts, when possible. Efforts to reduce continuous posting long than 60 minutes will be made by crews to rotate posting ambulances.
5. In the event of limited staffing, the following guide will be used to staff higher-priority shifts based on staff availability. In order of importance, fill the following shifts:
    a. Bolivar 12-hour day shift [typically B-shift].
    b. Bolivar 12-hour night shift [typically Q-shift].
    c. Hermitage 12-hour day shift, then 12-hour night shift (may be converted to 24-hour shift) [typically H-shift].
    d. Stockton 12-hour day shift, then 12-hour night shift (may be converted to 24-hour shift) [typically S-shift].
    e. Bolivar second 12-hour day shift [typically A-shift].
    f. Bolivar second 12-hour night shift [typcially P-shift].
    g. Eldorado 24-hour shift [typically E-shift].
    h. Osceola 24-hour shift [typically O-shift].
    i. Bolivar third 12-hour day shift [typically C-shift].
    j. Float shift [typically F-shift].
    k. Bolivar BLS 10-hour day shift [typically T-shift].
    l. Bolivar BLS second 10-hour day shift [typically U-shift].
6. In the event of communicable disease or pandemic situation and limited staffing, the maximum number of staff in a station at a time will be two (2) in living areas (excludes meeting rooms and offices). All other on-duty crews will post in ambulances to limit disease transmission. If a station needs decontamination or cleaning prior to occupancy, crews will post nearby and not remain in the station. Suggested posting locations, in order of priority to fill, based on number of ambulances available:
    a. Collins (truck stop)
    b. Bolivar (station)
    c. Hermitage (station)
    d. Stockton (station)

e. El Dorado Springs (station)

f. Osceola (station)

g. Bolivar (Smiths)

h. Bolivar (Kum&Go 13 & 32)

i. Bolivar (Fast&Friendly 32 & D)

E. **Staff may request time off and utilize Paid Time Off (PTO).** Refer to Paid Time Off, HR08-15.

1. Once scheduled for a shift, employees are expected to work the scheduled shifts. Staff are expected to trade or fill their scheduled shifts on their own. All trades, dumps, or other schedule modifications must be approved using the scheduling software.
2. Vacation and PTO requests may be approved or denied by managers or chiefs according to the current staffing status.
    a. Regularly, only two staff members with the same level of licensure (i.e two paramedics or two EMTs) may be approved for vacation at a time.
    b. During "critical staffing" as defined in the bonus pay section, only one staff member with the same level of licensure may be approved for vacation at a time.
3. Employees with priority to be approved for PTO use include:
    a. Employees that have not used or those projected not to have used their annually required PTO usage.
    b. Employees who are at their maximum accrual of PTO hours and cannot accumulate any more PTO.

Attachments

No Attachments

Approval Signatures

Approver	Date
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References:	*Hospital*

Pre-Hospital Services In-Processing of New Employees, PHS01-20

POLICY:

It is the policy of Citizens Memorial Hospital (CMH)-EMS that each applicant meets certain predetermined requirements. Once a perspective employee completes the hospital orientation process they must complete the EMS In-Processing and complete further documentation.

PURPOSE:

The purpose of this policy is to assure all new hire EMS personnel are current in all necessary skill levels. To establish minimum completion times for preparing the new hire for release to field duty.

PROCEDURE:

A. New hire employees to Emergency Medical Services and employees newly promoted shall receive a thorough job specific orientation which outlines specific areas of knowledge and skills required for the position.

B. The County Base Manager will be responsible for assuring the orientation process and verification of competency of the new employee. The Manager will coordinate and communicate with Field Training Officers (FTOs) and mentors on status of the new employee.

C. The Orientation period shall be divided in four stages.

1. Stage 1: (Demonstration) Classroom and Skills Evaluation
2. Stage 2: (Instruction) Third-Rider on the Ambulance
3. Stage 3: (Collaboration) Double EMT/Medic on the Ambulance
4. Stage 4: (Evaluation) Released as a full partner on the ambulance for evaluation

D. Manager shall conduct the 30-60-90 Day evaluations and Final Release of employee to field duty.

METHODOLOGY

A. Assigned FTO shall be utilized to educate and orient new employees and students riding on ambulances.

B. FTO's shall meet the requirements as outlined in the current EMS Education Administration Manual

C. New Hires, Students, and Observers shall only ride with an approved FTO.

D. The following shall be the Process followed during in-processing.

a. Awareness of the core functions, essential services and core competencies for new employees as well as specific competencies for disciplines of EMT or Paramedic.

b. Utilization of job specific skills lists with designated activities and time-frames for completion and verification of competency of the assigned skills.

c. Designated Field Training Officer or mentor to foster an environment of supported learning.

d. New Employee, FTO and County Manager evaluation and feedback including a plan for improvement or continued growth as indicated according to the established time frame.

e. The Orientation Coordinator shall schedule the initial 6 shifts, with the 6th shift conducted with the Base Manager

Reference:

i. CMH-EMS New Hire/On-Boarding Guidelines

Attachments

No Attachments

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Accidents Involving Hospital Ambulances, PHS01-21

POLICY:

In the event of an accident involving a Hospital ambulance, the following guidelines will be initiated.

PURPOSE:

To provide guidelines of actions to be taken in the event of an accident involving an ambulance.

PROCEDURE:

A. Provide care to injured person(s).

B. Remove person(s) from immediate danger.

C. Radio for appropriate assistance.

D. Notify CMH ambulance dispatch.

E. The ambulance should not be moved until notified to do so by law enforcement personal.

F. Obtain the following information from the other involved party or parties:

1. Name (Vehicle owners name if other than the driver)
2. Address (Business address if company owned vehicle)
3. Drivers license number and state
4. Make, model, and year of vehicle
5. Description of damages
6. Insurance company and policy number

G. Notify the Director of PHS or designee as soon as practical.

H. The Director of EMS or designee will notify the PHS administrative head.

I. The ambulance administrative head or Director of PHS or designee will notify the Chief Executive Officer.

J. Security and the Director of Fleet Services will be notified.

K. No statement will be made other than to the investigating law enforcement agency, Chief Executive Officer, or Director of EMS, CMH Security or designee.

L. Driver will report to laboratory for drug and alcohol screening.

M. Failure to submit to the required testing may result in immediate termination.

N. Upon returning to the hospital, the driver of the ambulance will contact Security and a vehicle accident report form will be completed and a statement of witness to the vehicle accident will be completed and submitted to the Chief Executive Officer.

O. A Event Report will be completed by the driver of the ambulance

P. Director of Fleet Management will report accidents to the Director of Accounting for insurance notification.

Attachments

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Oxygen Cylinders, PHS01-22

POLICY:

Oxygen cylinders will be stored in a safe and appropriate manner.

PURPOSE:

To establish guidelines for oxygen cylinder storage and use.

PROCEDURE:

A. Oxygen equipment, when not in use, is to be left off the ambulance and stored in the appropriate storage area.
   1. "M" and "H" size tanks are to be chain secured in place to the wall. "D" and "E" size tanks are to be kept in the appropriate storage rack.

B. Oxygen tanks shall be strapped down or in some manner secured when not in use. When the oxygen tanks are in use, care shall be taken to prevent the tank from being dropped or rolling loose.

C. While moving larger tanks, the "safety cap" shall be in place prior to moving the tank.

D. At NO time should a cylinder or cylinder part be oiled.

E. Report damage of tanks to the ambulance operations manager or to the director.

Attachments

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Ambulances Passing School Buses, PHS01-23

POLICY:

Citizens Memorial Hospital (CMH) ambulances will use caution when passing school buses.

PURPOSE:

To effect safe passes of school buses.

PROCEDURE:

A. Refer to Policy PHS01-01 - Ambulance Driving for general driving policies while operating a CMH ambulance.

B. While running Code 1 (no lights or siren), state traffic regulations will be followed concerning the passing of school buses.

C. While running Code 3 (lights and siren), the driver shall stop at a safe distance behind the stopped bus. The ambulance should be stopped as close to the center line as possible without crossing it. (Leave emergency warning signals on and siren off.)

D. The ambulance will not pass the school bus until the school bus stop sign has been retracted and/or clear indication from the school bus driver that it is safe to proceed.

E. The ambulance shall then proceed cautiously around the school bus. While being alert for pedestrians.

F. Once safely past the school bus, the ambulance may re-engage the siren and proceed.

Attachments

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Ambulance Medications, PHS01-24

POLICY:

A Policy and Procedure for medications and controlled substances used in Pre Hospital Service Department.

PURPOSE:

To assure that the proper procedures are followed and Federal and State laws and regulations are observed when handling medications and controlled substances.

PROCEDURE:

A. Each ambulance station will maintain its own Drug Enforcement Administration (DEA) and Missouri Bureau of Narcotics and Dangerous Drugs (BNDD) licenses.
   1. DEA and BNDD licenses shall be displayed at each station.
   2. The PHS Director in cooperation with the Operations and Clinical Chiefs will be responsible for keeping the licenses current.

B. Controlled medications
   1. Refer to current protocols authorized by medical control for the list of medications (controlled or otherwise) that are to be carried on ambulances and may be administered by EMTs and Paramedics.

C. Each station will maintain its own supply of medications and controlled substances.
   1. Regional Managers will keep the supply inventory for stations at adequate levels to be able to resupply the ambulances.

D. Staff will contact a member of the leadership team to obtain controlled medications to resupply an ambulance narcotics box:
   1. Such ambulance resupply may occur when the count of medication is below the minimum stock level as indicated in the inventory sheet or the medication is expired and needs to be replaced.
   2. The controlled medication will then be added to the current ambulance inventory.
   3. If needed, the expired medication will be removed and transferred to the expired medication inventory in the station supply box.
   4. The perpetual (ongoing) inventory sheet/log will be adjusted to show date/time the controlled medication was obtained or transfered, along with witness for resealing box.

5. A new seal will be placed on the ambulance narcotics box and recorded.

E. For each station to obtain controlled medications (purchase):

1. Such station resupply may occur when the amount of a medication lot in the supply box at the station is at a low level, the medication is expired, and/or at the discretion of leadership based on anticipated needs.
2. The Director, Chief, or Medical Director may inventory the controlled medications at any point.
3. The Director, Chief, or Manager will purchase the needed medication(s) at the CMH Pharmacy.
    a. This is done with official order forms:
        i. Schedules II
        ii. DEA Form 222
        iii. BNDD Form MO58-276 will be used for Schedule III,IV,V
    b. After a purchase, a copy of the DEA Form 222 and/or BNDD Form MO58-276 will be filed in the ambulance station files and a pharmacy inventory sheet for the new medication log filed in the narcotics book.
    c. The inventory sheets will be updated to record the changes in Supply box inventory. The changes to the Supply Box Inventory will be double checked by the PHS personal resupplying the Supply Box and Pharmacist assisting with the purchase..
    d. The pharmacist may do an inventory audit.

F. Perpetual Inventory:

1. A perpetual inventory log will be maintained by the following:
    a. For each narcotics box assigned to each ambulance.
    b. Date and time used
    c. Patient's name
    d. Run number
    e. Physician from which medical control was received or if protocol was used
    f. Signature of emergency medical technician-paramedic (EMT-P) and emergency medical technician (EMT)
    g. Noting each medication amount in inventory
    h. Amount used
    i. Amount wasted and reason for waste
    j. Log seal replacement number
    k. Duty paramedic will witness signatures of last adjustment/seal
2. Perpetual inventory (ongoing inventory) will correspond by numbered seal with the daily seal audit.
    a. If this does not correspond, an audit will be done.
    b. An audit will be done once a month or approximately once every 30 days by operations manager, director, or medical director and logged as an audit.
3. During the audit medication expiration dates will be checked. If the medication is expired the expired

medication will be replaced by in-date medications.

4. An count shall be done every time the seal and/or container of controlled medications is opened.

G. Ambulance Storage/Security :

1. Controlled medications are to be stored in a sealed bag/metal/plastic box or locked container along with corresponding inventory log sheet.
2. The narcotics box shall be stored within a locked cabinet that is permanently attached to or within the ambulance.
3. This cabinet shall not be labeled.
4. The container in the cabinet shall be sealed with a lock and/or tamper proof seal.
5. Controlled substances will be secured by an electronic lock that allows access by proxy card that is unique to each Paramedic and the Paramedic's designated access number.
6. Each Paramedic will be issued a unique proxy card during orientation. The proxy card will allow access to the controlled substances in each ambulance..
7. The proxy cards issued to leadership will also allow access to each station's main supply box.
8. If the Paramedic does not bring their proxy card to work and has to use the emergency access code, leadership must be notified and an event report filled out. Excessive use of emergency access code can lead to disciplinary action..
9. An access log is maintained by the proxy card system and will be occasionally reviewed along with access log sheets.
10. The emergency access code number will be maintained and changed on a routine basis. The emergency access code is confidential and should only be used in a emergency situation or when a Paramedic does not have their proxy card available or there is a malfunction with the proxy card.
11. Ambulances that are not parked in an environmentally sound and secure building or area or will be parked away form a ambulance station or Fleet Services for a extended period of time should have the controlled substances removed and stored in the station supply cabinet

H. Administration and waste:

1. Protocol may be followed or a physician's order may be obtained for administration of controlled substances.
2. When a controlled medication is given, the following information should be recorded on the inventory record:
    a. Patient name as on the EPCR
        i. The patient name and address needs to appear on the EPCR.
    b. Date and time
    c. Drug name and strength
    d. Dose
    e. Ordering physician's name or protocol if given by protocol.
    f. Trip ticket number
    g. Paramedic signature

3. When a partial dose shall be destroyed:
    a. Waste amount shall be visually witnessed by a paramedic, registered nurse, physician, or EMT.
    b. When a medication needs to be destroyed or wasted, the following will be recorded:
        i. Date and time
        ii. Drug name
        iii. Amount
        iv. Reason for waste
        v. Two signatures - the on-duty paramedic and witness to the waste.
    c. The medical director and/or CMH pharmacist shall review the record keeping periodically.

I. Daily Inventory Seal Audit:

1. Controlled medications should be counted at the beginning and end of each shift, by cross reference of the numbered seal on the lock box, and the logged entry on the narcotic log for the particular box.
2. If the numbered seal on the lock box and the last logged entry on the daily seal audit do not correspond, immediately refer to the perpetual or ongoing inventory logs for the last inventory adjustment.
3. When the seal/audit inventory logs do not correspond, an inventory of the lock box shall be made in the presence of a witness.
4. When complete and no loss is noted, log new seal number on the daily audit and log the numbered seal on the perpetual inventory noting the following:
    a. Date and time
    b. Number of meds
    c. Replacement seal number
    d. Duty paramedic and witness signature (who should be the off-going paramedic) or Operations Manager.
5. If a discrepancy is still present, notify the manager immediately and fill out an event report.

J. Medical Director Review:

1. The medical director shall review purchasing and distributing records periodically.
2. The medical director shall review the inventory and record keeping periodically.

K. Supply Box

1. Each station will keep a supply box to stock the units' narcotics boxes.
2. Supply Box will be kept in a secure lock location at the station.
3. A perpetual inventory will be kept of the supply box.
4. When a transfer to an ambulance narcotics box is made, the following information will be logged on the Pre Hospital/Narcotic Stock Box Inventory.
    a. Date of transfer
    b. Time of Transfer
    c. Signature of Paramedic

d. Leadership Signature
e. Perpetual Inventory reflecting stack transfer
f. Log seal number Stock Box is sealed with
g. Log which ambulance box was restocked

5. A log book will be kept at each station that includes
   a. Each ambulance narcotics box perpetual inventory
   b. Supply box perpetual inventory
   c. DEA 222 forms
   d. Missouri BNDD Form MO58-276 for Schedule III,IV,V medications
   e. All records and perpetual inventories for that station
   f. Periodically the older records will be filed in a secure place in chronological order
6. Annual Inventory of Controlled Substances
   1. In December of each year an annual inventory of controlled substances will be performed.
   2. Missouri BNDD form 580-2849 will be filled out and kept on file

Attachments

No Attachments

Approval Signatures

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References:	*Hospital*

Damage to CMH Ambulance, PHS01-25

POLICY:

In the event of damage to a Citizens Memorial Hospital (CMH) ambulance, the following guidelines will be initiated.

PURPOSE:

To provide guidelines of actions to be taken in the event of damage to a CMH ambulance. Motor vehicle accidents shall be reported to the appropriate law enforcement agency immediately. Refer to PHS01-21, "Accidents Involving Hospital Ambulances."

PROCEDURE:

A. Radio for assistance if it is needed
   1. Arrange for transportation of patient if transport cannot be completed.
   2. Notify Fleet Services on-call personnel if wrecker is needed.

B. Notify the Director of PreHospital Services or designee as soon as possible. The ambulance administrative head, Director of PreHospital Services, or designee will notify the Chief Executive Officer. Contact Director of Accounting (417-328-6650) as soon as practical 1st business day after event.

C. Upon returning to base a report shall be submitted to the operations manager and director.

D. Upon returning to the base, and Security will be notified and a report shall be made.

E. CMH employees involved will submit to a chemical test

F. Failure to submit to the required testing may result in immediate termination.

Attachments

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Rescue Squad Supplies, PHS01-26

POLICY:

Citizens Memorial Hospital (CMH) will restock supplies for area 1st Response Agencies, regardless of the agency's profit or not-for-profit status. The goal of restocking supplies for these agencies is to enhance the delivery of emergency services and facilitate emergency preparedness in our service area.

PURPOSE:

To assist 1st Response Agencies with the procurement of necessary emergency medical supplies.

PROCEDURE:

A. Initial issuing and restocking of bulk supplies:
   1. 1st Response Agencies will present a list of the type of supplies and quantity requested to the Director of Pre Hospital Services.
   2. The requested supply list will be approved by the Chief Executive Officer (CEO) or designee.

B. Replacement of supplies used on scene:
   1. The on-scene CMH ambulance crew may replace supplies utilized by the 1st Response Agency on scene in an emergency. If the exchange of supplies cannot be completed in a timely manner in which patient care will not be affected, then the 1st Response Agency shall wait until a later time to request supplies.
   2. The hospital will not bill a federal health care program or beneficiary for the restocked drugs or supplies and will not write off the cost of these drugs or supplies as bad debt.

Attachments

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Ambulance Coverage for Special Events, PHS01-27

POLICY:

Citizens Memorial Hospital (CMH) will provide and charge for ambulance service coverage for special events within the CMH ambulance service area.

PURPOSE:

To provide guidelines when requests are made to provide ambulance coverage to special events in CMH ambulance service area.

PROCEDURE:

A. Definitions:

1. Dedicated Unit Coverage: An advanced life support (ALS) or Basic Life Support (BLS) ambulance is provided to the event. Their sole responsibility is to provide emergency medical services and transportation at the event. In the event there is a need to transport a patient or if there is an extreme need in the service area, the ambulance may leave the event (extreme need is determined by the ambulance crew or ambulance leadership).
2. Duty Unit Coverage: An ALS or BLS duty ambulance is provided to the event. The unit remains on stand-by status at the event location and provides emergency medical services and transportation as needed. They can be dispatched to a call at another location if the need arises (need is determined by ambulance dispatch).

B. Requests for stand-by ambulance should be forwarded to the PHS Director or Operations Chief. The requester may need types of stand-by options explained. The agency requesting the ambulance determines if they would like a dedicated or duty unit.

C. Scheduling is confirmed and arranged by the Operations Chief after approval by the Director.

D. Minimum time for the arrangement of a dedicated unit is two weeks prior to the event. If a request for a dedicated unit is made with less than two weeks notice, CMH will try to accommodate the event if staffing permits.

E. The agency shall be advised that a duty unit may be sent if a dedicated unit cannot be arranged.

F. The agency should be contacted as soon as possible to confirm the type of coverage that can be

provided.

G. Public schools and not-for-profit organizations are typically not billed for ambulance coverage; however, it is the prerogative of the Chief Executive Officer (CEO) to make the final decision.

H. Crews on the scene of stand-by event shall make themselves familiar with Protocol 2-814 - Spinal Cord Trauma for patient treatment options. Additional protocols may also be used as determined by patient condition and ambulance staff discretion.

Attachments

No Attachments

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Ambulance Equipment (Powered), PHS01-28

POLICY:

Steps will be taken to verify equipment is functioning properly by performing routine checks and maintenance.

PURPOSE:

To assure that the ambulance patient care equipment is in a state of readiness.

PROCEDURE:

A. Ambulances shall have the following patient care equipment that is powered by batteries and/or charging device.
   1. Laryngoscope
   2. Pulse oximetry
   3. Defibrillator with monitor
   4. Portable suction
   5. IV pump
   6. Exactech glucose monitor
   7. IO Gun device
   8. Thermometer for patient use

B. The following equipment is powered by batteries:
   1. Laryngoscope
   2. Pulse oximetry
   3. Defibrillator monitor
   4. Spare batteries are maintained Storage Room and on the ambulance.
   5. Spare defibrillator monitor batteries are in the ambulance and crew area.

C. The following equipment is powered by battery or 110 volts alternating current (vac) inverter and shoreline 110 vac.
   1. IV Pump

2. Portable Ventilator

D. Function Check:

1. Function check of powered patient care equipment is performed at at the beginning of a shift. It will consist of turning the unit on and checking that:
    a. Lights work
    b. Screens work
    c. Operates without hesitation
    d. Equipment is clean
2. Failure of the function check that cannot be corrected, notify the Base Manager or designee.
3. Equipment function checks should be noted on the daily check .

E. The Exactech glucose monitor equipment should maintain a daily log including:

1. Control test of high/low ranges
2. Ranges
3. Strip lot number
4. Signature of person conducting control test
5. Monthly logs are retained and a file is kept.
6. Difficulty with equipment, notify Base Manager or designee
7. An equipment functions monitor log should be maintained.

F. Equipment Maintenance:

1. Monitor Defibrillator
    a. The monitor defibrillator will have available batteries as follows:
        i. LP15 - 2 in monitor, 2 extra
        ii. LP 12 - 2 in monitor 2 extra
    b. Daily checks are conducted noting:
        i. Battery rotation
        ii. Monitor function

G. Monitor Defibrillator Battery Maintenance:

1. Battery rotation is daily.
2. Batteries that last less than 30 minutes should be sent to Biomed Department for evaluation.
3. Deep Cycling:
    a. Will be done when the battery is rotated from the monitor with little or no use.
    b. Deep cycling is as follows:
        i. Place the battery in the slot to the far right on the battery support system.
        ii. Press the discharge panel. This begins the discharge cycle. Time will vary, depending on current battery capacity.
        iii. Deep cycle charge begins when panel indicates a charge and light flashes.

iv. Charge capacity is reached when battery indicator reads charge percentage.

v. Charge of 90% and greater is acceptable. If this is not obtained, repeat the deep cycle process once to achieve 95% or greater.

vi. Failure to reach this percentage, pull the battery from service, notify Base Operations Manager.

4. Faulty Batteries:

a. Batteries that charge up to capacity and indicate faulty. This battery can be sent to Biomed for evaluation. Notify the base Operations Manager or designee.

H. Function Check Monitor Defibrillator:

1. Equipment function check is done daily.
2. Noting battery function scope screen operation, recorder function, defibrillator function.
3. Daily monitor check:

a. Note the following for operation, wear, and tear:

i. Cords and cables

ii. Case and controls

iii. Lead select

iv. Screen and recorder

v. Charge and shock

I. Biomed 12 month evaluation:

1. The defibrillator will be evaluated at 12 month intervals:

a. Monitor Defibrillator:

i. Biomed will check monitor defibrillator 1 every 12 months.

ii. Records will be kept by Biomed

iii. Cardiac monitor defibrillator will be checked to manufactures recommendations.

2. Biomed will notify PreHospital Services of problems.
3. Biomed will maintain documentation in Site e FM.
4. Biomed will provide documentation if requested.

J. Battery Replacement:

1. Biomed will provide the following batteries for:

a. Suction Units

b. Monitor Defibrillator

K. Battery designation:

1. Monitor battery designation:

a. LP Batteries will be marked by Base,date put in service, if more than 1 battery is put in service on the same date use 1,2,3 ....

2. If difficulty is noted with the equipment, notify the Base Manager or designee

Attachments

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Owner:	*Theron Becker: EMT P-CMH HOS EMS Educati*
Policy Area:	*PreHospital*
References:	*Hospital*

Daily Operations, PHS01-31

POLICY:

The ambulance will be maintained through routine checks, equipment functions, supply restock, cleaning, sanitizing or disinfecting, emergency systems, and vehicle safety checks as needed and through daily operations.

PURPOSE:

To provide a frame work of daily duties to keep the ambulance and equipment in a state of readiness.

PROCEDURE:

A. When arriving for duty the crew will first clock into duty.

B. If relieving a crew, the off going crew will pass along shift information, including:

1. Current ambulance readiness, equipment concerns, ambulance status, inventory to be replaced, and pending transfer information.
2. The paramedic will check the narcotic inventory and assure the narcotic seal is intact and concurs with the inventory sheet.
3. Each crew member will obtain a hand held radio with fresh batteries.
4. Check-in with Polk County Central Dispatch on the ambulance radio and advise of crew with radio number and unit crew is checking in. Check-in needs to be complete within the first 15 minutes of the beginning of the shift.

C. Daily Unit Check Procedure:

1. Using the Ambulance Inventory List, a thorough check of the ambulance should be done to assure supplies, packs, and equipment is ready for service. A thorough unit check includes
   a. The vehicle inventory for equipment, patient care supplies, and medications
   b. Vehicle engine check
   c. Vehicle safety check
   d. Daily monitor/pacer/defibrillator check
   e. Perform daily Accu Check controls and fill out log

f. Note equipment failure

g. Note equipment that requires repair or replacement

h. Replace equipment or supplies needed

i. Complete Pre-shift Check List

2. Equipment on the ambulance shall be kept clean, both in the patient compartment and in the outside compartments.

D. Equipment failure, deficiencies, or supply needs should be noted for follow up as soon as possible during the shift.

E. Equipment, patient care supplies, or medications are to be replaced promptly after completion of each call.

1. If medications are needed, obtain medications from medication stock located in the station.

2. If controlled substances are needed to be restocked, follow proper procedure, per policy Controlled Medications in Prehospital Services, PHS01-24.

F. During the last 30 minutes at the end of a shift, the ambulance is to be cleaned inside and out. Equipment and supplies are to be inventoried and the ambulance is to be left ready to be put in service. Complete the Post Shift Check List.

G. If the crew operated out of more than one ambulance during their shift, they are responsible for cleaning inside and out of each ambulance. Restocking the ambulance and completing a Post Shift Check List shall be completed for each truck used during the shift. The ambulance is to be left ready to be put in service.

H. When equipment is taken from another ambulance, the crew member taking the equipment is to leave an 8.5 x 11 sheet of paper taped to the center of the dash with the time, date, the name of the crew member, equipment taken, where the equipment was placed, and why the equipment was taken. The paper is not to be removed until the equipment is replaced.

I. Failure in not leaving the ambulance in accordance to this policy is subject to disciplinary action.

Attachments

No Attachments

Approval Signatures

Approver	Date
Heather Cline: CORP COMP-CMH SHA CEOS OF	01/2019
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References:	*Hospital*

Mass Casualty Incident Response, PHS01-32

POLICY:

A mass casualty incident is noted as an incident that 6 or more patients will be transported by ambulance.

PURPOSE:

To allow resources to be attained and coordinated in a mass casualty incident. Citizens Memorial Hospital (CMH) EMS should follow the unified method and Standard Operating Guideline of the Missouri Southwest Regional Emergency Medical Services (EMS) Committee revision dated December 7, 2011.

PROCEDURE:

A. Upon arrival and/or when determination that a mass casualty incident has occurred, the first dispatch unit en route will request that ambulance dispatch contact the Emergency Room charge nurse and department director or designee to notify them of the incident.

B. The paramedic will be the triage officer. The second crew member will be transportation/communications officer. If the first ambulance on scene is basic life support (BLS) one emergency medical technician (EMT) will be triage officer, one EMT will be the transportation/ communications officer.

C. The following are mass casualty incident procedure for the first ambulance on scene.

1. First ambulance on scene:
    a. Strategically parks vehicle
    b. Establishes communications with dispatch
    c. Sizes up the scene and advises dispatch:
        i. Location and type of accident
        ii. Potential hazards
        iii. Estimated number of patients, if possible

D. Triage Officer:

1. Paramedic (until relieved)
    a. Estimates number and severity of patients. (Relays this information to transportation/ communications officer.)

b. Performs rapid triage using the START triage method for adults and the JumpStart triage method for pediatric patients. (Tagging patients: immediate/red, delayed/yellow, ambulatory/ green, or deceased/black)

c. Established triage/treatment areas (Immediate/red, delayed/yellow, ambulatory/ green, or deceased/black)

d. Establishes treatment teams/extrication teams, as resources allow.

e. Maintains rapid/orderly flow of patients from extrication to treatment areas.

E. Transportation/Communications Officer:

1. Emergency Medical Technician

a. Identifies as incident command with dispatch

b. Relays location/type of incident

c. Potential hazardous conditions

d. Location of command

e. Location of treatment areas

f. Routes of access to the scene

g. Number/severity of patients using the red, yellow, green, and black descriptors

i. Orders/coordinates transportation resources

ii. Ground/air ambulances

iii. Sets up staging areas (access/egress, assembly areas)

iv. Established patient loading zone

v. Coordinates access of incoming units to scene

vi. Assigns patients to ambulances, supervises loading

vii. Keeps log of patient's number, severity, treating/transporting units, and destination

F. Refer to diagrams and policy of Missouri Southwest Regional EMS Committee of the Regional EMS Triage Program. Appendix A and C of this Standard Operating Guideline has the START Triage and JumpSTART Triage Algorithm.

G. The second unit upon arrival will set up a treatment area if necessary.

Attachments

No Attachments

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DeAnna Hedger: DIR-CMH SHA PI	03/2018

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References:	*Hospital*

Ambulance Transfers, PHS01-33

POLICY:

Citizens Memorial Hospital (CMH) Pre Hospital Services (PHS) considers patient transfers to be a significant and important portion of the services provided in its daily operation.

PURPOSE:

To provide guidelines to ensure safety of the general public, patients, and PHS crews.

PROCEDURE:

A. General Guidelines

1. Response to emergency 911 calls is the priority, transfers will be done as Ambulances are available and adequate coverage of the CMH response area can be maintained.
2. Patient transfers will be covered in the most expedient manner possible, taking into account local resources and transport factors.
3. CMH EMS shall require a crew or crew member to perform patient transfers while on duty. Transfers will be performed as assigned. Determination of unit and crew utilization may be made by the PHS Operations Manager, Supervisor and/or Director.
4. Patient transfers should be performed without warning lights or sirens unless patient condition warrants. Changes in transport status will be documented.
5. During transport CMH EMS treatment protocols will be used unless other treatment is necessary and should be provided as physician orders. Order received by a physician should be documented in the Electronic Patient Care Record (EPCR) along with the name of the physician.
6. Ambulance crew responding to the transfer will take required items for transport and make contact with patient's caregiver for report. A verbal (bedside) and any transferring paper work should be given to transport crew. Prior to leaving sending facility, transport crew will re-confirm destination with patient and nursing staff.
7. A Physician Certification Statement (PCS) should be filled out by nursing staff for non-emergency inter-facility transfers or transports to the patient's residence. This form can be found on the CMH intranet. The completed PCS form is to be given to the transport crew.
8. Upon arrival at destination, the patient will be left in the care of the receiving facility staff. A verbal

report will be given. The electronic patient care reports (EPCR) will be faxed to the receiving hospital. The patient's personal belongings should be left in the care of receiving staff and documented. Transfers should be completed in an expedient manner to reduce the time crews are out of response area.

a. Once a transport crew re-enters CMH service area they are to notify Polk County Central Dispatch or home county of location and status.

B. Transfers:

1. Emergent transfers are generally defined as life threatening or potentially life threatening symptoms. Priority 1.
2. Crews will respond to all transfers as the Priority indicates. See attached: Transfer Decision Tree 11.14.18. Utilization of resources will be at the discretion of the PHS Operations Manager, supervisor and/or Director.
3. Patients will be transported as indicted (ALS or BLS) by the COBRA Transfer Form. It will be the responsibility of the transport crew to make the determination if additional resources are needed. This includes understanding of current patient condition, treatments, and equipment used during transport. If the paramedic feels that additional resources are necessary, this will be made known to the nursing staff immediately.
4. Arrangements should be made with the assistance of the nursing staff for the necessary equipment or staff to complete the transport safely.
5. A verbal report from a RN and any transferring paper work should be given to transport crew.

C. Advanced Life Support (ALS) transfers:

1. Generally defined as the patient is undergoing treatments or need care that require a paramedic to provide care.
2. These include, but are not limited to:
   a. Intravenous (IV) bags with fluids infusing that need to continue to infuse during transport
   b. Medications/blood infusing
   c. Cardiac monitoring
   d. Need for pain control
   e. Pregnancy greater than 20 weeks with active labor or pregnancy related issues
   f. Possible deterioration in patient condition that would require invasive airway maneuvers

D. For transfers that take more than one hour, the patient's condition, treatment, and needs during transport should be evaluated by a physician to assure the patient's needs can be safely maintained during transport.

E. The nursing units are encouraged to notify the PHS Operations Manager or Supervisor as soon as they are aware of a Long Distance Transfer (LDT). A LDT is to a facility farther than 100 miles one way. When the patient is ready for transport, the nursing units should notify Polk County Central Dispatch.

F. If the physician feels as if the patient cannot wait until an ambulance is available for a transfer they should consider using air medical transport.

G. Basic Life Support (BLS) transfers:

1. Generally defined as no immediate life threatening symptoms exist and there is no condition that

requires a paramedic to provide care.

2. Examples include but are not limited to:
    a. Return to long term care facility, specialized care or home.
    b. Transfer is Scheduled
    c. BLS transfers should not take place with a ALS Ambulance to destinations greater than 100 miles one way when there is one ambulance available in Polk County.(Status One)
3. Special Circumstances
    a. A long distant transfer (LDT) is a transfer with a one way leg of 100 miles or greater. When accepting long distance transfers, crew on duty time will be evaluated with a goal of not exceeding 14 hours of on duty time. An effort will be made to maintain adequate rest period between shifts of 10 hours. The final decision will be made by the Director or Operations Manager.
    b. When inclement weather is present or expected, the following sites will be studied by the PHS Director and/or Operations Manager in order to determine whether transporting patients can be done safely:
        a. Missouri Department of Transportation (MODOT) Road Condition map
        b. National Oceanic and Atmospheric Administration (NOAA) web site
        c. National Severe Weather Center St. Louis
        d. KY3 weather web site
    c. If, after studying the above sites it is determined that road or other weather conditions are or will imminently be hazardous and not safe for travel, the Director or Operations Manager will make the decision that transfer will not take place until conditions are safe for travel. The Director or Operations Manager will inform the Administrator on-call, Emergency Department Director, Director if Social Services, and ER charge nurse, . Conversely, the same steps in reverse will be taken when weather conditions support re-institution of transportation.
    d. The Director or Operational Manager will keep the on call administrators up to date on road and weather conditions.
    e. Local transfers (60 miles or less): During hazardous weather local transfers may be delayed until safe conditions exist. An effort will be made to complete needed transfers to local tertiary care centers.
    f. Special Weather Conditions
        a. During a Winter Weather Advisory - long distant transfers may be delayed until road conditions for both legs of the transfer are safe.
        b. During a Winter Storm Warning - transfers may be delayed until road conditions are safe.
        c. During a Winter Storm Warning - long distant transfer will not be done until weather conditions improve and road conditions on both legs of the transfer are clear. Efforts will be made to complete the transfer as soon as it is safe and practical.
        d. Tornado Warning - A transfer should not be made into an area with a high probability of development of dangerous weather or tornadoes. Severe weather conditions will be determined using information from sites listed above in section G-3-b.

g. If the transport crew requests that Security or a female rider accompany them, they should contact Security to arrange Security personnel to accompany the crew. The transfer may be delayed until Security personnel are available.

h. Patients in the custody of law enforcement and restrained with handcuffs and/or leg irons will be transported by CMH EMS only if an officer from the arresting agency is present in the ambulance throughout EMS transport. Patients may not be handcuffed to cot.

i. If a patient requests to be let out of ambulance, on-duty Emergency Room physician at CMH should be called immediately for direction. In cases (need for patient/crew safety) Law Enforcement should be contacted. The ambulance crew should not let the patient out of the ambulance unless the patient becomes a clear threat to crew safety.

Attachments

transfer decision tree 11.14.18.docx

Approval Signatures

Approver	Date
Heather Cline: CORP COMP-CMH SHA CEOS OF	03/2020
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Citizens Memorial Hospital - Pre-Hospital Services
Hospital Transfer Decision Tree
PHS01-35 Attachment 1
Updated 4/14/2021

Does the patient meet one of the following criteria?

- Time Critical Diagnosis (STEMI, Stroke, Trauma, Sepsis)
- Life-threatening condition that has to be transported as soon as possible
- Immediate surgery or critical treatment for a medical or trauma condition
- Urgent obstetrics (OB)

Yes → **Priority 1 Critical Care Transfer**. Lights and siren response by the closest ALS ambulance. Consider air ambulance.

No ↓

Is the transfer destination one of the following?

- Emergency Room
- Intensive Care Unit

Yes → Does the transfer require Advanced Life Support? (i.e., airway management, medication administration, or cardiac monitoring).

Yes → **Priority 2 ALS Transfer**. Normal response by the closest ALS ambulance. At least one other ALS ambulance must be available for 911 coverage.

No ↓

Does the transfer require Advanced Life Support? (i.e., airway management, medication administration, or cardiac monitoring).

Yes → **Priority 3 Transfer**. Normal response by the ambulance next up in rotation or with the longest time before end of shift. At least one other ALS ambulance and an additional ALS or BLS ambulance must be available for 911 coverage.

No ↓

Priority 4 BLS Transfer. Normal response by the BLS ambulance next up in rotation or with the longest time before end of shift. At least one other ALS ambulance and an additional ALS or BLS ambulance must be available for 911 coverage.

Note: Transfers will be dispatched and handled in order of priority above, and then in the following order:

1. Patient located in an Emergency Department (ER)
2. Patient located in a Cath Lab
3. Patient located in an Obstetrics Department (OB)
4. Patient located in an Intensive Care Unit (ICU)
5. Patient located in a Medical/Surgical Unit (MS)

Additional note: EMS supervisors may alter the order of transfers to increase efficiency. For example, moving a local in-town transfer higher on the priority list to get it completed more quickly before ambulances take long-distance transfers.

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Emergency Medical Services (EMS) Triage Program, PHS01-34

POLICY:

CMH Prehospital Services should use the Regional EMS Triage program.

PURPOSE:

To develop a unified method of appropriately triaging patients in the prehospital setting.

PROCEDURE:

A. Follow Modified ESI Triage Algorithm to assign an acuity level to patients in order to assist the Emergency Departments (ED) of the area to prepare for the arrival of the patient.

B. Medical patients should be triaged in this fashion and report made available to ED staff during radio report

1. Red or immediate patients require immediate life-saving interventions, i.e. ST-elevation myocardial infarctions (STEMIs), Cardiovascular accidents (CVAs), unconscious, or unstable vital signs.
2. Yellow or delayed patients are in a high risk situation. The patient is currently stable but at risk of becoming unstable. They have an altered mental status, altered level of consciousness, or severe pain/distress. Currently their vital signs are stable but may or may not have an elevated temp. These patients may require multiple hospital resources to manage this patient's care in the ED. i.e. labs, electrocardiograms (ECG), X-ray, computed tomography (CT)/magnetic resonance imaging (MRI), ultrasound, respiratory therapy, or specialty consultation.
3. Green or minor patients have minor complaints and/or are manageable with limited resources.

C. Triage tags could be used on patients that are:

1. Transferred to an air ambulance
2. Transported to an ED on designated triage tag training days

Attachments

No Attachments

Approval Signatures

Approver	Date
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References:	*Hospital*

Education and Competency, PHS01-37

POLICY:

It shall be the policy of Citizens Memorial Hospital (CMH)-EMS that all skills represented in emergency medical service shall undergo monthly/quarterly/semi-annual/annual competency examinations. These examinations shall consist of a mixture of hands-on skills recital with a minimum pass/fail criterion, as well as a measurement of cognitive knowledge through written examinations.

PURPOSE:

To assure EMS personnel are current in all necessary skill levels. To establish minimum competency standards for EMS skills and procedures and to define time intervals for training of required competencies.

PROCEDURE:

A. At the beginning of each calendar year, a new skills competency renewal schedule will be finalized for all field staff, and will be placed in the overall annual education schedule.

B. Criteria for competencies are included in the Procedure Index section of the protocols. The PHS Education Coordinator will provide checklists for skills not outlined in the Procedure Index.

C. It shall be the responsibility of each employee to maintain current competency in all skill levels indicated on the Skills Competency Renewal Schedule. This includes the scheduling and attendance of the necessary or required classes to achieve competency.

D. Deadlines for meeting the competency requirements are as follows:

   1. Monthly-End of each month (*HealthStreams*)
   2. Quarterly-Last day of March, June, Sept, Dec
   3. Semi-Annual-June 30 and Dec 31 of each year
   4. Annual-Dec 31 of each year

E. Employees who have not met competency requirements by these deadlines, and who have had ample and reasonable opportunities to do so will be subject to the following actions: (*These are within a 12-month period*)

F. 1st OffenseCoaching/Employee Development Plan

G. 2nd Offense-Employee Development Plan

H. 3rd Offense-Written Warning

I. The PHS Education Coordinator shall provide a list of employees not meeting specific competency requirements one month prior to each deadline.

J. Employees returning from a leave of absence will be required to become current in the competency areas missed during the LOA, before they can return to the work schedule.

K. All field personnel must successfully complete the annual written competency exam with at least an 80% score. Personnel will be given two attempts to successfully complete this exam, before remediation is required.

L. Remediation method may include, but not limited to a reassessment of the skill or knowledge and/or developing an education plan for performance improvement. All of them are at the discretion of the PHS Education Coordinator.

M. Education Services will promote and encourage competency of employees by providing access to educational materials and trainings required for the position and as possible, other opportunities to enhance the growth of the employee's skills and abilities to perform the job.

N. Education Services will assure that any on the job training is provided by qualified and/or competent trainers.

METHODOLOGY

Competency requirements and verification include, but not limited to the following:

a. Quarterly competency assessments utilizing checklists of key job skills including self-evaluation, demonstration and supervisor observation/evaluation with improvement plans as indicated.

b. Interim competency assessments to assess competence as new procedures or techniques are introduced, when job duties change and as indicated by individual performance.

c. Verification and copies of current licensure and certifications as required. Assurance of completion of required or recommended trainings as appropriate for the assigned responsibilities.

d. Review and/or performance by the supervisor of record audits as applicable to the position.

e. Utilization of reports of incidents, accident trends, customer satisfaction feedback and staff input as indicated.

f. Annual agency employee performance appraisal/work-plan utilizing required duties and responsibilities of the job description and including future goals and plans.

General Ref:

i. CMH-EMS Protocols v.11 (2018)

ii. NASEMO; National Model EMS Clinical Guidelines

iii. NREMT; EMT 2016 NCCP

iv. NREMT; Paramedic 2016 NCCP

Attachments

No Attachments

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References:	*Hospital*

Emergency Patient Non-Discrimination,PHS01-38

POLICY:

The Citizens Memorial Hospital (CMH) Emergency Medical Services (EMS) will not discriminate regardless of race, color, religion, national origin, age, sex, pregnancy, sexual orientation, gender identity or expression, disability or ability to pay.

PURPOSE:

To provide a standard to which EMS insures quality care for the emergent patient.

PROCEDURE:

A. CMH EMS provides emergency 911 response service 24 hours a day, 7 days a week.
   1. CMH responds to all emergency requests as directed by ambulance dispatch
      a. EMS will respond to all emergency requests for service, for ill or injured patient, regardless of race, color, religion, national origin, age, sex, pregnancy, sexual orientation, gender identity or expression, disability or ability to pay.

Attachments

No Attachments

Approval Signatures

Approver	Date
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Medical Control of Patient Care, PHS02-01

POLICY:

Citizens Memorial Hospital (CMH) EMS Ambulances are under Medical Control provided by CMH EMS Medical Director, and may be requested from CMH ERP or receiving facility ERP.

PURPOSE:

To define established medical control of the patient care in an emergency situation.

PROCEDURE:

A. When a physician is present on the scene and desires to direct patient care, ambulance personnel shall:

1. Inform the physician that if the physician directs the patient care, the physician shall accompany the patient to the hospital or accept CMH medical control.
2. Inform the physician at the onset of the event, that ambulance personnel have strict legal guidelines and established protocols and they may not exceed those guidelines or protocols.
3. Inform the physician that procedures outside the CMH Pre-Hospital Services (PHS) protocols and policies need to be performed by the physician and the physician must accompany the patient to the receiving hospital.
4. If a physician gives medical control on scene or accepts patient care and rides to hospital in the ambulance document the physicians name, address, and phone number in the PCR.

Attachments

No Attachments

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Policy Area:	*PreHospital*
References:	*Hospital*

Institution of Ambulance Protocols, PHS02-02

POLICY:

It is the policy of Citizens Memorial Hospital (CMH) that in the absence of a Physician, an Emergency Medical Technician (EMT), Advanced EMT (AEMT), Registered Nurse (RN), or Paramedic may institute protocols within their scope of practice.

PURPOSE:

To provide expedient, definitive care in both basic and advanced life support situations encountered in the ambulance and prehospital setting.

PROCEDURE:

A. Pertinent patient assessment and history will be done first.

B. The appropriate protocol and/or procedure will be instituted.

C. The receiving medical facility will be advised of patient's condition and radio report given after patient is stabilized or at first opportunity.

D. Refer to the currently approved EMS Protocols for CMH EMS. These protocols are reviewed and approved annually by the Medical Director for CMH EMS.

Attachments

No Attachments

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Approver	Date
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Air Transport of Patients, PHS02-03

POLICY:

Air transport is for patients that require more rapid means of transport due to condition of illness or injury.

PURPOSE:

To set the guidelines for use of air transport of patients

PROCEDURE:

A. Air transport may be requested:
   1. By request of outside emergency service agency (police, fire) or by request of rescue or ambulance personnel. This request will be honored whether the responder is already at the scene or if that responder feels from information received, that air transport might be appropriate.

B. Guidelines when to request air transport:
   1. It is the prerogative of the requesting agency or ambulance crew on the scene to specify which air transport to call. If the requesting party does not specify, the dispatcher can call their choice of services.
   2. Use of air transport is not considered as inappropriate in an emergency situation.
   3. The ground ambulance crew may request air transport. A landing zone (LZ) should be selected. If possible a fire department or rescue unit should be dispatched to secure the LZ.
   4. When an air ambulance is in route to the scene, medical personnel in attendance with the patient at the scene may make determination to cancel the air ambulance response.
   5. Air transport is recommended for the following circumstances:
      a. Severely injured or ill patient
      b. Ground ambulance resources are exhausted or exceeded
      c. Special environmental conditions (extreme heat or cold) which affect potential patient outcome or prohibit ground access to hospital or poor road conditions
      d. Reduction in transport time to a tertiary care center compared to ground transport for seriously

ill or injured patient.

e. Reduction in transport time to a Trauma, STEMI or stroke center.

Attachments

No Attachments

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References:	*Hospital*

Patients Determined to be Dead at the Scene, PHS02-04

POLICY:

Procedures shall be followed when a patient has been determined to be dead on arrival.

PURPOSE:

To provide procedural guidelines for patients determined to be dead on arrival.

PROCEDURE:

A. Contact Citizens Memorial Hospital (CMH) ambulance dispatch and report patient was determined dead at the scene. Request resources as needed.

B. Documentation of the following shall be completed:

1. Electrocardiogram (ECG) monitor strips may be obtained and added to the patient's permanent record.
2. Obvious death or mortal injury, a electrocardiogram (EKG) is not necessary
3. Document complete physical assessment to include mechanism of injury of trauma patient.
4. Document patient's history prior to event.
5. The appropriate county coroner shall be notified
6. If acted on, document do not resuscitate (DNR) and by what physician

C. Protect the body from public view.

D. If suspected crime scene, avoid moving objects. Notify law enforcement.

E. Do not leave the body unattended unless required to respond to another emergency.

F. No patient information will be given except to immediate family present, coroner, or investigating law enforcement agency.

Attachments

No Attachments

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References:	*Hospital*

Scope of Services –Prehospital Services, PHS02-05

Scope of Services-Prehospital Services

The PreHospital Services (PHS) Department provides emergency and non-emergency medical services with safe and efficient transportation for patients regardless of age, neonatal through geriatric patients. Paramedics and Emergency Medical Technicians (EMTs) respond to life-threatening medical and trauma patients, provide inter-hospital transfers, routine and scheduled transports, as well as provide support for law enforcement and fire/rescue operations. The pre-hospital services department also provides standby coverage at community events including sports, rodeos, and other events.

The state of Missouri licenses Registered Nurse(RN), Paramedics and Emergency Medical Technicians (EMT). Emergency medical services (EMS) personnel function under the treatment protocols and procedures approved by the EMS medical director (a physician), which are based on current basic life support (BLS), advanced cardiac life support (ACLS), pediatric advanced life support (PALS), and Pre Hospital trauma life support (PHTLS) standards in addition to evidence based clinical research.

To evaluate the need for treatment, EMS personnel use standard assessment techniques. Each ambulance in the fleet is equipped according to a standardized equipment list which includes a cardiac monitor, defibrillator, pulse oximeter,capnography, infusion pump, a blood pressure monitor, basic and advanced airways and emergency medications. These tools assist our personnel in providing initial and ongoing evaluations on-scene and during transport.

Paramedics function under the auspices of a physician medical director. Our medical director provides written standing protocols that enable EMS personnel to initiate treatment procedures in the field immediately. Paramedics consult with the receiving facility by telephone, cellular phone or radio to provide a patient report and to discuss and/or receive additional treatment orders from the physician. At times, patients are transferred to an air ambulance directly from the scene based on the severity of their illness or injury.

Citizens Memorial Hospital (CMH) PHS integrates into the local communities through involvement with local fire and rescue squads, emergency management personnel, city and county governments, and area law enforcement agencies. We participate in disaster management planning and HazMat planning in the four counties we serve. PHS staff also provides community-wide education on illness and injury prevention and other EMS topics as requested.

CMH PHS personnel staff ten ambulances in Polk, Hickory, Cedar counties and St. Clair. Coverage is provided twenty-four hours daily in each county with additional peak staffing as needed as determined by time

studies. Advanced Life Support (ALS) coverage, including a paramedic and an EMT on each ambulance is provided a round-the-clock while BLS coverage is provided for routine Basic Life Support (BLS) transfers. Mutual aid coverage is provided to adjoining counties upon request and available personnel. Including First Responders and fire and rescue personnel, are called upon to assist the CMH PHS department as needed.

Ongoing, continuous patient monitoring is done to support quality patient care and to protect patients from potential complications related to their care and treatment. Protection is maximized with the application of safety devices and training including scene safety, infusion pumps, restraints, and safe driving competency by staff. The PHS department also participates in the organization-wide initiatives on patient safety which may affect care delivery in the EMS environment. In addition, universal precautions are followed to the best of the ability of the staff given the particular scene circumstances.

The PHS department supports and facilitates the CMH Performance Improvement (PI) program and recognizes the importance of both PI and the empowerment of staff to provide quality EMS care that meets or exceeds patient's expectations. PI indicators are developed and monitored on an ongoing basis and PI team participation by both managers and staff is encouraged and supported. Chart audits, to ensure protocol compliance and proper documentation, are a component of the PI process. Skill competency is assessed for EMS personnel. Customer satisfaction is measured internally and benchmarked nationally by the Patient Advocate in the Performance/Quality Improvement Department. Annual unit-specific goals are also identified and analyzed on a quarterly basis. The PHS department supports the philosophy of CMH in the provision of delivering superior quality health care.

Attachments

No Attachments

Approval Signatures

Approver	Date
Heather Cline: CORP COMP-CMH SHA CEOS OF	09/2019
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Owner:	*Theron Becker: EMT P-CMH HOS EMS Educati*
Policy Area:	*PreHospital*
References:	*Hospital*

Request for Blood Alcohol Sample for Law Enforcement, PHS02-06

POLICY:

If the patient consents, Citizens Memorial Hospital (CMH) paramedics at their discretion, may draw blood for a blood alcohol (BA) analysis for the law enforcement officer when an intravenous (IV) line is being initiated.

PURPOSE:

To assist law enforcement in obtaining a blood sample for BA analysis when the task does not distract from patient care.

PROCEDURES:

A. When the paramedic is starting an IV, they may draw blood for a BA analysis if requested by a law enforcement officer and the patient consents to the blood sample being drawn for BA analysis. The officer shall be present, supply the blood tube and witness the blood sample being obtained.

B. The task will not distract attention away from the primary task of patient care.

C. The paramedic's documentation shall include the patient consent, blood draw, and officer requesting the blood draw.

D. At no time will the paramedic draw blood when an IV is not being started.

E. If an IV is not being initialed or the task will divert attention away from patient care, the paramedic shall politely inform the officer he/she cannot draw a blood sample to be used for BA analysis.

F. If requested by law enforcement, the paramedic may inform the law enforcement officer where the patient is being transported.

G. At no time will PreHospital Services (PHS) respond to a police station or sheriff's office for the purpose of drawing blood for a BA analysis.

H. At no time will PHS personnel draw blood for a BA analysis if a law enforcement officer brings a person to a base for purpose of obtaining a blood sample for a BA analysis.

Attachments

No Attachments

Approval Signatures

Approver	Date
Heather Cline: CORP COMP-CMH SHA CEOS OF	04/2019
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Pre-Hospital Service Driving Program, PHS02-08

POLICY:

Citizens Memorial Hospital (CMH) Pre Hospital Services (PHS) Driving Program

PURPOSE:

To set procedures in place for a driving program that promotes safe ambulance operations.

PROCEDURE:

A. The PHS Driving Program and polices that support and promote a safe driving culture.
   1. CMH PHS should have an Ambulance Operations and Driving Policy that promotes safety. PHS01-01
   2. CMH PHS should have an Long Distance Transfer (LDT) policy to promote safe LDTs PHS01-05
   3. CMH PHS should have na ambulance Transfer Policy that promotes safe transfers and address road conditions. PHS01-33
   4. CMH PHS should have a Roadway Operation and Safety Policy that promotes roadside safety. PHS03-08
   5. PHS Safety Officer will assist the PHS Director and Operations Managers with management and review of the program

B. All PHS employees should maintain a current Emergency Vehicle Operations Certificate (EVOC).

C. EVOC equal to National Association of Emergency Medical Technicians (NAEMT) 16 hour class or equivalent that includes hands on driving. If the employee has a equivalent certificate with no expiration date it should be considered valid for 4 years.
   1. Employees should not be scheduled to work without a current EVOC certificate.
   2. Newly hired employee have 120 days to obtain a Emergency Vehicle Operations certificate.

D. All PHS employees should complete an annual driving competency consisting of:
   1. A Healthstream learning program.
   2. A Driving competency with a Operation Manager, PHS Safety Officer, Supervisor or EVOS instructor.
   3. If a recertification class is attended, the class will count as the annual competency.

E. CMH Ambulances should have back up cameras.

F. CMH ambulances should have heavy duty bumpers to help mitigate damage from deer and other animal strikes.

G. Ambulances should have have driver feed back devices and tele-metrics devices

1. PHS personal will maintain an acceptable drivers rating of 2.0 and above
    a. Performance metrics will be reviewed with the employee by their Base Manager and PHS Safety Officer monthly.
    b. Driver rating scores will be included in annual Performance Center Evaluation.
2. Drivers that fall below the minimum driver rating of 2.0.
    a. Should be re-educated on specific identified deficiencies that includes hands-on road instruction.
    b. Re-education should be completed by the Operations Manager, PHS Safety Officer, or EVOS instructor
    c. Employee will be given 30 days to improve. Documentation will be an Employee Development Plan (EDP) completed by the employees direct report Operations Manager.
    d. If rating does not improve in 30 days further disciplinary action should be taken.
3. If a driver avoids an event and causes a hard stop or high tele-metric readout, after review by the Operation Manager and PHS Director, the event can be deleted from driver rating.
    a. Employee may notify Operations Manager to have an event reviewed.

H. Ambulance Accidents and Incident Review.

1. The goal of accident/incident review is to identify needed safety improvements.
2. Identify and mitigate crew behavior that may have lead to the event.
3. To identify behavior that may have contributed to the event.
4. Correct and improve the behavior to enhance driver competency and safe vehicle operation.
5. To Identify any vehicle issues that may have contributed to the event and mitigate any vehicle issues to keep the event from reoccurring.
    a. Accidents or incidents that cause damage to the ambulance or personal property should be reported.
    b. Accidents and incidents should be reviewed by Operation Manager, PHS Safety Officers and PHS Director. The CMH Director of Safety and Work Heath may be consulted.
    c. Tele-metrics should be included in the reviewed.
    d. Base Manager and peers should review events with crew members involved at a peer review meeting.
    e. Manager should report findings and recommendations of the peer review to the PHS Director.
    f. If the involved crew was not adhering to CMH polices, disciplinary action may be taken.

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Policy Area:	*PreHospital*
References:	*Hospital*

Ambulance On-Call Crew, PHS03-01

Policy

Ambulance On-Call Crew

Refer to HR Policy; On-Call Personal, HR02-08

Purpose:

To have an ambulance available when local Emergency Medical Service, Citizens Memorial Hospital Pre Hospital Services (CMH PHS) or the healthcare system is overloaded and the situation arises that, to maintain community 911 coverage and to be able to do Long Distance Transfers (LDT) an additional ambulance is required.

Procedure:

Hospital department census, ER through put, and community 911 demands will be evaluated. COO, CNO, Administrator On Call (AOC) in conjunction with PHS Director and/or Chiefs will determine when to initiate an ambulance on-call crew.

A. COO, CNO, AOC, PHS Director and/or PHS Chief will decide when the on-call crew will be utilized.
B. On-call crew may be ALS or BLS crews.
C. On-call shifts will be scheduled and paid in 12-hour increments.
D. 8 am to 8 pm and 8 pm to 8 am will be the on-call shift times.
E. When called in, pay will be time and a half. (On-Call Personnel, HR02-08)
F. Bonus shifts may be paid, if eligible and approved by PHS Director or PHS Chief.
G. A maximum of one-hour response time is required by the on-call crew.
H. If the LDT is a TCD or critical patient, the on-duty crew may take the transfer and the on-call crew will back fill.
I. If called in, a minimum of one-hour will be paid if canceled.
J. Picking up on-call shifts is typically voluntary. In extenuating circumstances, it may be required to be on-call. If being on call is required, shifts will be rotated in an equitable manner.
K. All scheduled open shifts must be filled prior to on-call shifts being picked up.

L. If a crew member calls in as unable to report for a shift, the on-call crew may be used to fill scheduled duty shifts.

Attachments

No Attachments

Approval Signatures

Approver	Date
Heather Cline: CORP COMP-CMH SHA CEOS OF	11/2021
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Policy Area:	*PreHospital*
References:	*Hospital*

Lost Ambulance Equipment, PHS03-03

POLICY:

Efforts will be made to recover lost equipment.

PURPOSE:

To provide guidelines for reporting and recovering lost equipment.

PROCEDURE:

A. The both crew members that lost the equipment are primarily responsible for recovering the equipment.

B. If equipment could have been left at a scene, go back to scene and search and recover equipment if possible.

C. If left at a patients house, place a call to the residence at an appropriate time and check if equipment had been found at the residence. Make arrangement to pick up equipment

D. If lost at another facility, notify the charge nurse of the unit equipment may have been left on, ask if a note with the description of the equipment and contact information could be posted. If possible go back to facility and search for equipment.

E. Make an active search of the area or department where the equipment was lost.

F. Fill out an incident report describing equipment and how the piece of equipment was lost.

G. Advise the Base Operations Manager of the incident at the earliest possible time.

Attachments

No Attachments

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Approver	Date
Heather Cline: CORP COMP-CMH SHA CEOS OF	07/2019

Approver	Date
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Policy Area:	*PreHospital*
References:	*Hospital*

Ambulance Maintenance, PHS03-06

POLICY:

Ambulance maintenance guidelines are to be established to maintain ambulance fleet.

PURPOSE:

To provide guidelines for ambulance fleet maintenance to decrease ambulance breakdowns and keep ambulance fleet in a safe operational state.

PROCEDURE:

A. Monday of each week the Operations Manager or designee of each base will send current mileage and when next service is due for each ambulances assigned to the base to Fleet Services.

B. The Base Operations Manager or designee will notify and coordinate service/maintneance with the Director of Fleet Services.

C. The Base Operations Manager, or designee should notify Fleet Services when ambulances are approximately 500 miles away from service.

D. When Director of Fleet Management or designees schedules a time and date to have ambulance in for maintenance or service, they should contact the Operations Manager or designee of the time and date of appointment.

E. Base Operations Manager or designee making service arrangements should document the time and date on the communications board.

F. The County Operations Manager, or designee will communicate any maintenance problems when making service or maintenance appointments.

G. Any maintenance issue that are reported or found are repaired during preventive maintenance is appointment. Any possible points of failure found are correct when a ambulances go to Fleet services for routine or scheduled maintenance.

H. Ambulance preventative maintenance schedule is a follows, mileage are estimates when service is due.

1. 7,500 miles: change oil and oil filter and tire rotation
2. 20,000 miles: air filter changed
3. 40,000 miles: transmission fluid and filter changed

4. 100,000 miles: belts and hoses, idler pulley belt tensioner replaced. Coolant and rear differential fluid replaced.
5. Tires are replaced when wear indicator reaches approximately 5/32. This helps prevent hydroplaning and keeps tire failures at a minimum.

I. Vehicle Equipment Failure:

1. Person(s) finding failed equipment should notify Director of Fleet Management, Director of PreHospital Services, Operations Manager, or designee, and note on Daily Vehicle Check.
2. If person(s) feel vehicle is unsafe, they may take unit out of service and switch to stand by unit. If this is done the Operations Manager or designess should be contacted and report of maintenance problem to cause the ambulance to be unsafe.
3. If unit is taken out of service, person(s) should label unit with a sign stating unit is out of service and why. Person(s) will contact Director of PreHospital Services or Operations Manager, or designee of this matter, and note on the Daily Vehicle Operations Sheet and communication board.

J. Ambulance Failure:

1. If ambulance breakdowns responding to a call or during patient transport the crew will call ambulance dispatch. Notify dispatch of event. Dispatch will call closest ambulance service to continue call or respond and finish transfer. Notify Director of Fleet Management and Director of PreHospital Services, designee, or department administrator.
2. Complete a Event Report
3. If ambulance fails when not on a call, notify dispatch that the unit is out of service. Notify Director of Fleet Management, Operations Manager or designee of event.

Attachments

No Attachments

Approval Signatures

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References:	*Hospital*

COT Lifting/Lifting of Patients, PHS03-07

POLICY:

Safe ambulance cot operation and safe lifting of patients should be utilized using proper equipment and personnel.

PURPOSE:

To provide guidelines in lifting of patients of different weights and utilizing equipment and human resources in a safe manner.

PROCEDURE:

A. When using an ambulance cot, the following procedures will be utilized:

1. Note patient's weight and ambulatory status and medical condition.
2. Obtain the patient's weight if available.
3. Ambulatory patients may be assisted to the cot if not medically compromised and in stable condition.
4. Patients requiring lifting onto the cot will be carefully lifted onto a transfer sheet, backboard, or surgilift. A scoop stretcher may be used or other techniques which would safely move the patient without unnecessary patient compromise. Address in documentation on chart.
5. All cot safety straps, including shoulder straps/harness shall be used to secure the patient to the cot. Use seat belt extender only in special circumstances such as : patient girth to big for regular size cot straps, pregnant patient. When seat belt extenders are used, document there use in the patient's PCR
6. When lifting or transferring patient(s) from a position or by the cot, use proper body posture and proper lifting procedure: shoulders back, back straight, lift with legs, do not turn or twist.
7. Patient(s) may require additional personnel beyond the procedural recommendations due to position found or personnel restrictions in access or ability.
    a. The following are placement of personnel utilizing the cot:
    Cot operators are placed at the head and foot of cot.
    Additional personnel are placed at the sides evenly distributed on either side of the cot.

1. Personnel required to lift patients of different weight categories are as follows:
    a. Patient(s) up to 200 pounds or 91 kilograms require a minimum of 2-4 personnel.
    b. Patient(s) from 200 pounds or 91 kilograms to 400 pounds or 182 kilograms require a minimum of 4-6 personnel.
    c. Patient(s) from 400 pounds or 182 kilograms to 600 pounds or 273 kilograms require a minimum of 8 personnel.
    d. Patient(s) in excess of 650 pounds or 295 kilograms may require special lifting and transportation consideration for patient weighing above cot rating. The use of a power cot and power load should be considered.
2. Special considerations include the following:
    a. Utilizing the cot in a lower level position until secure in ambulance.
    b. Increasing from 10 to 14 personnel in lifting procedure.
    c. Lifting a non-ambulatory patient(s) utilizing a surgilift ,backboard or scoop stretcher for placement onto the cot
    d. Arranging transport in a vehicle other than an ambulance if patient weight and size exceeds cot, and ambulance capabilities.

B. Equipment failure is to be reported to the operations manager and/or Director of PreHospital and a Incident Report filled out.

C. Personnel injuries are to be reported, refer to SAF04-01, "Employee Illness or Injury, Job Related" and complete employee injury form.

D. Cot weight rating should not be exceeded:
    1. Cot rating of Stryker MX Pro is 650 pounds or 295 kilograms
    2. Cot Rating of Stryker Power Pro XT is 700 pounds or 318 kilograms

Attachments

No Attachments

Approval Signatures

Approver	Date
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References:	*Hospital*

Ambulance Operations and Safety while in the Roadway, PHS03-08

POLICY:

CMH Pre Hospital Service (PHS) employees, students, and job shadows will operating safely while working in and around a roadway.

PURPOSE:

To provide the safest environment possible for EMS responders at the scene of a motor vehicle collision or other roadway incident.

PROCEDURE

A. CMH PHS employees, students, and job shadows shall wear a reflective vest or jacket with ANSI Level II or greater coverage while working and providing patient care on a roadway.

B. Responders should remember that they are a pedestrian.

C. Responders shall not step on the road without looking at traffic and checking mirrors and surrounding area prior to exiting the vehicle.

D. Responders should not expect to be seen by drivers. They should plan an escape route.

E. Shut down wig wags and bright headlights when facing oncoming traffic Reduce Emergency scene lights when not needed.

F. Work on the roadway should be avoided, if possible. If work on the roadway is required, responders shall employ techniques of **TIME**, **DISTANCE**, and **SHIELDING**.

1. **TIME:**
    a. Limit the exposure time of responders in dangerous situations.
    b. Clear the roadway as soon as safely practical. Get off the roadway as soon as possible.
    c. Have non-injured persons stay seat belted or remove them to a safe location off roadway or seat belted in ambulance.
2. **DISTANCE:**
    a. Work shall be performed using the most distance from dangers as possible.

b. Responders should face oncoming traffic while in the roadway, on the shoulder, or near traffic.

3. **SHIELDING:**

a. Ambulances shall be parked in the safest location to minimize the ambulance and responder exposure on the roadway.

b. Ambulances shall be parked at an angle with the front wheels pointing away from the working area.

c. When blocking a lane of traffic, utilize early warning (as available) and the entire lane should be blocked. Partial lane blockage should not be performed.

d. Check with law enforcement or fire department on scene to block additional traffic lanes for safety.

G. For further details on scene and personnel safety, refer to Guideline 1-600 - EMS Responder Safety.

Attachments

No Attachments

Approval Signatures

Approver	Date
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Guideline 1-100 - Air Transport of Patients

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	Yes	NA
EMR	Yes	Yes	NA
EMT	Yes	Yes	Yes
AEMT	Yes	Yes	Yes
RN	Yes	Yes	Yes
Medic	Yes	Yes	Yes

Guideline:

Air ambulances shall be used as appropriate to provide safe and exceptional patient care.

Purpose:

The purpose of this guideline is to provide guideance on utilization of air ambulances.

Procedure:

I. Upon request for air ambulance, the dispatch agency covering the jurisdiction where the landing zone will be located, shall contact Cox Air Care and advise location, destination, and patient demographics (if known).
II. If ground transport is within **45 minutes** drive time from the destination at the time of aircraft request, it is potentially faster to drive by ground than request an aircraft.
III. **Consider air ambulance if ONE or more of the following**:
    A. Ground resources are exhausted.
    B. Prolonged extrication time (greater than 20 min) is anticipated.
    C. Road or bridge conditions which prevent ground transport.
    D. Time Critical Diagnosis where air transport will be quicker than ground transport to TCD facility:
        1. **STEMI:**
            a. Acute MI or Chest Pain suggestive of MI.
            b. Uncontrollable cardiac dysrhythmias.
            c. Need for airway control intervention.
        2. **Stroke:**
            a. Sudden onset of Stroke symptoms with last seen normal less than 12 hours ago.
        3. **Trauma:**
            a. Head or Spinal Trauma with neurological deficits.
            b. Second or third degree Burns greater than 20% BSA.
            c. **Vital signs indicating compensation in addition to the following injuries**: Pulsating abdominal mass, severe bleeding, trauma during pregnancy, loss of consciousness, or penetrating injury.
IV. Request for Air Ambulance should be made as early as possible. Can be made while en route.
V. Request for Air Ambulance should be made through the dispatch in the county of the LZ location.
VI. Once en route, the request can only be canceled by EMS or rescue personnel on scene.
VII. Prepare a safe landing zone. Utilize local law enforcement and fire department.
VIII. Final decision to accept a mission is the responsibility of the pilot.
IX. Patient requests for specific aircraft and destinations should be discussed with flight crew.

CMH PHS Mission: "*Provide safe, exceptional, and compassionate care to our communities with an emphasis on highly trained and empowered staff*."

Guideline 1-100-50 - Helicopter Landing Zone

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	Yes	NA
EMR	Yes	Yes	NA
EMT	Yes	Yes	Yes
AEMT	Yes	Yes	Yes
RN	Yes	Yes	Yes
Medic	Yes	Yes	Yes

Guideline:

Purpose:

Procedure:

CMH PHS Mission: "*Provide safe, exceptional, and compassionate care to our communities with an emphasis on highly trained and empowered staff.*"

Guideline 1-200 - Ambulance Dispatch

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	Yes	NA
EMR	No	No	NA
EMT	No	No	No
AEMT	No	No	No
RN	No	No	No
Medic	No	No	No

Guideline:

The designated Emergency Medical Services (EMS) Dispatch Center shall seek to ensure dispatch of the appropriate ambulance which has the shortest Estimated Time of Arrival (ETA) to the scene of priority one, two, and three responses. Citizens Memorial Hospital (CMH) ambulances will be dispatched in an efficient manner to each request for service.

Purpose:

The purpose of this guideline is to establish standards and procedures for the dispatch of emergency medical resources to requests for ambulance or medical transport and to ensure ALS ambulance is available for 911 Response in CMH service areas.

Procedure:

I. Dispatch administration:
   A. It should be a goal for all call takers and ambulance dispatchers to be experienced with EMS and be currently certified Emergency Medical Dispatchers (EMDs).
   B. Communications center directors shall be familiar with and strive to meet NFPA 1221 (Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems), specifically:
      1. **Section 7.2: Telecommunicator Qualifications and Training**. This section references NFPA 1061 (Standard for Public Safety Telecommunications Personnel Professional Qualifications) and describes required certifications and training.
      2. **Section 7.3: Staffing**. This section requires sufficient staffing based on call volume with a minimum of two on duty at all times.
      3. **Section 7.4 Operating Procedures**. This section sets call answering and processing time requirements. Specifically, 90% of calls answered within 15 seconds and 90% of calls processed within 60 seconds. EMDs are required and CPR instructions shall be provided when a patient is unresponsive and not breathing. Refer to performance data for the four dispatch centers serving CMH EMS:

C. In each instance when an ambulance is not available to respond to a request for an emergency, an EMS Missed Run Log entry will be made and kept. A report of missed runs will be sent to PHS leadership no later than the 5th day after the beginning of each month. Weekly reporting is preferred.

II. General dispatching:

A. If the dispatched ambulance does not acknowledge the call within one minute, a second attempt at dispatch should be made. If no response after another minute, the next closest ambulance should be dispatched and resources deployed to obtain the status of the non-responsive ambulance staff. Additionally, PHS leadership should be advised of the incident.

B. Primary dispatch should include the ambulance identifier, general location of the call, nature of the call, and priority.

C. Dispatchers should provide secondary dispatch information within two minutes of the unit calling en route, when possible. Secondary information should include the full address and all pertinent patient and safety information.

D. The dispatch center shall record the following for every request for an ambulance. This data shall be available to the ambulance crew at the end of the call to complete required documentation.

1. Call received time
2. Dispatch time
3. En route time
4. On scene time
5. Transporting time
6. Transporting mileage
7. Destination time
8. Destination mileage
9. In service time
10. Run number. A unique run number will be assigned each time an ambulance is dispatched.

E. The EMS Dispatch Center shall monitor ambulance movement through Automatic Vehicle Locators (AVL). The EMS Dispatch center will dispatch the closest ambulance for Priority One and Two responses.

F. A form of call rotation will be used where more than one ambulance covers the same geographic location.

G. If multiple ambulances respond and transport patients, ambulance crews will request additional run numbers. Secondary run numbers will not be auto assigned just because multiple ambulances are responding.

H. Upon arrival at the destination, the ambulance is automatically in service for another call immediately, unless notified by the crew otherwise.

I. Within the last 30 minutes of a shift, the crew may otify dispatch of End Of Shift (EOS) and then will move to the back of the response rotation.

III. 9-1-1 call dispatching:

A. Refer to Guideline 1-200-24 - Call Natures for specific EMD medical directions.

B. Refer to Guideline 1-200-48 - Mutual Aid to determine which ambulances to dispatch based on location.
Requests for mutual aid ambulances from neighboring counties will by honored if an ambulance is available. Ambulances will not be held from response unless directed by PHS leadership. Mutual aid requests further than one county away should be approved by PHS leadership.

C. EMDs will utilize Medical Priority Dispatch System (MPDS) version 13 approved by the International Academy of Emergency Medical Dispatch (IAEMD) to provide emergency medical instructions to 9-1-1 callers. This includes protocols 1 through 33 and associated determinate codes, pre-arrival instructions, and diagnostic tools.

1. If MPDS recommends a BLS ambulance, utilization of BLS resources should be done first. If no BLS ambulance is available, an ALS ambulance should be used for priority 1, 2, and 3. Priority 4 requests should wait until a BLS ambulance is available.
2. If MPDS recommends an ALS ambulance, utilization of ALS resources should be done first. If no ALS ambulance is available, a BLS ambulance should be used in addition to the nearest

mutual aid ALS ambulance.

D. All requests for an ambulance where the patient is not located in a hospital, shall be processed as if a 9-1-1 call has been placed. This includes all calls from Long Term Care (LTC) facilities, clinics, and physician offices.
E. If an ambulance is transporting a patient to a facility within the response area, and a Priority One or Two request is pending, check with ambulance crew for quick turn-around and obtain an estimated time they can be enroute to the call. If the time is within 20 min, dispatch may use this unit for a quick turn-around. In either case, dispatch the closest currently available unit to respond (including mutual aid). The ambulance first arriving to the scene will take the call.
F. If an aircraft is requested, the dispatch agency where the landing zone is located should make the request. Refer to fire department dispatching policies for establishing the landing zone. Refer to Guideline 1-100 - Air Transport of Patients. If the aircraft refuses the flight due to weather, do not continue to "shop" for another aircraft.

IV. Transfer dispatching:

A. Refer to Guideline 1-200-72 - Transfer Priority Calculator to determine priority level and dispatch transfers. Reminder, "transfers" are only out of the hospital, all other requests for an ambulance should use MPDS protocols 1 through 32.
B. The above calculator should be used to triage and prioritize transfers out of the hospital. When patients to be transferred are triaged and prioritized correctly, this allows efficient use of ambulance resources and meets the needs for the condition of the patient.
C. If multiple transfers are pending with the same priority level, they should be dispatched in order of current locations as follows:
    1. Emergency room
    2. Cath lab
    3. Obstetrics
    4. ICU
    5. Medical/surgical
D. ModivCare requests (previously LogistiCare): ModivCare requests are automatically approved unless one or more of the following conditions:
    1. Long distance transfer
    2. A CMH facility is neither the patient location nor the destination
E. Refer to the 9-1-1 dispatching section as it relates to BLS and ALS dispatching.
F. Long distance transfers (defined as greater than 100 miles) must be approved by CMH Pre-Hospital leadership. Contact order for leadership shall be:
    1. Crew Leader on Duty
    2. Supervisor on Duty
    3. Manager on Duty
    4. Manager on Call

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Guideline 1-200-24 - Ambulance Dispatching: Call Natures

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	Yes	NA
EMR	No	No	NA
EMT	No	No	No
AEMT	No	No	No
RN	No	No	No
Medic	No	No	No

Guideline:

EMS dispatch centers shall dispatch the correct resources to requests for ambulances.

Purpose:

The purpose of this guideline is to outline details regarding resources to be dispatched based on the nature of the call.

Procedure:

Nature of Call	Dispatcher Actions
All 9-1-1 calls	Refer to Guideline 1-100 - Air Transport of Patients. Refer to Guideline 1-200 - Ambulance Dispatch. Refer to Protocol 2-924 - Universal Patient Care.
	Structure fire or other incident where firefighters may be entering a hazardous atmosphere: Dispatch a non-dedicated standby ALS ambulance.
Aircraft Emergency 2 (Full Emergency)	Dispatch closest ALS ambulance for standby.
Aircraft Emergency 3 (Accident)	Dispatch closest two (2) ALS ambulances and Ops Ambulance (EMS Crew Leader) (or additional ALS ambulance).
Aspirin Diagnostic	Refer to Protocol 2-220 - Chest Pain / Suspected Cardiac Event.

Hazardous Materials Release	If patient or patients: Refer to MPDS Protocol 8 below. If no patients: Dispatch closest ALS ambulance for standby and notify Ops Ambulance (EMS Crew Leader) (or additional ALS ambulance).
All MPDS Protocols	Echo-level (not breathing): Dispatch closest ambulance, closest ALS ambulance (if closest is not ALS), and Ops Ambulance (EMS Crew Leader) (or additional ALS ambulance). In other words, the absolute closest ambulance should be dispatched. A total of two ALS providers should be dispatched.
MPDS Protocol 4 (Assault)	4-D-1 (Arrest): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) (or additional ALS ambulance).
	4-D-1 (Multiple Victims): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) and Rescue Task Force (or additional ALS ambulance).
MPDS Protocol 7 (Burns)	Refer to Guideline 1-300 - Ambulance Operations. Refer to Protocol 2-176 - Burns.
	7-D-1 (Multiple Victims): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) and Rescue Task Force (or additional ALS ambulance).
	7-D-2 (Arrest): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) (or additional ALS ambulance).
	7-C-4 (Significant Facial Burns): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) (or additional ALS ambulance).
MPDS Protocol 8 (Hazmat)	Refer to Protocol 2-176 - Burns. Refer to Protocol 2-352 - Exposure: Cyanide. Refer to Protocol 2-374 - Exposure: Nerve Agents.
	8-D-1 (Arrest): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) (or additional ALS ambulance).
	8-D-5 (Multiple Victims): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) and Rescue Task Force (or additional ALS ambulance).
MPDS Protocol 9 (Cardiac Arrest)	Cardiac arrest pathway: Refer to Protocol 2-198 - Cardiac Arrest.
	Obvious or expected death: Refer to Protocol 2-198 - Cardiac Arrest.
MPDS Protocol 14 (Drowning)	Obvious death: Refer to Protocol 2-286 - Drowning / Near Drowning.
	14-D-2 (Underwater): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) (or additional ALS ambulance).
MPDS Protocol 15 (Electrocution)	15-D-1 (Multiple Victims): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) and Rescue Task Force (or additional ALS ambulance).
MPDS Protocol 17 (Fall)	17-D-2 (Arrest): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) (or additional ALS ambulance).
MPDS Protocol 18 (Headache)	Stroke time window: Refer to Protocol 2-880 - Suspected Stroke.<
MPDS Protocol 20 (Heat/Cold Exposure)	20-D-2 (Multiple Victims): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) and Rescue Task Force (or additional ALS ambulance).
MPDS Protocol 21 (Hemorrhage)	21-D-1 (Arrest): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) (or additional ALS ambulance).

MPDS Protocol 22 (Inaccessible)	22-D-1 (Mechanical), 22-D-2 (Trench), 22-D-3 (Structure), 22-D-4 (Confined), 22-D-5 (Terrain), 22-D-6 (Mudslide), or 22-B-2 (Peripheral): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) (or additional ALS ambulance).
MPDS Protocol 24 (Pregnancy)	High risk complications: Refer to Protocol 2-242 - Childbirth / Labor
	24-D-1 (Breech), 24-D-2 (Head Visible), 22-D-3 (Imminent), 24-D-6 (Baby Born, Baby Complications), or 24-D-7 (Baby Born, Mother Complications): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) (or additional ALS ambulance).
MPDS Protocol 27 (Penetrating)	27-D-1 (Arrest): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) (or additional ALS ambulance).
	27-D-6 (Multiple Victims): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) and Rescue Task Force (or additional ALS ambulance).
MPDS Protocol 28 (Stroke)	Stroke time window: Refer to Protocol 2-880 - Suspected Stroke.
MPDS Protocol 29 (Traffic)	29-D-1 (Major Incident): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) and Rescue Task Force (or additional ALS ambulance).
	29-D-2 (High Mechanism), 29-D-4 (Hazmat), 29-D-5 (Pinned), or 29-D-6 (Arrest): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) (or additional ALS ambulance).
MPDS Protocol 30 (Trauma)	30-D-1 (Arrest): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) (or additional ALS ambulance).
MPDS Protocol 31 (Unconscious)	31-D-1 (Agonal): In addition to primary ambulance, dispatch Ops Ambulance (EMS Crew Leader) (or additional ALS ambulance).
MPDS Protocol 33 (Transfer)	This protocol only applies to transfers out of a hospital (i.e., ER, ICU, etc.). All other requests for an ambulance should be processed using MPDS protocols 1 through 32. Refer to Guideline 1-200-72 - Transfer Priority Calculator.

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Guideline 1-200-48 - Ambulance Dispatching: Mutual Aid

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	Yes	NA
EMR	No	No	NA
EMT	No	No	No
AEMT	No	No	No
RN	No	No	No
Medic	No	No	No

Guideline:

The closest and most appropriate ambulance shall be dispatched and respond to priority medical emergencies.

Purpose:

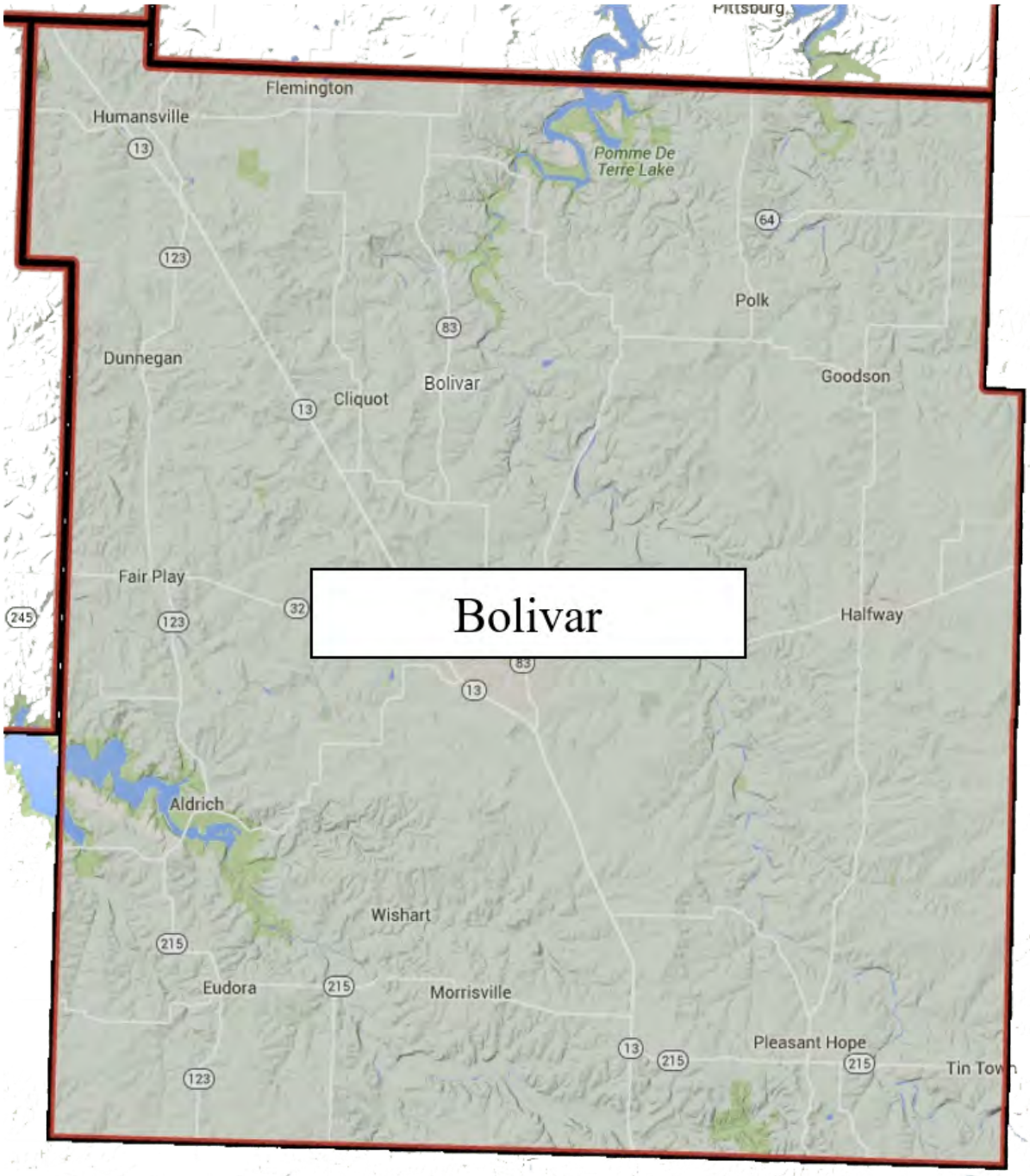
The purpose of this guideline is to provide maps and guideance to dispatchers to facilitate choosing the best ambulance.

Procedure:

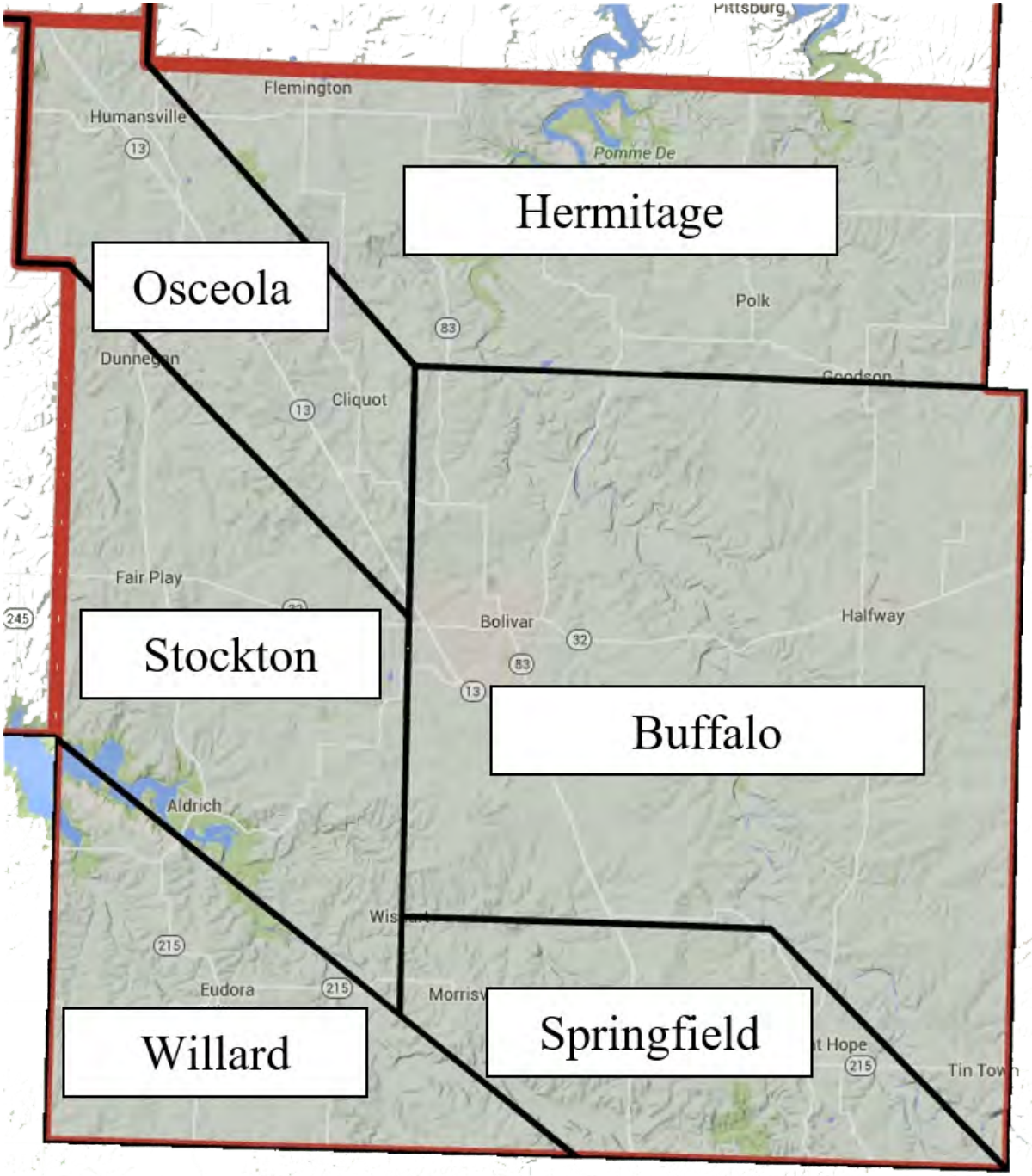
I. When requesting resources, utilize Ambulance Locations and the following maps to determine the closest, most appropriate ambulance.
II. These are simplified boundaries based on response time calculations by Theron Becker in February 2016. KML files are available upon request for integration into GIS and CAD.

III. Polk County:

A. All ambulances available:

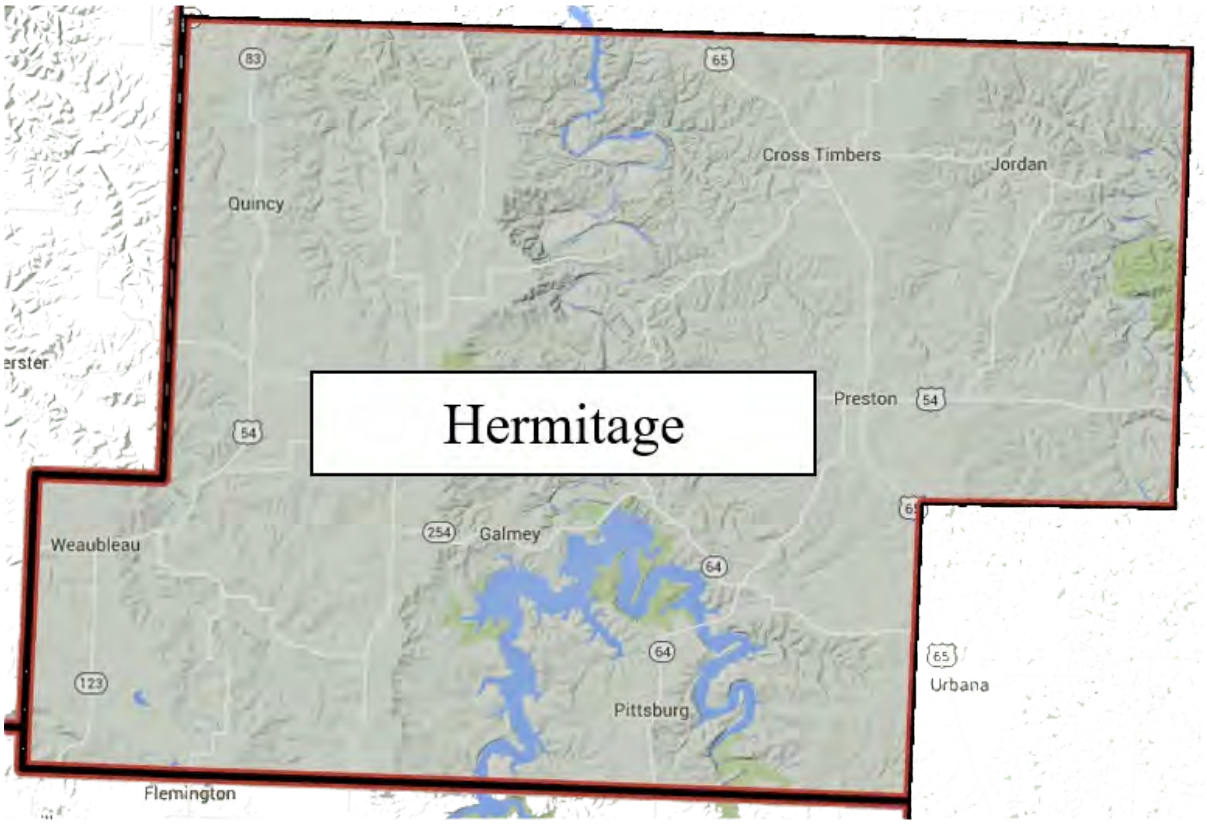


B. Bolivar ambulances are unavailable:

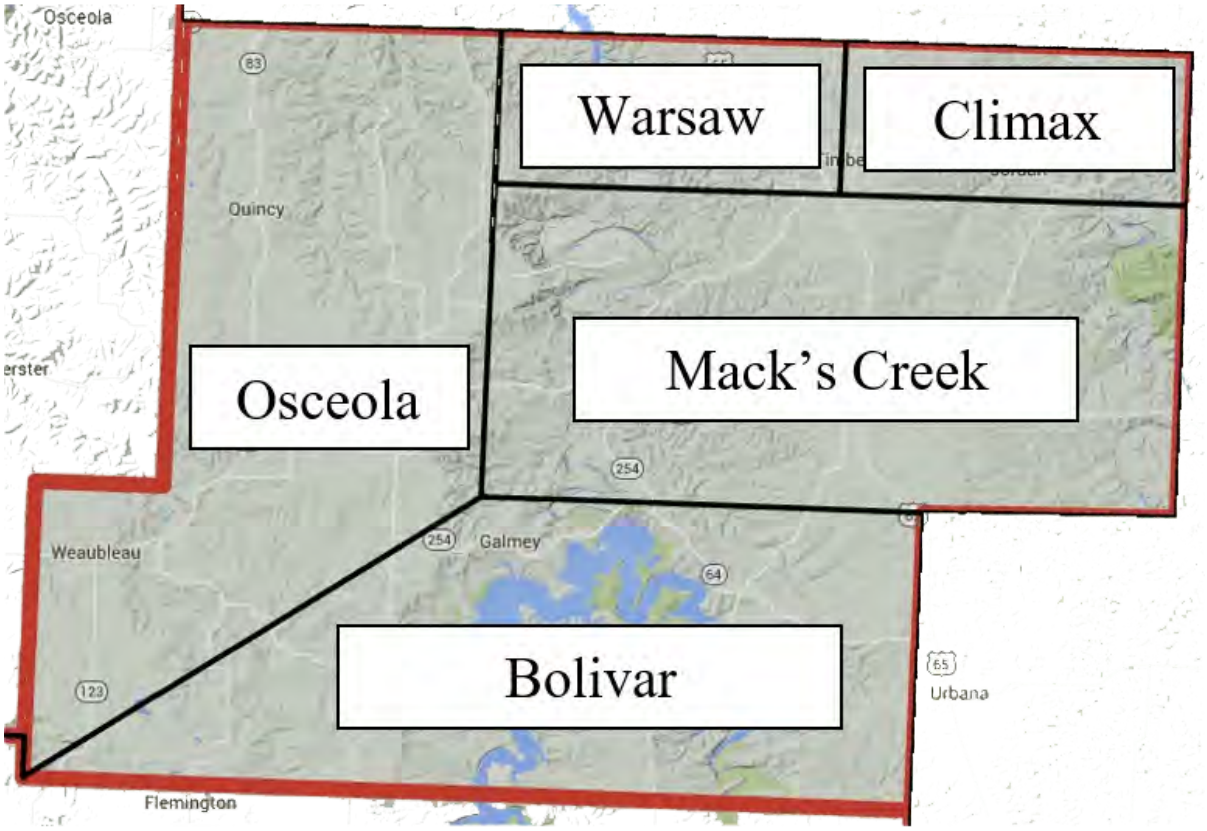


IV. Hickory County:

A. All ambulances available:

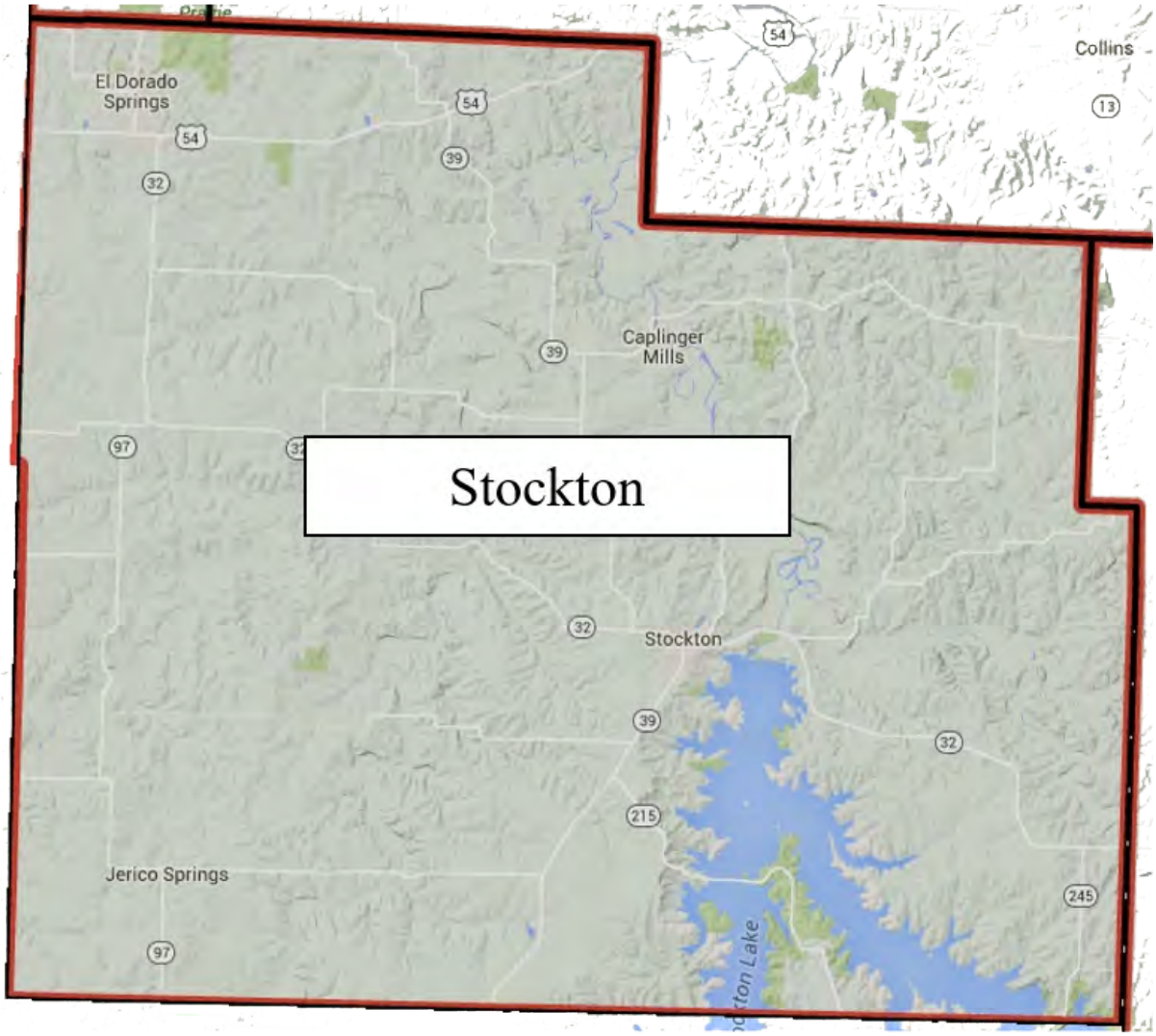


B. Hermitage ambulance is unavailable:

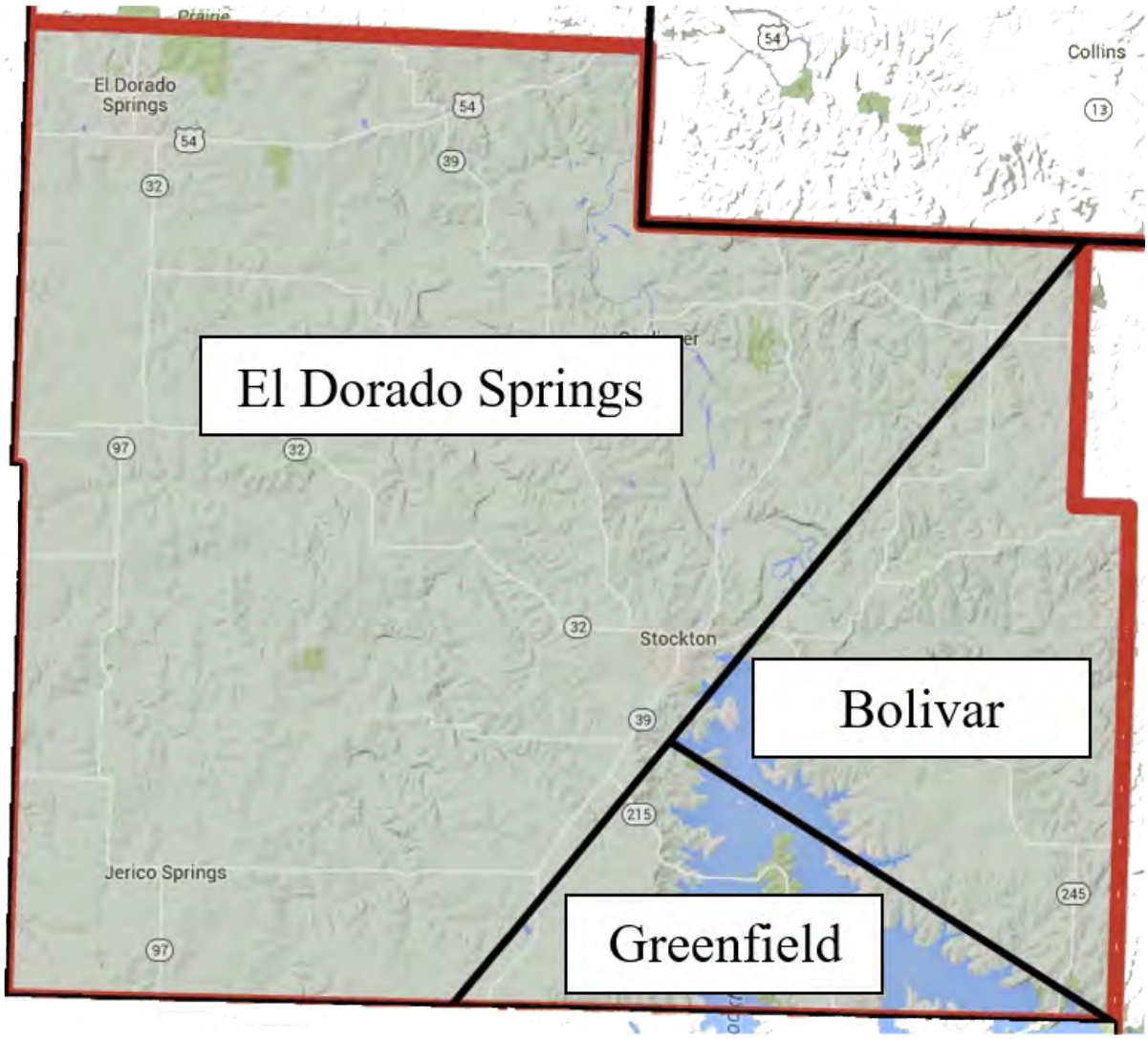


V. Cedar County:

A. El Dorado Springs ambulance is unavailable:



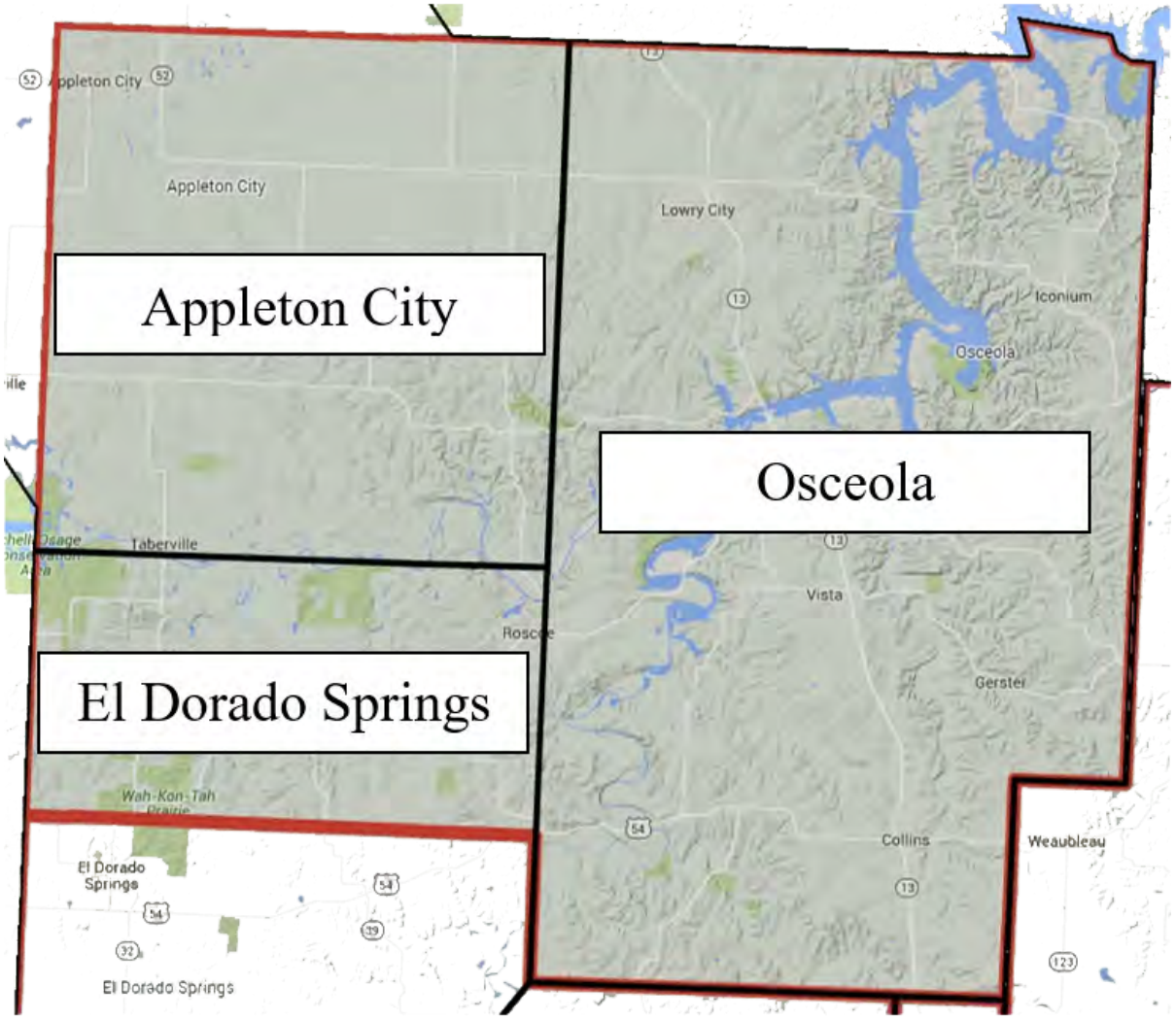
B. Stockton ambulance is unavailable:



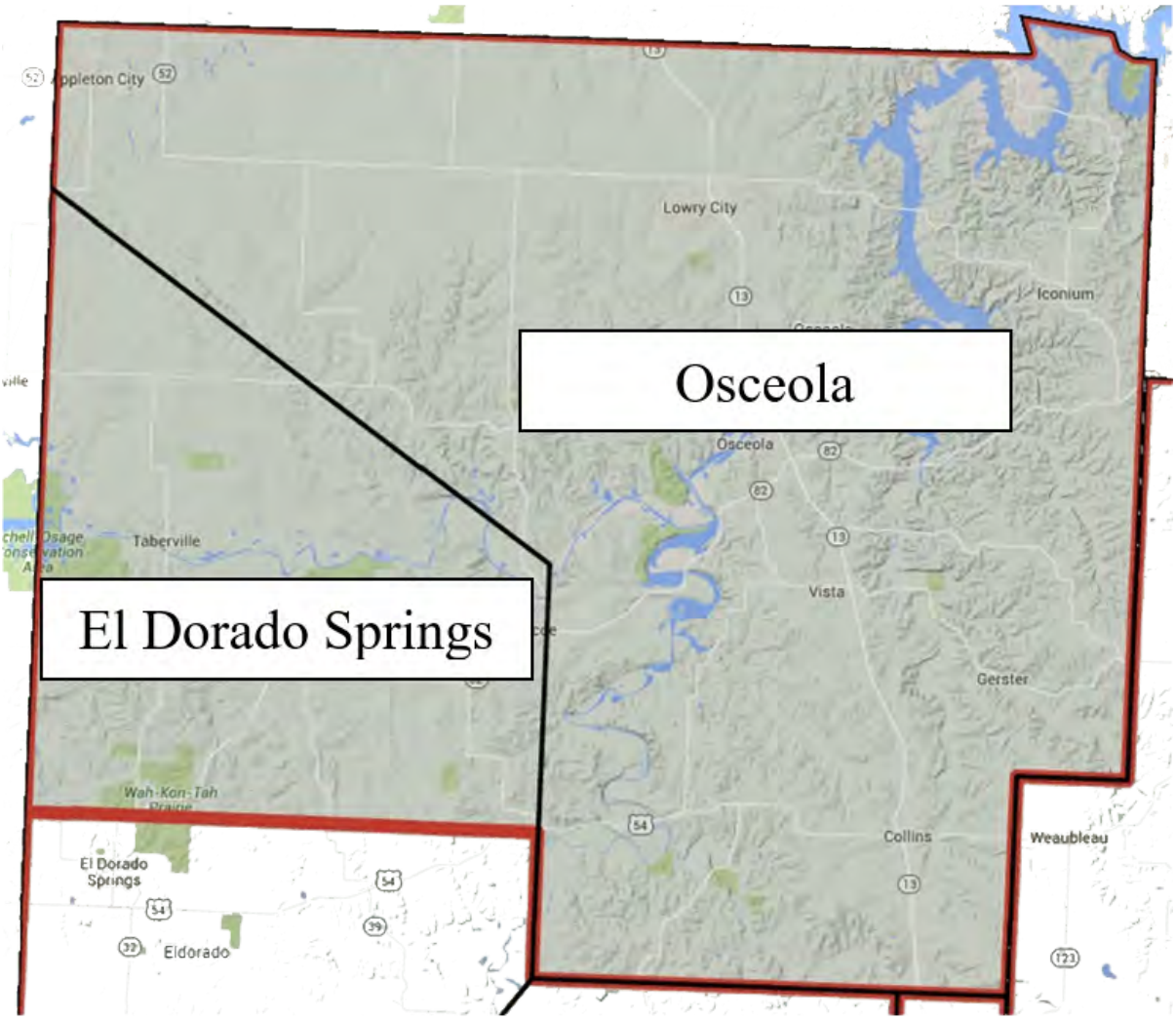
C. Both ambulances are unavailable:
[MAP PENDING]

VI. St Clair County:

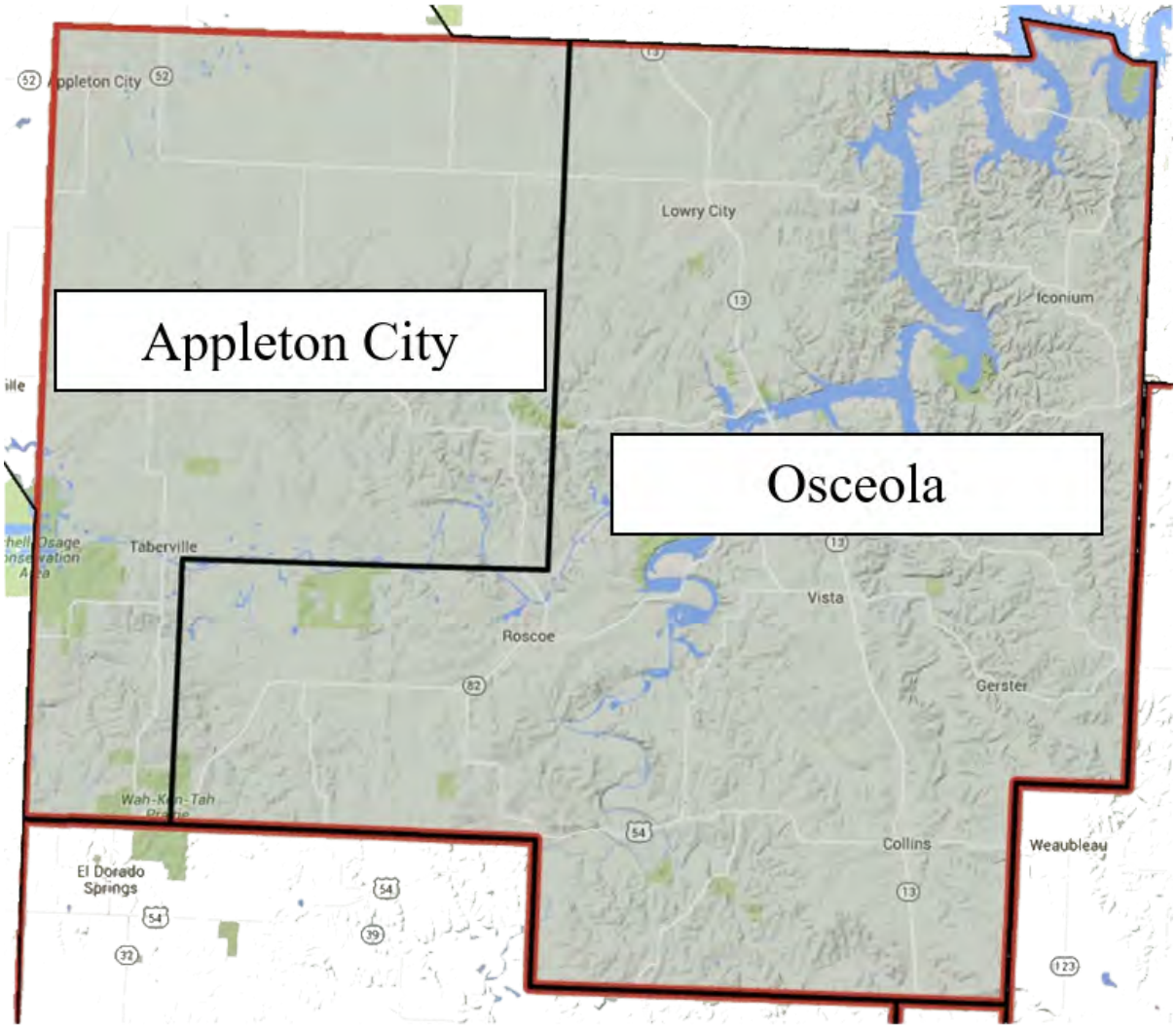
A. All ambulances available:



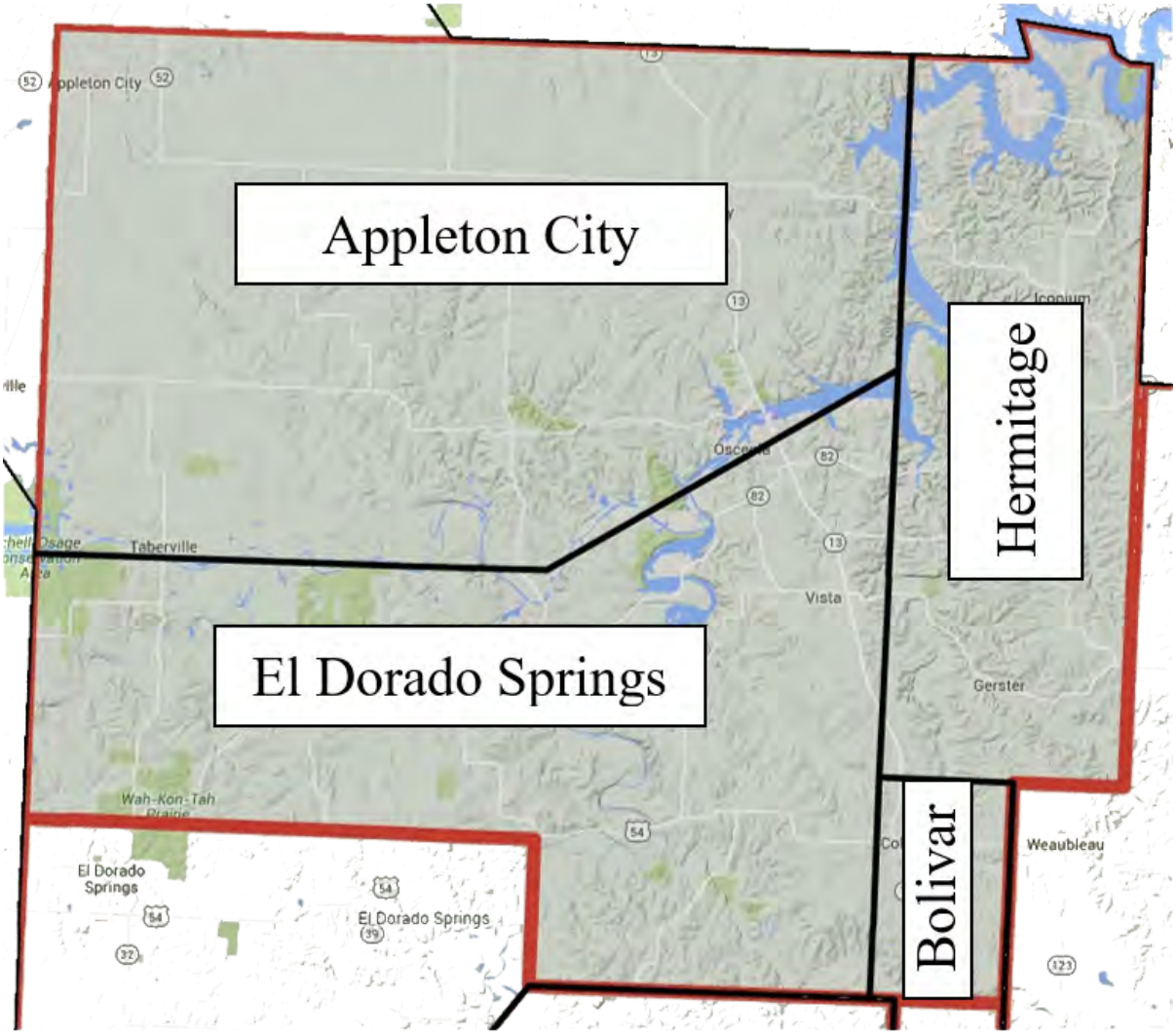
B. Appleton City ambulance is unavailable:



C. El Dorado Springs ambulance is unavailable:



D. Osceola ambulance is unavailable:



E. None of the ambulances are available:
[MAP PENDING]

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Guideline 1-200-72 - Ambulance Dispatch: Transfer Priority Calculator

Polk, Hickory, Cedar, & St Clair EMS Protocols

Date: 02/26/2021

Name of person completing this form:

RN

Patient sticker here

Patient diagnosis	Check MULTIPLE	Points possible	Points given
Patient diagnosed with a recent (within four hours) **TCD** (Trauma, Stroke, STEMI, or Sepsis).	☐	10	
Patient currently has a **life-threatening condition** that has to be transported as soon as possible.	☐	10	
Patient needs ugent (within four hours) **surgery or critical treatment** for a medical or trauma condition.	☐	10	
Patient has an urgent (within four hours) need for **obstetrics** (OB) care.	☐	10	
Other considerations	**Check MULTIPLE**	**Points possible**	**Points given**
Patient **currently requiring ALS care** (i.e. airway management, medication administration, and/or cardiac monitoring).	☐	5	
Transport must be initiated within two (2) hours or they will **lose the bed** assignment at the destination.	☐	3	
Before this transfer request, **how many patients are currently waiting in this department** for an ambulance? Do not include this transfer request in the total.	0	1 per patient	
Patient's current location	**Check ONLY ONE**	**Points possible**	**Points given**
Patient currently located in an **Emergency Room**.	◯	6	
Patient currently located in a **Cath Lab**.	◯	5	
Patient currently located in an **Obstetrics Department**.	◯	3	
Patient currently located in an **Intensive Care Unit**.	◯	2	
Patient currently located in a location **not listed above**.	◯	0	

Destination	Check ONLY ONE	Points possible	Points given
Destination is an **Emergency Room**.	◯	7	
Destination is an **Intensive Care Unit**.	◯	2	
Destination is a location **not listed above**.	◯	0	
Destination distance	**Check ONLY ONE**	**Points possible**	**Points given**
Destination is **less than 10 miles away** (i.e. local).	◯	4	
Destination is **between 10 and 100 miles away**.	◯	0	
Destination is **GREATER than 100 miles away** (i.e. LDT).	◯	-8 (subtract 8 points)	
Calculate points			

Select the priority level based on points and table below:

Priority	Priority name	Dispatch conditions	Ambulance response	Minimum score required
1	Life-saving transfer	Will be dispatched immediately. The closest ALS ambulance (including mutual aid) will be dispatched. Note: Please consider an air ambulance.	Lights and siren immediately.	20
2	Critical transfer	Will be dispatched only if at least one other ALS ambulance is available in the county for 9-1-1 coverage.	NO lights and siren at time of dispatch.	10
3	Ugent transfer	Will be dispatched only if at least two other ambulances (at least one ALS) is available in the county for 9-1-1 coverage. Note: In Cedar County, only one 9-1-1 coverage ambulance is needed. Priority 2 and 3 are the same in Cedar County.		5
4	Scheduled transfer	Will be dispatched after contacting the PHS leadership. The leader may call in an extra crew, have a crew hold over, or other decision to best manage the transfer. BLS transfers may be held overnight due to limited ambulance availability.	NO lights and siren at the scheduled time.	0

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Guideline 1-400 - Ambulance Communications

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	Yes	NA
EMR	Yes	Yes	NA
EMT	Yes	Yes	Yes
AEMT	Yes	Yes	Yes
RN	Yes	Yes	Yes
Medic	Yes	Yes	Yes

Guideline:

Medical personnel shall communicate to provide the best patient care and patient safety possible.

Purpose:

The purpose of this guideline is to assist staff in communicating with each other to provide exceptional patient care with an emphasis on patient safety.

Procedure:

I. Radio and emergency communications shall be made in a NIMS-compliant manner.
   A. Ambulances shall be named and numbered to reduce confusion:
      1. "**Rescue**" refers to a non-transport capable vehicle. This vehicle can have any combination of BLS, ALS, and leadership staff on board and can perform as a quick response vehicle, support vehicle, and/or command vehicle.
      2. "**Squad**" refers to a BLS-level ambulance capable of transporting a patient. NIMS type 3 or 4 ambulance.
      3. "**Medic**" refers to an ALS-level ambulance capable of transporting a patient. NIMS type 1 or 2 ambulance.
      4. "**Ops**" refers to an ALS-level ambulance with an Ambulance Strike Team Leader on board. This ambulance can be referred to as a command vehicle in addition to transport ambulance.
      5. Numbering shall be by primary BEMS license assignment:
         a. **01 through 09**: Dunnegan Critical Care Unit (Polk and Hickory Counties).
         b. **10 through 19**: Cedar County Ambulance District (Cedar County).
         c. **20 through 29**: Sac Osage Hospital (St Clair County).

II. Official communication between ambulance staff members should follow the chain of command outlined in Guideline 1-400-12 - Staff Communication Paths. This guideline is not meant to limit communication, only serve as a guide. There is no such thing as too much communication, regardless of the format or path.

III. Medical control contact should follow Guideline 1-400-48 - Medical Control.

IV. While on duty, ambulance staff shall carry a hand-held radio.

V. Required radio communications by ambulance crews: Note, utilization of the phone for the following communications is discouraged.
   A. Start of shift check in within 15 minutes of shift start. This communication shall include vehicle assignment and crew names.
   B. While available for a call, each time a county line is crossed into or out of Polk, Hickory, Cedar, or St Clair counties. Contact both dispatch centers indicating you are leaving one and entering the other and available for call.
      1. Additionally, when leaving Springfield, contact Polk Dispatch advising location and available.
      2. If ambulance is available and mobile farther than usual from the station, advise dispatch of location and availability. Crew members must also stay together during their shift to allow for immediate response.
   C. En route to call.
   D. Unplanned stops during response or transporting.
   E. On scene at scene.
   F. Leaving the scene. If transporting, include mileage and destination facility.
   G. Arrive at destination, if applicable. Include destination mileage.
   H. Within 30 minutes of end of shift, crew may advise "EOS" to be moved to the bottom of the rotation and use this time for EOS duties.
   I. Out of service at the end of shift. If a call is pending, crews may be held by CMH PHS leadership for up to an hour to provide coverage.

VI. When dispatched to an emergency call, crews will respond without dispute. A grievance may be filed with leadership at a later time.

VII. ER radio reports should be attempted starting with at least a 15-minute ETA.

VIII. Patient handoff reports (i.e. from first responders to ambulance crew or from ambulance crew to ER staff) should follow Guideline 1-400-72 - Patient Handoff Report.

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Guideline 1-400-12 - Staff Communications Paths

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	No	NA
EMR	No	No	NA
EMT	No	No	Yes
AEMT	No	No	Yes
RN	No	No	Yes
Medic	No	No	Yes

Guideline:

EMS personnel and leadership shall communicate frequently and efficiently to ensure safety and exceptional patient care.

Purpose:

The purpose of this guideline is to provide tools and guideance to facilitate EMS staff communications.

Procedure:

I. Staff Meetings:
   A. CMH PHS staff meetings will occur weekly on Tuesday mornings at 0830 on a rotating basis as described below:
      1. Bolivar A-week
      2. Hermitage
      3. Stockton
      4. Bolivar B-week
      5. Osceola
      6. Eldorado

II. Upstream Path:
   A. Staff → Crew Leaders through monthly rounding. Refer to Guideline 1-450-66 - Crew Leader - Rounding Form.
   B. Crew Leaders → Managers through monthly rounding.
   C. Managers → Chiefs through scouting reports due each Monday.
   D. Chiefs → Director through scouting reports due each Tuesday.

III. Downstream Path:
   A. Director → Chiefs through weekly briefing each Tuesday morning.
   B. Chiefs → Managers through weekly manager meeting each Wednesday morning.
   C. Chiefs → all staff through weekly email briefing each Wednesday afternoon.
   D. Managers → Crew Leaders through weekly huddles.
   E. Crew Leaders → Staff through daily huddles at shift changes.

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Guideline 1-400-48 - Communications: Medical Control

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	No	NA
EMR	No	No	NA
EMT	No	No	Yes
AEMT	No	No	Yes
RN	No	No	Yes
Medic	No	No	Yes

Guideline:

Field medical providers shall contact medical control for guideance and orders that outside scope of these protocols.

Purpose:

The purpose of this guideline is to provide tools for field medical providers to contact medical control.

Procedure:

I. Medical control is the responsibility of the RN or Paramedic. The only exception is in the absence of ALS (i.e., BLS-only ambulance crew).
II. Medical control shall only be provided by a Physician. Medical control shall not accepted from nurses, nurse practitioners, physician assistants, midwifes, or any physician extenders.
III. Medical control is preferred to be provided by the receiving hospital. If contact cannot be made, CMH Emergency Room will be the default medical control for CMH ambulances and EMH Emergency Room will be the default medical control for EMH ambulances. Sending physician (if transfer) may also be consulted.
IV. When transporting from another facility and treatment that deviates from protocol is suggested by transferring Physician, RN/Paramedic should contact receiving MEDICAL CONTROL in the ambulance to verify orders.
V. If medical control cannot be contacted, protocols should be utilized as standing orders including those designated as requiring medical control. Medical control should be contacted as soon as possible and attempts at contact shall be documented.
VI. Refer to Guideline 1-400-48 - Communications - Medical Control Phone Numbers.
VII. If an on-scene physician gives orders, RN/Paramedic shall require credential evidence and the requesting physician must accompany the patient in transport to the receiving facility. This process should not be

considered if the physician does not have the appropriate medical sub-specialties as determined by the RN/Paramedic.

Medical Control Contact Information:

City	Facility	Medical Control Phone
Appleton City	Ellett Memorial Hospital	660-476-2111
Bolivar	Citizens Memorial Healthcare	417-328-6301
Butler	Bates County Memorial Hospital	660-200-7000
Carthage	McCune Brooks Regional Hospital	417-358-8121
Clinton	Golden Valley Memorial Hospital	660-885-6690
Columbia	Boone County Hospital	573-815-8000
	University Hospital	573-882-8091
	Veterans Hospital	573-814-6000
El Dorado Springs	Cedar County Memorial Hospital	417-876-2511
Ft Leonard Wood	Ft Leonard Wood Hospital	573-596-0803
Joplin	Freeman West	417-347-1111
Kansas City	Veterans Hospital	800-525-1483
Lamar	Barton County Memorial Hospital	417-681-5100
Lebanon	Mercy	417-533-6350
Monett	Cox Monett Hospital	417-235-3144
Neosho	Freeman Neosho Hospital	417-451-1234
Nevada	Nevada Regional Medical Center	417-667-3355
Osage Beach	Lake Regional Health System	573-348-8000
Springfield	Cox North	417-269-3393
	Cox South	417-269-4983
	Mercy	417-820-2115
St Louis	Barnes Jewish Hospital	314-294-1403

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Guideline 1-400-72 - Communications: Patient Handoff Report

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	No	NA
EMR	No	No	NA
EMT	No	No	Yes
AEMT	No	No	Yes
RN	No	No	Yes
Medic	No	No	Yes

Guideline:

Pre-arrival patient reports should be given to emergency rooms and other facilities receiving patients.

Purpose:

To provide guidelines for ESO Alerting and radio reports.

Procedure:

I. If transporting a patient to a facility, a pre-arrival report should be given.
   A. If the transport is a result of a transfer, a report has already been given via doctor-to-doctor, nurse-to-nurse, or other, however, an ambulance heads-up on ETA and any patient changes is polite to the receiving facility.
      1. The transfer pre-arrival report should be done by telephone.
   B. If the transport destination is an emergency room, make all efforts to provide a pre-arrival patient report at least a ten (10) minutes prior to arrival.
      1. Best practice is to create a case in the **ESO Alerting** app for every patient transport. If the destination hospital does not use ESO Alerting, select "Non Transport" as the destination. Use the information you entered to formulate your radio report and then import into ESO EHR.
      2. If the destination is CMH ER and time, patient condition, or other factors do not allow the use of ESO Alerting, contact should be made via the encrypted radio channel "**CMH ER Reporting**."
      3. If the destination is not CMH ER and not a facility that uses ESO Alerting, contact should be made via the analog, unencrypted radio channel "**VMed28 HEAR**."
      4. Another option, but should be rarely used and only as a last resort, is by telephone.

II. **ESO Alerting** procedure:
   A. Mobile devices in ambulances or personal devices may be used. No patient information is stored at any time on the device.

1. iPads in ambulances may be logged in using "device number" + ".cmhems" (for example "12345.cmhems").
2. Each employee has a login using "username" + ".cmhems" (for example "flast.cmhems").
3. The agency code is "cmhems."
4. The unit number should be "CMH" + short number (for example "CMH 1"). Do not include the full number (i.e. 701 is 1). Do not include "Ops," "Medic," or "Squad."

B. Assume field are NOT mandatory until the app tells you they are.
C. **All hospitals request EMS to OVER TRIAGE (i.e. If your patient *might* be a TRAUMA, STEMI, or STROKE pick the appropriate TCD).**
D. Enter the basics required for a typical radio report and add anything extra you would like.
E. Photos of injuries or videos of assessments can be added at any time and are appreciated by ER staff. However, if you are transporting to CMH ER and want to include the ECG, only transmit via the LifePak modem through LifeNet. Do not include a photo of the ECG in ESO Alerting for CMH ER. Non-CMH destinations will need the ECG.
F. The last page has a required field of "Case Priority." Options are 1, 2, or 3. Think of these like Red, Yellow, or Green.

Priority 1 (Red): If you are going lights and siren to the ER or this is a TCD patient, select 1 (red).	Priority 2 (Yellow): All patients that do not meet criteria 1 or 3 are 2 (yellow).	Priority 3 (Green): If this patient is appropriate for triage, select 3 (green).

G. Keep the app open to be notified when the ER opens your report and if they send you any messages.
H. Estimated Time of Arrival (ETA) is provided by the device's internal GPS. If prompted, select "Always Allow Location Permission."
I. To import into EHR, open the Flowchart tab in EHR and click "Import."
J. Nearby hospitals currently using ESO Alerting:

▪ CMH	▪ Cox Branson ▪ Cox North ▪ Cox South	▪ Mercy Springfield

K. Fields that import into EHR from Alerting:

▪ Patient name ▪ DOB ▪ Age ▪ Gender	▪ AVPU ▪ GCS ▪ Vitals	▪ Activation type ▪ Medications given ▪ Procedures performed ▪ Destination hospital

III. **CMH ER Reporting** radio channel procedure:
A. Follow the procedure below for VMed28-HEAR radio, however, patient identifying information may be provided, if needed.
IV. **VMed28 HEAR** radio channel procedure:
A. Identify your unit and the destination hospital.
B. Allow the receiving ER time here to divert you, if they are on diversion. All requests for diversion should be made clearly and should be repeated (i.e. "Medic 1 copies Hospital XYZ that we are being diverted."). Diversions shall be documented in EHR.
C. Identify your patient by approximate age and gender.
D. Identify the type of patient condition (medical or trauma) and the triage color code (see color codes in ESO Alerting section above).
E. Report your patient's chief complaint or problem along with relevant history and the findings of assessment and exam.
F. Report the patient's vital signs.
G. Report medications and treatments provided and the results of those treatments.
H. Provide an approximate ETA.
I. If physician's orders are provided, repeat back those orders.

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Guideline 1-450 - Ambulance Leadership

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	No	NA
EMR	No	No	NA
EMT	No	No	Yes
AEMT	No	No	Yes
RN	No	No	Yes
Medic	No	No	Yes

Guideline:

CMH PHS leaders shall be utilized to improve safety, quality of care, and efficiency while deploying ambulances and managing emergency medical resources.

Purpose:

The purpose of this guideline is to provide support to leaders and staff to formally communicate resources and processes for EMS leadership.

Procedure:

I. CMH EMS Chain of Command:
   A. Director
   B. Chiefs
   C. Managers
   D. Supervisors
   E. Crew Leaders
   F. Paramedics (ALS FTOs have seniority)
   G. EMTs (BLS FTOs have seniority)
   H. New hires, students, all other riders

II. Crew Leader recommended duties:
   A. The Crew Leader position is intended to serve as field supervisor to coordinate ambulance operations and support emergency and non-emergency responses in all four counties.
   B. Be involved and dedicated to improving the service you work for and your profession.
   C. Have an in-depth knowledge of all EMS policies, guidelines, and protocols.
   D. Maintain situational awareness via all communication tools available (radio, Slack, vehicle tracking, etc.). Refer to Links Page for a list of online resources.
   E. Make decisions at the lowest possible level. Be Empowered and "Just-Fix-It."
   F. Demonstrate good clinical and professional behaviors. Enforce those behaviors when deviations witnessed. Escalate as needed to include appropriate management staff.

G. Complete Just Culture training and utilize Just Culture decision-making.
H. Ensure ESO documentation reviews are caught up. Refer to Guideline 1-450-33 - Documentation Reviewer Reference Sheet.
I. Touch base with EMS leadership, if available and appropriate at the beginning of shift.
J. Contact the appropriate dispatch centers when available.
K. Be the point of contact for dispatch to coordinate transfers and make transfer decisions.
L. Crew Leaders are expected to float between all counties, as appropriate, and are not in any dispatch call rotation.
M. It is up to Crew Leaders to pick up calls when status zero or other issues when an additional response is needed. Refer to Guideline 1-200 - Ambulance Dispatch for a list of call types where an EMS Supervisor and/or an additional ALS ambulance might be needed.
N. Support staff, as available, with Echo-level, multiple patients, RSI situations, and other situations you feel you are needed.
O. Facilitate implementation of hold-over guideline for all crews, including yourself, as needed.
P. Daily activities:
    1. Walk station and grounds. Fix or report any issues.
    2. Follow up on daily cleaning chores to make sure being done.
    3. Conduct staff huddles and report any issues or concerns to supervisor or manager.
    4. Check and correct mileage on Orbcomm when ambulance comes back from Fleet.
    5. Monitor ESO for ensure trip tickes are being completed timely.
    6. Monitor ambulance locations.
    7. Monitor radio traffic and Slack for ambulance status levels in all counties.
Q. Weekly activities:
    1. Complete ambulance mileage report on F: drive.
    2. Check oxygen quantities on hand.
    3. Obtain and forward missed call report from dispatch center.
    4. Check biohazard box and call for pickup when needed.
    5. Monitor restock supplies.
    6. Collect and forward receipts and invoices to manager.
    7. Check narcotic boxes and log sheets.
    8. Check RSI kits.
    9. Ensure daily run logs are completed.

III. Supervisor recommended duties (in addition to Crew Leader above):
A. Ensure ESO clinical reviews are caught up. Refer to Guideline 1-800-33 - Clinical Reviewer Reference Sheet. Refer to Guideline 1-800 - Quality Improvement to determine which charts need reviewed.

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Guideline 1-450-33 - Documentation Reviews

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	No	NA
EMR	Yes	Yes	NA
EMT	Yes	Yes	Yes
AEMT	Yes	Yes	Yes
RN	Yes	Yes	Yes
Medic	Yes	Yes	Yes

Guideline:

Purpose:

Procedure:

Refer to Guideline 1-700-33 - Documenter Reference Sheet for reference and definitions.

Reviewers should look for:

- LifePak download attached?
- Facesheet and other scans attached?
- **Incident tab**:
  - Incident number formatted correctly?
  - EMD complaint and EMD Code correct? Only if EMD was used should a code be entered?
  - Responding from correctly indicates the station they were assigned and aligns with run number?
  - "Transport Due To" correct?
    - Should be "Closest Facility" unless clinical needs made it "Protocol."
    - If "Patient Choice," is there a refusal signature?
  - Receiving facility chart number correct?
- **Vitals tab**:
  - Complete set of vital signs?
- **Flowchart tab**:
  - If ALS provider on the crew, is "ALS Assessment" in flowchart?
- **Assessments tab**:
  - If trauma, was anatomical tool used?
- **Narrative tab**:
  - If anything is marked UTO, has it been explained?
  - Narrative includes complete DRAATT information?
- **Forms tab**:
  - Appropriate forms been filled out?

- **Billing tab**:
  - CMS Service Level correct?
    - If ALS1 or ALS2, is "ALS Assessment" in the flowchart?
    - Is Emergency vs. Non-Emergency selected correctly?
  - If PCS transfer, is Medical Necessity and Transport completed?
- **Signatures tab**:
  - Were all signatures obtained?

Add feedback:

- Be specific, positive, and give them the benefit of the doubt.

Rating:

Rating	Can be approved for billing immediately?	Changes NEEDED?	Changes RECOMMENDED?
Poor	No	Several major	NA
Fair	No	Only a few major	NA
Good	Yes	Only a few major	or Several minor
Very Good	Yes	None	Only a few minor
Excellent	Yes	None	None

Send message:

- Send message for review and/or fixing by the documenter: Include their manager as a recipient of the message. Consider adding their partner, too.
- Open EHR and "unlock" the chart if the documenter needs to make changes.

Change status:

- Mark "approved" only if all the above answers are "yes" and it is ready to send to billing.

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Guideline 1-450-66 - Rounding Form

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	No	NA
EMR	No	No	NA
EMT	No	No	Yes
AEMT	No	No	Yes
RN	No	No	Yes
Medic	No	No	Yes

Guideline:

Purpose:

Procedure:

This form is to be used by Crew Leaders rounding on staff members. Once complete, forward the form to the appropriate manager for entry into MyRounding software.

Demographic info:

Staff member's name being rounded on:

Crew Leader's name:

Date rounding completed:

Is there someone we can recognize for doing good?

Name of person to be recognized:

Description of why they should be recognized:

Do you have any questions or concerns we can address?

Description of conversation:

Follow-up (answered by Crew Leader):

Description of what follow-ups need to happen (i.e. what needs to be passed up the chain or issues to add to the stoplight report):

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Guideline 1-500 - EMS Education and Competency

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	Yes	NA
EMR	Yes	Yes	NA
EMT	Yes	Yes	Yes
AEMT	Yes	Yes	Yes
RN	Yes	Yes	Yes
Medic	Yes	Yes	Yes

Guideline:

Each individual following these protocols shall be educated and demonstrate competence.

Purpose:

The purpose of this guideline is to establish a process and standards for responders and staff to aquire education and maintain emergency medical competence.

Procedure:

A. General Requirements: Two tables below detail requirements for those responders and staff utilizing these protocols. The first table is for first responders and ambulance staff that are not employees of Citizens Memorial Hospital Pre-Hospital Services. The second table is for staff that are employed by CMH PHS.
B. Required Licenses: Refer to the tables below for the required licenses for each responder level. Each individual is responsible for maintaining licensures as listed.
C. Required Certifications: Refer to the tables below for the required certifications for each responder level. Each individual is responsible for obtaining and maintaining certifications as listed.
D. Required Competence: Each year, a list of competency requirements will be compiled from input from Quality Program, MEDICAL CONTROL, staff, dispatch agencies, and first responder agencies.
    1. Required Annual Competence: Life support competency opportunities will be available throughout the year (typically every month on the second Tuesday). Successful completion of the Life Support Competency is equivalent to a refresher certification in AHA BLS, ACLS, and PALS (if the student already possesses an unexpired certificate). New AHA certification cards along with CEU certificates will be issued upon successful completion.
    2. Required Triannual Competence: At least three times per year, an educational competency will be held. Competencies will routinely be comprised of different topics offered throughout the year. Additional classroom and/or skill competencies may be required based on community and professional development needs. Competency schedule will be posted and announced at least 30 days ahead. Typically, one competency topic per trimester. Refer to Education Manual Section 2-720 - Generic Education Calendar for schedules and announcement flyers. Agencies may deliver the

competency locally with the approval of CMH PHS. CMH PHS will offer each topic at least five times over a two-week period to allow participation. CEU certificates will be issued upon successful completion.

3. Required Monthly Competence: Each month, a protocol quiz is available to familiarize responders and staff with current protocols. Refer to Monthly Protocol Competency Quizzes for the list of links to find all quizzes available for the year. Completion of each month's protocol quiz is only valid if completed within the given month (i.e. after the first day and before the last day of the month). Quizzes are open-book and may be taken as many times as necessary to obtain a passing score of at least 80%. CEU certificates will be issued upon successful completion.

E. Recordkeeping: It is the responsibility of each agency to maintain records demonstrating each responder meets these requirements.

NOT CMH PHS Employee:

Level	Required Licenses	Required Certifications	Required Competence
EMD	• None.	• EMD certification. • AHA Basic Life Support (BLS) certification or equivalent.	• Annual: EMDs may, but are not required, to attend life support competencies. Maintaining AHA BLS certification is sufficient. • Triannual: Annually, each EMD shall attend and successfully complete **100%** of the offered topics that year. • Monthly: Annually, each EMD shall successfully complete **100%** of the offered protocol quizzes.
EMR (volunteer)	• None.	• EMR certification. • AHA Basic Life Support (BLS) certification or equivalent.	• Annual: Same as EMD. • Triannual: Annually, each volunteer EMR shall attend and successfully complete **33%** of the offered topics that year. • Monthly: Annually, each volunteer EMR shall successfully complete **33%** of the offered protocol quizzes.
EMR (career)	• None.	• EMR certification. • AHA Basic Life Support (BLS) certification or equivalent.	• Same as EMD.
EMT (volunteer)	• State of Missouri Emergency Medical Technician (EMT) License.	• AHA Basic Life Support (BLS) certification or equivalent.	• Annual: Volunteer EMTs who are not employed by CMH PHS may, but are not required, to attend life support competencies. Maintaining AHA BLS certification is sufficient. • Triannual: Annually, each volunteer EMT shall attend and successfully complete **66%**

			of the offered topics that year. • Monthly: Annually, each volunteer EMT shall successfully complete **66%** of the offered protocol quizzes.
EMT (career)	• State of Missouri Emergency Medical Technician (EMT) License.	• Same as volunteer EMT.	• Same as career EMR.
AEMT (volunteer)	• State of Missouri Advanced Emergency Medical Technician (AEMT) License.	• Same as career EMT.	• Same as volunteer EMT.
AEMT (career)	• State of Missouri Advanced Emergency Medical Technician (AEMT) License.	• Same as volunteer AEMT.	• Same as career EMT.
RN	• State of Missouri Registered Nurse (RN) License.	• Same as career AEMT plus... • AHA Advanced Cardiac Life Support (ACLS) certification or equivalent. • AHA Pediatric Advanced Life Support (PALS) certification or equivalent.	• Annual: RNs who are not employed by CMH PHS may, but are not required, to attend life support competencies. Maintaining AHA BLS, ACLS, and PALS certifications is sufficient. • Triannual: Same as career AEMT. • Monthly: Same as career AEMT.
Medic	• State of Missouri	• Same as RN.	• Same as RN.

	Paramedic License.		

CMH PHS Employees:

A. Scheduling Eligibility: If a staff member fails to meet requirements as set forth in this guideline, they are no longer eligible to pick up or fill ambulance shifts. Remediation is available for every requirement.
   1. Required Licenses and Certifications: If any licensure or certification is not completed by the deadline or lapses, the employee will be removed from the schedule until such time as the licensure or certification has been obtained.
   2. Required Annual Competence: Each employee must attend the Life Support Competency each year during or before their month of birth. If an employee fails the competency standard for any simulation, a debriefing will occur and an opportunity to retake the simulation the same day will be offered. If the employee does not successfully complete the second simulation attempt, a pre-defined remediation day will be scheduled. Typically, Life Support Competencies are held on Tuesdays and the remediation day is the Friday of the same week. Typically, competencies are held at the SBU Simulation Center in Bolivar and remediations are held at EMS Headquarters classrooms in Bolivar. If the employee fails simulations on the remediation day, they will be removed from the schedule and an interview and training will be scheduled with the Clinical Chief and/or Medical Director. Further remediation will be decided at that meeting.
   3. Required Triannual Competence: Upon the last delivery of each competency, those employees who did not attend and successfully complete the competency, a written test will be issued (minimum of 100 difficult questions related to the topic covered within the scope of practice). The employee has two weeks to successfully complete the test with as many attempts as it requires. Feedback will be given after each attempt. If the employee fails to obtain a passing score after the two-week remediation period, they will be removed from the schedule until such time as a passing score has been obtained.
   4. Required Monthly Competence: On or near the first of each month, those employees who did not obtain a passing score on the previous month's protocol quiz will be removed from the schedule until such time as a passing score has been obtained.

Level	Required Licenses	Required Certifications	Required Competence
New Hire	CMH PHS will utilize a new hire onboarding process to orient staff when hired. Refer to Education Manual Section 3-700 - CMH PHS Employee Onboarding Academy.		
EMT	• State of Missouri Emergency Medical Technician (EMT) License. Required immediately upon hire. • State of Missouri Class E (or higher) Driver License. Required within 30 days of hire and cannot work orientation shifts until completed.	• AHA Basic Life Support (BLS) certification. Required within 30 days of hire and cannot work orientation shifts until completed. • FEMA IS 100 (Introduction to Incident Command). Required within 90 days of hire. • FEMA IS 700 (Introduction to National Incident Management). Required within 90 days of hire. • FEMA IS 800 (Introduction to National Response Framework). Required within 90 days of hire.	• Annual: Each CMH PHS employee must attend the Life Support Competency each year during or before their month of birth. • Triannual: Annually, each EMT shall attend and successfully complete **100%** of the offered topics that year. • Monthly: Annually, each EMT shall successfully complete **100%** of the offered protocol quizzes.

		• NIHSS Certificate of Completion from nihstrokescale.org. Required within 90 days of hire. • Missouri DOT Traffic Incident Management (TIMS) or equivalent. Required within six (6) months of hire. • NAEMT Emergency Vehicle Operator Safety (EVOS) or equivalent. Required within six (6) months of hire. • NAEMT Pre-Hospital Trauma Life Support (PHTLS) or equivalent. Required within six (6) months of hire.	
AEMT	• State of Missouri Advanced Emergency Medical Technician (AEMT) License. Required immediately upon hire. • State of Missouri Class E (or higher) Driver License. Required within 30 days of hire and cannot work orientation shifts until completed.	• Same as EMT.	• Same as EMT.
RN	• State of Missouri Registered Nurse (RN) License. Required immediately upon hire. • State of Missouri Class E (or higher) Driver License. Required within 30 days of hire and cannot work orientation shifts until completed.	• Same as AEMT plus... • AHA Advanced Cardiac Life Support (ACLS) certification. Required within 30 days of hire and cannot work orientation shifts until completed. • AHA Pediatric Advanced Life Support (PALS) certification. Required within six (6) months of hire. • FEMA IS 200 (ICS for Single Resources). Required within 90 days of hire.	• Same as AEMT.
Medic	• State of Missouri Paramedic License. Required immediately upon hire.	• Same as RN.	• Same as RN.

	• State of Missouri Class E (or higher) Driver License. Required within 30 days of hire and cannot work orientation shifts until completed.		

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Guideline 1-700 - Ambulance Operations

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	Yes	NA
EMR	Yes	Yes	NA
EMT	Yes	Yes	Yes
AEMT	Yes	Yes	Yes
RN	Yes	Yes	Yes
Medic	Yes	Yes	Yes

Guideline:

Ambulances shall operate and function efficiently to provide safe and exceptional patient care.

Purpose:

The purpose of this guideline is to outline procedures to be used to improve safety and efficency in ambulance operations.

Procedure:

I. First responder personnel will assume patient care from initial patient contact until face-to-face verbal report given to transporting ambulance crew.
   A. Verbal report shall include, but not limited to: Patient history, current status, and treatments provided. Refer to Guideline 1-400-72 - Patient Handoff Report.
   B. Available documentation should also be transferred (i.e. ECGs, patient information, etc.).

II. Ambulance personnel should acknowledge within 60 seconds of call notification. The responding ambulance is expected to be en route within 60 seconds of call notification on priority 1 and priority 2 calls.

III. Ambulance personnel will assume patient care from initial patient contact or face-to-face verbal report from on-scene medical personnel until face-to-face verbal report given to flight crew or receiving facility.

IV. In a multi-patient incident, ambulance personnel will continue patient care until care can be transferred to appropriate in-coming ambulance with face-to-face verbal report.

V. In the event of mechanical difficulty or other situation requiring transferring a patient to another ambulance, CMH or EMH crew may maintain patient care in the new ambulance (even if the new ambulance is not a CMH or EMH ambulance).

VI. **While off duty**, EMTs, AEMTs, RNs, and Paramedics currently employed with an agency that has adopted these protocols may provide **Basic Life Support** following to these protocols.
   A. Ensure 9-1-1 is contacted and an ambulance is responding as appropriate.
   B. While off duty, current CMH or EMH Pre-Hospital or Emergency Department RNs and Paramedics may assist in providing **Advanced Life Support** according to these protocols if the following conditions are met:
      1. A CMH or EMH ambulance must be the transporting unit AND
      2. An on-duty CMH or EMH RN or Paramedic must provide primary patient care.

VII. **Ambulance crew documentation**: Refer to Guideline 1-700-33 - Documenter Reference Sheet.

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Guideline 1-700-33 - Patient Care Documentation

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	No	NA
EMR	Yes	Yes	NA
EMT	Yes	Yes	Yes
AEMT	Yes	Yes	Yes
RN	Yes	Yes	Yes
Medic	Yes	Yes	Yes

Guideline:

Purpose:

Procedure:

An ePCR must be completed for every EMS response (regardless of patient contact or transport status).

All PCRs shall be completed, faxed, and exported prior to end of shift unless approved by supervisor.

Suggested workflow:

- **Update mobile**: At the beginning of every shift, enter your credentials and click "update."
- **Lock your chart**: After writing your chart in Mobile, "Lock" it by clicking the checkmark in the top right.
- **Sync records on the dashboard**: The chart will no longer be accessible from Mobile. You can "sync" at any time to work on your chart on ESOsuite.net.
- Both "lock" and "sync" are required to finish your chart.

Incident tab:

- **Response**:
  - Each responding ambulance needs it's own "incident number." If multiple patients per ambulance, add "A", "B", etc. to "run number."
  - Incident number configuration: 20X1234. "20" is the year. "X" is the station identifier:
    - **B** = Bolivar
    - **H** = Hermitage
    - **S** = Stockton
    - **L** = Eldorado
    - **C** = Osceola
  - Run Type:
    - Use "911 Response" if an on-duty ambulance was needed for the response.
    - Use "Medical Transport" or "Inter-Facility Transfer" if a call-in crew COULD be used.
    - Use "Standby" if a standby or public relation event. Enter the name and address in the patient data area. Narrative should explain why the ambulance was needed at the event.

- **Disposition**:

  - Disposition:
    - **Patient treated, transferred care to another EMS professional**: Includes intercept and flight crews. Select the receiving hospital as the destination so the facility will be able to get your documentation.
  - Transport Due To:
    - **Closest Facility**: Should be used as the default.
    - **Diversion**: If appropriate facility is on divert or diverted after giving radio report.
    - **Family Choice**: Similar to patient's choice, but patient unable to make decision.
    - **Insurance**: NOT USED.
    - **Law Enforcement**: NOT USED.
    - **On-Line / On-Scene Medical Direction**: Only used if transporting crew spoke directly with sending or receiving physician for orders.
    - **Other**: NOT USED.
    - **Patient's Choice**: Should only be used if patient refused closest facility AND facility recommended by protocol.
    - **Patient's Physician's Choice**: Patient being transferred by physician order.
    - **Protocol**: Should be used if closest facility was bypassed due to TCD.
    - **Regional Specialty Center**: Used in conjunction with a protocol or physician order.
    - **Cancelled**: Only if no patient contact was made.

- **Destination**: Chart number: From destination face sheet.

  - **General info**: Epic usually uses "CSN", Cerner usually uses "FIN", and Meditech uses "Account#."
  - **CMH**: Account number in top right of face sheet is "H" followed by 11 digits (i.e. H00001234567).
  - **Cox**: Patient number (PT NO) in top right of face sheet is 12-digit number (i.e. 123456789012).
  - **Mercy**: CSN number in top left of face sheet is 9-digit number (i.e. 123456789).
  - **St Luke's**: CSN number in the top right of face sheet is 5-digit number (i.e. 12345). CSN can also be found on bottom left under the barcode.

Vitals tab:

- If 4-lead or 12-lead performed, at least one entry has ECG interpretation documented.

Flowchart tab:

- If a paramedic is present, add "ALS Assessment" and document findings on the Assessment tab.
- "BLS Assessment" is only required when COBRA form says BLS ambulance is required and if a paramedic is not present during the assessment. However, BLS Assessment can be added to any chart if one was completed.

Narrative tab:

- **Injuried**: If fall, height of fall is number of feet between part of patient that struck an object and the object he/she struck. For example, a fall from standing striking their head might be five (5) feet.
- **Narrative**: Narrative should be a picture of how all the technical information from the rest of the chart played out on the call. Should be DRAATT format with double space between each section for easier review:
    - **Dispatch**: All details provided from initial dispatch. Examples include, but not limited to:
        - Precise nature of call at time of dispatch.
        - Was it scheduled?
    - **Response**:How crew responded and any additional information provided while en route.
    - **Arrival**: All details of the scene leading up to patient contact. Examples include, but not limited to:
        - Scene size-up: What did you find?
        - Observations that affect MOI and/or NOI.
        - Location and position patient found.
        - What is your first general impression of patient?
    - **Assessment**: Initial patient presentation and assessment leading up to loading the patient for transport. Examples include, but not limited to:
        - Document and describe any immediate life threats.
        - What did the patient tell you?
        - What is the patient’s baseline?
        - Does the patient have decision-making ability?
        - Discussion on ECG findings and interpretation.
    - **Treatment**: All treatments performed and the patient's response. Include treatments indicated or considered but not performed and why.
    - **Transport**: All details of patient reassessment and what happened during transport including patient hand-off to receiving provider. Examples include, but not limited to:
        - Detailed description of how moved to stretcher.
        - Clinical reason for destination or patient preference. If clinical, what was the clinical reason for that destination?
        - Describe any changes from earlier assessments.
        - Describe patient belongings and what did you do with them.
    - **If PRC**: Should be highly detailed covering all bases. Examples include, but not limited to:
        - Does the patient have the ability to understand the ramifications of the decision to refuse care?
        - If the patient does not have decision-making capacity, who is the responsible party the patient is left in care of?
        - Discussed risks, etc. with family or other concerned party. Name of party.
        - Narrative of the discussion with the patient and others (including noting what the patient repeated back to you).
        - If the patient does not have decision-making capacity, list the physician’s name who was consulted when you contacted medical control.

Billing tab:

- **Details**: Response urgency definitions:
    - **Immediate**: You responded “as quickly as possible to take the steps necessary to respond to the call.”
    - **Non-Immediate**: "Omega" EMD codes and scheduled transfers and standbys - all other calls should be "emergency."
- **Details**: CMS service level definitions:
    - **ALS2**: The patient required and receivied:
        - At least three (3) separate administrations of one or more IV medications, OR
        - At least one (1) of the following procedures:
            - Defibrillation,
            - Cardioversion,
            - Pacing,
            - Intubation,
            - Surgical airway,
            - Chest decompression, OR
            - Intraosseous access.
    - **ALS1**: The patient required and received:
        - The complaint at the time of dispatch requires an ALS assessment and they received an ALS assessment. Refer to Protocol 2-924 - Universal Patient Care for the list of conditions requiring ALS. After the ALS assessment, the patient can be transported BLS (if appropriate) and still have a ALS1 CMS service level, OR
        - At least one ALS intervention. ALS interventions are defined by those that require an AEMT or Paramedic license to perform (with the exception of starting an IV and giving isotonic fluids).
    - **BLS**: Does not meet any of the conditions above. Only starting an IV and giving fluids does not make a patient ALS for billing purposes.

Signatures tab:

- **Billing Authorization**: Start with section I and only move onto the next section if you are unable to complete the previous section.
    - **Section I**: Patient signature is required for assessment and treatment.
    - **Section II**: If patient is unable to sign, is there a responsible party that makes decisions for the patient (i.e. facility staff or parent). Responders and EMS should NOT be signing here.
    - **Section III**: If patient is unable to sign AND no responsible party is present, obtain EMS and facility signatures.
- **Standard Signatures**: Complete ALL the appropriate sections.
    - **Provider Signatures**: Obtain signatures from everyone assigned to the ambulance on that shift.
    - **Facility Signatures**: Obtain signature from the provider taking over patient care (including flight crew). If signature cannot be obtained, type the agency name and provider name and sign "via xxxx" where "xxxx" is your signature.
    - **Refusal**: This is required for all refusals including refusing all care, a specific treatment, or transport to recommended facility.
    - **PCS**: This section is not required if a hard copy of the PCS is obtained from the facility.
- **Custom Documents**: Complete ALL the appropriate sections.
    - **Controlled Substances**: Sign and obtain witness signatures if controlled substances are accessed.

Scanning hard-copy forms:

- All hard-copy forms shall be scanned and attached to the EHR. This includes PCS forms, face sheets, etc. The process to scan attach is:
    1. Place forms on copier.
    2. Button-presses may vary from copier to copier:
        - The Bolivar variation is: Scan - Scan to Network Folder - Scan_Doc - Scan
        - The Stockton variation is: Send - Address Book - Circle - "ESO_SCAN" - OK - OK - Start
    3. Open ESO
    4. Hamburger Menu
    5. Attachments
    6. Add Attachment
    7. Browse
    8. Files should be located here: F:/Depts/Pre-Hospita/Scan_Doc then the name of the location you scanned to.

Other reference sheets:

Refer to Guideline 1-450-33 - Documentation Reviewer Reference Sheet for info on how your charts will be reviewed prior to sending to Billing.

Refer to Guideline 1-800-33 - Clinical Reviewer Reference Sheet for info on how your charts will be reviewed for clinical competence.

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Guideline 1-700-60 - Hazardous Atmosphere Standby

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	No	NA
EMR	No	No	NA
EMT	No	No	Yes
AEMT	No	No	Yes
RN	No	No	Yes
Medic	No	No	Yes

Guideline:

Ambulances may be utilized on the scene where emergency personnel are engaged in highly dangerous activities.

Purpose:

The purpose of this guideline is to outline procedures to be used when an ambulance is requested to stand by in the event of emergency responders operating in an Immediately Dangerous to Life and Health (IDLH) atmosphere.

Procedure:

I. Non-dedicated ambulance may be requested by any public safety agency engaged in operations deemed Immediately Dangerous to Life and Health (IDLH). Examples include, but are not limited to: Structure fires, hazardous materials, clandestine drug labs, etc.
II. If Incident Commander requests ambulance to be dedicated and remain on the scene, contact the supervisor or Crew Leader.
III. Once on scene, check in with the Staging Officer or Incident Commander.
IV. Park the ambulance in a manner to allow view of the scene from a distance but always have the ability to leave the scene in an expedient manner.
V. Ambulance crew duties are to care for civilians, bystanders, and/or responders that require treatment and/or transport for an injury or illness.
VI. Due to possible contamination, firefighters shall not be placed in an ambulance for cooling/warming unless they require treatment and/or transport for injuries or illnesses.
VII. **Persons with smoke inhalation**: Refer to Protocol 2-352 - Exposure: Cyanide.
VIII. Rehab of responders, baseline vitals, hydration, etc. shall preferably be conducted by fire department and/or emergency management personnel. **"Assistance" with rehab duties as assigned within fire department policies which may include**:
    A. Encourage removal of PPE, rest, passive cooling, and oral hydration.
    B. Prior to returning to activity, obtain and record vitals. If vitals are outside the limits below, **suggest** further rest.
        1. SBP greater than 200.
        2. Pulse greater than 110.
        3. Respirations greater than 40.
        4. Temperature greater than 101.
        5. PulseOx less than 90%.

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Guideline 1-800 - Quality Improvement

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	Yes	NA
EMR	Yes	Yes	NA
EMT	Yes	Yes	Yes
AEMT	Yes	Yes	Yes
RN	Yes	Yes	Yes
Medic	Yes	Yes	Yes

Guideline:

Purpose:

Procedure:

All agencies ongoing in-house quality improvement must include review of documentation by management staff to ensure clinical competence, protocol compliance, appropriate patient care, and liability reduction.

These reviews must be shared in a timely manner with the individuals reviewed for future improvements.

'>Refer to Guideline 1-800-33 - Clinical Reviewer Reference Sheet.

In the event, clinical issues or concerns are found, refer to Guideline 1-800-66 - Employee Remediation.

Refer to specific licensure levels for minimum review rates.

EMD:

- **Monthly, each agency must review reports by EMDs**:
  - 10% documentation review.
  - 50% clinical review.

EMR:

- **Monthly, each agency must review reports by EMRs**:
  - At least 0% documentation review of a random sampling.
  - At least 10% clinical review of a random sampling.

EMT:

- Ensure completion of applicable EMR items above.
- **Monthly, each agency must review reports by volunteer EMTs**:
  - At least 25% documentation review of a random sampling.
  - At least 10% clinical review of a random sampling.
- **Monthly, each agency must review reports by career EMTs**:
  - At least 50% documentation review of a random sampling.
  - Select the lowest scoring documenters and clinicians from previous months for 100% clinical review. Select as many individuals as needed to get total clinical review to at least 10% of all requests for service.

AEMT:

- Ensure completion of applicable EMT items above.
- **Monthly, each agency must review reports by AEMTs**:
  - At least 75% documentation review of a random sampling.
  - Refer to EMT section above for individual selection to meet 10% review rate.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- **Monthly, each agency must review reports by RNs and Paramedics**:
  - At least 100% documentation review.
  - At least 50% clinical review of calls where the patient was transported lights and siren and/or transported by air ambulance.
  - At least 50% clinical review of the following diagnoses:
    - Cardiac Arrest
    - Sepsis
    - Stroke
    - STEMI
    - Critical Trauma
      - Specifically, review trauma patients where a c-collar was indicated according to Protocol 2-836 - Spinal Immobilization Clearance.
  - At least 75% clinical review of the following treatments:
    - Cardioversion, defibrillation, or pacing.
    - Intubation (attempted or successful) or cases where RSI should have been used but was not (i.e., GCS less than eight with BVM for prolonged periods).
  - At least 100% clinical review of the following treatments:
    - RSI (attempted or successful) or paralytics administered (i.e, Rocuronium, Succinylcholine, or Vecuronium.
    - Ketamine administered.
  - Refer to EMT section above for individual selection to meet 10% review rate.

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Guideline 1-800-33 - Clinical Reviews

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope

License	Volunteer	Career	CMH
EMD	NA	Yes	NA
EMR	Yes	Yes	NA
EMT	Yes	Yes	Yes
AEMT	Yes	Yes	Yes
RN	Yes	Yes	Yes
Medic	Yes	Yes	Yes

Guideline:

Purpose:

Procedure:

This whole protocol is draft and not yet approved.

Refer to Guideline 1-450-33 - Documentation Reviewer Reference Sheet.

Refer to Guideline 1-700-33 - Documenter Reference Sheet for reference and definitions.

Refer to Guideline 1-800 - Quality Improvement to determine which charts should be reviewed.

Reviewers should look for:

- **All charts**:
  - In general, if there is a fill-in spot or drop-down for something, it should be documented there, not the narrative.
  - Review the appropriate protocol and determine minimum treatments were provided.
  - Review the narrative. Were all parts of DRATT included?
- **Trauma**:
  - C-collar and SMR applied according to Protocol 2-836 - Spinal Immobilization Clearance?
  - Appropriate vascular access?
  - Oxygen administered appropriately?
  - TXA administered, if appropriate?
  - Was the patient warmed?
  - Scene time and landing zone time kept to a minimum?
  - Transported according to Protocol 2-924 - Universal Patient Care?
- **RSI or airway needed**:
  - Treated according to Protocol 2-044 - Airway: RSI?
  - Was RSI appropriate? Was RSI needed and not provided?

    - Medications given correctly?
    - Attempts, placement, confirmation, etc. documented?
- **Sepsis:**
    - Treated according to Protocol 2-440 - Fever?
    - Temperature recorded?
    - Capnography recorded?
    - Source of infection investigated?
    - LR fluid bolus appropriately given?
    - Blood sugar checked and managed appropriately?
    - Scene time and landing zone time kept to a minimum?
    - Transported appropriately?
- **STEMI**:
    - Treated according to Protocol 2-220 - Chest Pain / Suspected Cardiac Event?
    - Aspirin within time goal?
    - 12-lead within time goal?
    - Scene time and landing zone time kept to a minimum?
    - Transported according to Protocol 2-220 - Chest Pain / Suspected Cardiac Event?
- **Stroke**:
    - Treated according to Protocl 2-880 - Suspected Stroke?
    - Blood sugar checked?
    - NIHSS completed?
    - Last known well time documented?
    - Scene time and landing zone time kept to a minimum?
    - Transported according to Protocl 2-880 - Suspected Stroke?

Add feedback:

- Be specific, positive, and give them the benefit of the doubt.

Rating:

Rating	Followed protocol?	Patient care issues?	Met quality measures?
Poor *	No	Several minor or a few critical	NA
Fair	No	A few minor	NA
Good	Yes	None	Met goal
Very Good	Yes	None	Slightly exceeded goal
Excellent	Yes	None	Significantly exceeded goal

Send message:

- Send message for review by the documenter: Include their manager as a recipient of the message. Consider adding their partner, too.
- If "Poor" rating is given, include Clinical Chief as a message recipient. Refer to Guideline 1-800-66 - Employee Remediation.

Change status:

- Mark "CLOSED."

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Guideline 1-800-50 - Quality Improvement: Just Culture Investigation

Polk, Hickory, Cedar, & St Clair EMS Protocols

Date of incident:

Date of investigation:

EMS incident number:

List of persons involved in investigation (this form should be completed with input from field staff involved in the incident).

What happened?

What normally happens?

What do policies and/or protocols require?

Why did the incident happen? Repeat this question as necessary to identify all the root causes.

Expand the appropriate algorithm(s) below and highlight the paths followed:

If an employee breeched the **duty to avoid risk**, complete the RISK ALGORITHM. Record result below:

Click to display the RISK ALGORITHM:

No problems	System problems	Employee problems
• ☐ NOT APPLICABLE • ☐ Do not consider employee action • ☐ Support employee in decision		• ☐ AT-RISK BEHAVIOR: Coach employee and conduct at-risk behavior investigation -> Complete the BEHAVIORS ALGORITHM • ☐ Consider punitive action • ☐ HUMAN ERROR: Console employee and conduct human error investigation -> Complete the ERRORS ALGORITHM • ☐ RECKLESS BEHAVIOR: Consider punitive action -> Complete the BEHAVIORS ALGORITHM

If an employee breeched the **duty to follow a procedural rule**, complete the RULE ALGORITHM. Record result below:

Click to display the RULE ALGORITHM:

No problems	System problems	Employee problems
• ☐ NOT APPLICABLE • ☐ Support employee in decision to violate rule	• ☐ Investigate circumstances leading to failure to know of duty • ☐ Investigate circumstances leading to impossibility	• ☐ AT-RISK BEHAVIOR: Coach employee and conduct at-risk behavior investigation -> Complete the BEHAVIORS ALGORITHM • ☐ HUMAN ERROR: Console employee and conduct human error investigation -> Complete the ERRORS ALGORITHM> • ☐ RECKLESS BEHAVIOR: Consider punitive action -> Complete the BEHAVIORS ALGORITHM

If an employee breeched the **duty to produce an outcome**, complete the OUTCOME ALGORITHM. Record result below:

Click to display the OUTCOME ALGORITHM:

No problems	System problems	Employee problems
☐ NOT APPLICABLE ☐ Accept outcome ☐ Support employee in decision	☐ Investigate circumstances leading to failure to know of duty ☐ Investigate circumstances leading to impossibility	☐ Assist employee in producing better outcomes or consider punitive action

If there are **repetative human errors**, complete the ERRORS ALGORITHM. Record result below:

Click to display the ERRORS ALGORITHM:

No problems	System problems	Employee problems
• ☐ NOT APPLICABLE	• ☐ Consider system redesign	• ☐ Consider punitive action • ☐ Consider reassignment or termination • ☐ Employee to make better choices • ☐ Employee to remedy personal performance shaping factors

If there are **repetative at-risk behaviors**, complete the BEHAVIORS ALGORITHM. Record result below:

Click to display the BEHAVIORS ALGORITHM:

No problems	System problems	Employee problems
• ☐ NOT APPLICABLE	• ☐ Consider system redesign	• ☐ Consider punitive action • ☐ Employee to remedy personal performance shaping factors

What system performance shaping factors can be improved (i.e. reducing the likelihood of human error or behaviroal drift)?

What employee improvements will be made?

If this employee is an FTO or leadership position, will that status be revoked or modified?

Targeted chart reviews of the past 60 days are required to identify trends. What specific calls are going to be reviewed and by whom?

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Guideline 1-800-66 - Quality Improvement: Employee Remediation

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	Yes	NA
EMR	Yes	Yes	NA
EMT	Yes	Yes	Yes
AEMT	Yes	Yes	Yes
RN	Yes	Yes	Yes
Medic	Yes	Yes	Yes

Guideline:

Emergency medical staff shall maintain high levels of competence and when those levels drop below acceptable standards, procedures must be followed to identify causes, improve staff competence, and reduce future occurances.

Purpose:

The purpose of this guideline is to establish procedures to identify causes of low clinical performance and suggest methods of improving performance.

Procedure:

Triggers for this guideline to be used include but not limited to:

- A "poor" rating is given during a clinical chart review (see Guideline 1-800-33 - Clinical Reviewer Reference Sheet).
- Recommendation by Manager or Chief.

Step 1: Identify the cause.

- Utilize Just Culture Investigation Form to determine cause.

Step 2: Improve staff competence.

- "Support employee in decision" or "Investigate system cause" recommended from Just Culture Investigation:
    1. Develop a plan for follow-up and deadlines.
    2. Consider discussion with the Medical Director.
    3. Consider an agenda item in the next Manager Meeting.

4. Consider an agenda item in the next Equipment Committee Meeting.
5. Consider an agenda item in the next Protocol Committee Meeting.

- "Consider punitive action" or "Consider reassignment or termination" recommended from Just Culture Investigation:
    1. Consider progressive discipline to include coaching, DESK, written warning, or other actions with Human Resources Department.
    2. Consider assigning self-educational task such as research and recommendations for protocol or staff education. Establish a deadline for completion.
    3. Consider assigning a repeat of initial education (i.e. full 16-hour ACLS class). Establish a deadline for completion.
    4. Consider remediation shifts with FTOs, Crew Leaders, and/or Managers. Remediation shifts could be on the ambulance, in the ER, or other locations. Establish a deadline for completion.
    5. Consider scheduling one or more high-fidelity simulation labs to improve critical thinking and/or skills.
    6. Consider scheduling a review meeting with the Medical Director.
    7. Consider other items not included on this list.

Step 3: Reduce future occurances.

- Consider adding additional surveillance or clinical review rules to monitor future occurances.

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Guideline 1-850 - Rescue Task Force

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	Yes	NA
EMR	Yes	Yes	NA
EMT	Yes	Yes	Yes
AEMT	Yes	Yes	Yes
RN	Yes	Yes	Yes
Medic	Yes	Yes	Yes

Guideline:

Purpose:

Procedure:

EMD:

- **Tier one incident (threat of MCI)**: Dispatch primary agency and notify secondary agency Supervisors.
- **Tier two incident (incident with less than six casualties)**: Dispatch all in-county on-duty agency resources and notify all Supervisors.
- **Tier three incident (MCI with six or more casualties)**: Dispatch on-duty agency resources, notify Supervisors, and follow mutual aid protocols.

EMR:

- Responders do not have an obligation to put themselves in danger. It is the discretion of the crew to enter an unsafe scene in coordination with unified command. Available information, resources, situational awareness, and a risk-vs-benefit analysis should determine actions.
- Wear high-visibility and retro-reflective apparel when appropriate.
- **PREPARATION**:
  - Assemble Rescue Task Force (RTF). Minimum of one (1) Threat Elimination Specialist (TES) assigned to EMS, but four is preferable.
  - Gather the bare minimum equipment to perform lifesaving medical interventions and personal protective equipment.
  - Medical functions of the RTF shall conduct radio communications on **VTAC12**.
- **DIRECT THREAT CARE** (Hot zone - Immediate threat may exist):
  - Instruct responsive TES to continue advancing toward eliminating the active threat and to provide self-aid.
  - Instruct ambulatory casualties to move to cover and provide self-aid.

    - Control massive hemorrhage with Tourniquet.
    - Consider moving unresponsive to cover and position to maintain airway.
- **INDIRECT THREAT CARE** (Warm zone - Secondary threats may exist):
    - All weapons on the casualty should be rendered safe and secure.
    - Establish casualty collection point(s) and perform hasty triage.
    - Conduct abbreviated patient assessment and perform interventions to stabilize patient for extrication. Do not delay extraction for non-life-threatening interventions.
    - **MARCH**:
        - **Major hemorrhage control**: Consider Tourniquet and/or Hemostatic Agent.
        - **Airway management**: Positioning, NPA
        - **Respirations**: Consider vented occlusive dressing.
        - **Circulation**.
        - **Head/Hypothermia**: Treat life-threatening Head Trauma and prevent Hypothermia.
- **EVACUATION**:
- Reassess all patients and initiate transports as appropriate.

EMT:

- Ensure completion of applicable EMR items above.

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV LR fluid bolus after addressing active bleeding.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- **MARCH**:
    - **Major hemorrhage control**.
    - **Airway management**: Consider Intubation.
    - **Respirations**: Consider Decompression Needle.
    - **Circulation**:
        - Consider IO LR fluid bolus after addressing active bleeding.
        - Consider TXA 1 g in 100 ml LR over 10 min if major injury AND signs of shock.
    - **Head/Hypothermia**: Treat life-threatening Head Trauma and prevent Hypothermia.
- **If it will not delay extraction**: Refer to Protocol 2-660 - Pain Control.

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Guideline 1-850-25 - Mass Casualty

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope:

License	Volunteer	Career	CMH
EMD	NA	Yes	NA
EMR	Yes	Yes	NA
EMT	Yes	Yes	Yes
AEMT	Yes	Yes	Yes
RN	Yes	Yes	Yes
Medic	Yes	Yes	Yes

Guideline:

A mass casualty incident is defined as an incident with six (6) or more patients or an incident that exceeds the resources available.

Purpose:

To allow resources to be attained and coordinated at a mass casualty incident.

Procedure:

I. EMS responders should follow National Incident Management System (NIMS) guidelines and coordinate with Incident Command (IC) or participate with Unified Command (UC).
II. Upon arrival and/or when determination that a mass casualty incident has occurred, EMS staff shall ensure potential receiving Emergency Rooms (ER) will be notified of potential patient surge.
III. If appropriate, medical officers may be established. However, transport of mass casualty patients to the appropriate facilities should be a priority.
    A. A medical command officer (sector chief) may be established to organize EMS response and interface with UC.
    B. A triage officer may be established to prioritize patient treatment, transport, transport methods, and destination.
    C. A transport officer may be established to facilitate and coordinate incoming and outgoing ground and air ambulances.
    D. In the absence of one or more established officers, the following tasks should be completed by on-scene EMS staff:
        1. Establish command, if none exists.
        2. Size up the scene noting hazards and number of patients.
        3. Ensure mitigation of hazards that might include power lines, hazardous materials, violent subjects, etc.
        4. Communicate appropriate sizup information to incoming units and destination facilities.

5. If appropriate, utilize SALT triage method to sort patients into those needing treatment and transport first.
6. If appropriate, establish casualty collection points.
7. Facilitate rapid flow of patients from injury site to destination facilities.
8. Coordinate incoming and outgoing ground and air ambulances.
9. Attempt to document patient information (number, severity, treatments, and destination).

IV. Ambulances sitting on the scene not being used as transport should be limited as much as possible. Consider loading ambulances with multiple patients with less emphasis on triaging on the scene to facilitate transporting more patient quickly to appropriate facilities. Patients waiting on transport by ambulance will likely find their own transport methods to destinations not capable to handle their needs.

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Part 2-000 - Protocols

Polk, Hickory, Cedar, & St Clair EMS Protocols

Contents:

- 2-792 - Seizure
- 2-814 - Spinal Cord Trauma
- 2-836 - Spinal Immobilization Clearance
- 2-858 - Supraventricular Tachycardia
- 2-880 - Suspected Stroke
  - 2-880-24 - STROKE Assessment Tool
  - 2-880-48 - STROKE EMS Information Form
  - 2-880-72 - STROKE Destination Matrix
- 2-902 - Trauma Arrest
- 2-924 - Universal Patient Care
  - 2-924-24 - Normal Vital Signs
  - 2-924-48 - Glasgow Coma Scale (GCS)
- 2-946 - Ventricular Tachycardia
- 2-968 - V-Fib / Pulseless V-Tach
- 2-990 - Vomiting

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Protocol 2-022 - Abdominal Pain

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- **Trauma cause**: Consider Oxygen 100%.
- **Medical cause**: Consider Oxygen if SpO2 is less than 88%.
- Apply Cardiac Monitor limb leads.
- **Identify possible causes**:
  - **Emesis present**: Inspect for blood.
  - **Female**: Determine last menstrual cycle.
- Monitor and treat for shock.
- **Evisceration**: Moist, sterile dressings.
- **Abdominal crush injury**: Immediate release and rapid transport.

EMT:

- Ensure completion of applicable EMR items above.
- Transport in position of comfort.

AEMT:

- Ensure completion of applicable EMT items above.
- Strongly assume abdominal discomfort may have cardiac causes. Consider 12-Lead ECG.
- Consider IV NS/LR in AC (left is preferred) with pigtail extension with 18 ga or greater.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO LR.
- Refer to Protocol 2-660 - Pain Control.
  - **Severe pain**: Consider Phenergan 12.5 mg IV/IO to potentiate narcotics.
- **Nausea**: Refer to Protocol 2-990 - Vomiting.
- **Bowel obstruction**: Consider stomach decompression.

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Protocol 2-044 - Airway: RSI

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Maintain airway and ventilate with 100% Oxygen for 5 minutes, if possible.
  - Attempt to maintain SpO2 above 90% at all times.
  - Consider nasal cannula at 15 LPM after sedation.
  - Avoid BVM prior to Intubation if SpO2 above 90% to reduce gastric inflation.
- Attach Cardiac Monitor.

EMT:

- Ensure completion of applicable EMR items above.
- Request a second ALS ambulance or supervisor, if possible.
- Assist ALS with Capnography.
- Ventilate rate and volume to maintain Capnography, if able:
  - Head Trauma: 35-45 mmHg
  - No Head Trauma: 35-40 mmHg
- **Review RSI CONTRAINDICATIONS**:
  - Unable to ventilate with BVM.
  - Severe facial or neck trauma.
  - Possibility of failure of backup airways.
  - Cricothyrotomy would be difficult or impossible.
  - Acute epiglottitis.
- Press "PRINT" on the Cardiac Monitor after Intubation and at transfer to ER or LZ to record Capnography waveform.
- Maintain warmth of the paralyzed patient.

AEMT:

- Ensure completion of applicable EMT items above.
- IV NS/LR.
  - Consider LR 250 ml bolus.
  - Consider second vascular access.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- RSI is indicated for all patients with a pulse needing Intubation.
- Consult EMT to ensure absence of contraindications.
- Consider IO NS/LR 250 ml bolus.
- Assign duties.

- **PREMEDICATE**:
  - **Seizing**: Refer to Protocol 2-792 - Seizure. Remember, paralysis will mask seizure activity.
Adult:	Pediatric:
▪ **Bradycardic**: Atropine 0.5 mg IV/IO. ▪ **Pain and/or Tachycardia**: Consider Fentanyl 3 mcg/kg IV/IO/IN (max 300 mcg). ▪ Click "calculate" to get dose.	▪ Consider Atropine 0.02 mg/kg IV/IO (min 0.1 mg) (max 0.5 mg). ▪ Click "calculate" to get dose. ▪ Consider Fentanyl 1-2 mcg/kg IV/IO/IN (max 150 mcg). ▪ Click "calculate" to get dose.

- **SEDATE**:
  - Ketamine 1-2 mg/kg IV/IO (60 second onset and 10 minute duration).
    - Click "calculate" to get dose.
    - OR Etomidate 0.3 mg/kg IV/IO (30 second onset and 3 minute duration).
      - Click "calculate" to get dose.

- **PARALIZE**: Consider delayed paralysis to allow pre-oxygenation.
  - **Delayed**: Rocuronium 0.1 mg/kg *[ideal body weight]* IV/IO (2 minute onset and 10 minute duration).
    - Click "calculate" to get dose.
    - Enter height and click "calculate" to get dose based on IDEAL weight.
  - **Rapid**: Rocuronium 1.2 mg/kg *[ideal body weight]* IV/IO (1 minute onset and 30 minute duration).
    - Click "calculate" to get dose.
    - Enter height and click "calculate" to get dose based on IDEAL weight.

- **INTUBATE**:
  - Elevate head of Cot.
  - Consider Suction.
  - Consider Bougie.
  - Click "calculate" to get equipment sizes.
  - Maximum of three attempts, then Supraglottic Airway should be used.
  - Confirm with Waveform Capnography.
  - Consider gastric tube.

- **CONTINUED SEDATION**:
  - Consider Ketamine 1 mg/kg IV/IO.
    - Click "calculate" to get dose.
Adult:	Pediatric:
▪ Consider Versed 2.5-5 mg IV/IO every 5 minutes as needed maintaining SBP greater than 100. ▪ Consider Fentanyl 5-100 mcg IV/IO/IN (max 300 mcg).	▪ **Over 12 years old**: Consider Versed same dose as adult. ▪ **2 months to 12 years old**: Consider Versed 0.15 mg/kg IV/IO. May repeat every 5 minutes. ▪ Click "calculate" to get dose. ▪ Consider Fentanyl 1-2 mcg/kg IV/IO/IN (max 150 mcg). ▪ Click "calculate" to get dose.

- **CONTINUED PARALYSIS**:
  - **Signs of patient movement AFTER fully sedated**: Rocuronium 0.1 mg/kg *ideal body wight* IV/IO.
    - Click "calculate" to get dose.
    - Enter height and click "calculate" to get dose based on IDEAL weight.

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Protocol 2-044-33 - Airway: RSI - Checklist

Polk, Hickory, Cedar, & St Clair EMS Protocols

Patient Preparation

- [ ] Preoxygenate
  - NRB
  - CPAP
  - BVM
- [ ] Hemodynamics
  - IV fluids
  - Vasopressors
- [ ] Positioning
  - Ear to sternal notch
  - Ramp / 30 degrees
  - Open collar
- [ ] Apneic oxygenation
  - NC 15 lpm
- [ ] Monitoring
  - SpO2 on opposite side of BP
  - ECG
  - BP q 5 min
  - EtCO2

Considerations

- [ ] Hemodynamics
  - Risk for hypotension
  - Shock severity
- [ ] Oxygenation
  - Risk for desaturation
  - Set SpO2 lower limit
- [ ] LEMON check
  - Look externally (feel cricothyroid membrane)
  - Evaluate 3-3-2 (3 fingers between upper and lower teeth, 3 fingers between mandible and neck, 2 fingers between mandible and thyroid)
  - Mallampati
  - Obstruction or Obese
  - Neck mobility
- [ ] pH
  - Metabolic considerations
- [ ] Verbalize airway plan
- [ ] Designate roles

Setup

- [ ] Laryngoscope(s)
- [ ] ETT(s) & syringe
- [ ] Bougie
- [ ] Stylette
- [ ] Suction(s)
- [ ] BVM with PEEP
- [ ] EtCO2
- [ ] Supraglottic
- [ ] Surgical airway
- [ ] Medications
  - Premedication
  - Induction
  - Paralytic
  - Post-intubation
  - Fluids
  - Pressors

Post-Intubation

- [ ] Confirm placement
  - Waveform EtCO2
  - Lung sounds
  - Epigastric sounds
- [ ] Secure ETT
- [ ] Analgesic
- [ ] Sedation
- [ ] Consider paralysis
- [ ] OG/NG tube
- [ ] Consider sit patient up
- [ ] Reassess
  - DOPE
  - Vitals
  - Pain

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Protocol 2-044-66 - Airway: RSI - Airway Equipment Sizes

Polk, Hickory, Cedar, & St Clair EMS Protocols

Refer to Equipment 8-936 - Ventilator for Tidal Volume based on patient sizes.

Age	Weight	Broslow / Handtevy	Laryngoscope	ET Size (age/4 + 4)	ET Depth (weight/2 + 8) or (age/2 + 13)	King Size	LMA Size	I-Gel Size
Preemie	2 kg	Grey	1	3.0	9.0 cm	0	1	1 (pink)
Newborn	4 kg	Grey	1	3.5	10.0 cm	1 (white)	1	1 (pink)
4 mo	6 kg	Pink	1	3.5	11.0 cm	1 (white)	1.5	1.5 (light blue)
6 mo	8 kg	Red	1	3.5	12.0 cm	1 (white)	1.5	1.5 (light blue)
1 yr	10 kg	Purple	1	4.0	13.0 cm	1 (white)	2	1.5 (light blue)
2 yr	12 kg	Yellow	2	4.5	14.0 cm	2 (green)	2	2 (grey)
3 yr	15 kg	White	2	5.0	14.5 cm	2 (green)	2	2 (grey)
4 yr	17 kg	White	2	5.0	15.0 cm	2 (green)	2.5	2 (grey)
5 yr	20 kg	Blue	2	5.0	15.5 cm	2 (green)	2.5	2 (grey)
6 yr	22 kg	Blue	2	5.5	16.0 cm	2 (green)	2.5	2 (grey)
7 yr	25 kg	Orange	2	6.0	16.5 cm	2.5 (orange)	2.5	2.5 (white)
8 yr	27 kg	Orange	2	6.0	17.0 cm	2.5 (orange)	2.5	2.5 (white)
9 yr	30 kg	Green	3	6.0	17.5 cm	2.5 (orange)	3	2.5 (white)
10 yr	35 kg	Green	3	6.5	18.0 cm	3 (yellow)	3	3 (yellow)
11 yr	40 kg	Green	3	7.0	18.5 cm	3 (yellow)	3	3 (yellow)
12 yr	50 kg	Green	3	7.0	19.0 cm	3	4	3

						(yellow)		(yellow)
13 yr	60 kg	Green	3	7.0	19.5 cm	4 (red)	4	4 (green)
Small Adult	75 kg	Light Blue	4	7.5	20.0-21.5 cm	4 (red)	5	4 (green)
Large Adult	100 kg	Light Blue	4	8.0	21.5-23.0 cm	5 (purple)	5	5 (orange)

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Protocol 2-066 - Allergic Reaction

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Identify and remove allergen, if possible.
- Oxygen to maintain SpO2 at 100%.
- Consider applying Cardiac Monitor limb leads.

EMT:

- Ensure completion of applicable EMR items above.
- Assist ALS with Capnography.
- **If ALS unavailable and dyspnea, dysphagia, or hypotension**:
  - Consider Epinephrine Auto-Injector.
  - ALS unit should be en route and/or immediate transport to the closest ER.

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV NS/LR.
Adult:	Pediatric:
Uncompensated shock: Epinephrine 1:1,000 0.3-0.5 mg IM/SQ. Repeat every 15 minutes as needed.	**Uncompensated shock**: Epinephrine 1:1,000 0.01 mg/kg IM/SQ (max 0.3/dose). Repeat every 15 minutes as needed. ▪ Click "calculate" to get dose.
- **Wheezing or obstructed ETCO2 waveform**: Refer to Protocol 2-770 - Respiratory Distress.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO LR.

Adult:	Pediatric:
◦ **Uncompensated shock**: Consider Epinephrine 1:10,000 0.1 mg IV/IO. Repeat every 15 minutes as needed. ◦ Consider Benadryl 25-50 mg IV/IO/IM. ◦ Consider Solu-Medrol 125 mg IV/IO/IM.	◦ Consider Benadryl 1 mg/kg IV/IO/IM (max 50 mg). ▪ Click "calculate" to get dose. ◦ Consider Solu-Medrol 1-2 mg/kg IV/IO/IM (max 125 mg). ▪ Click "calculate" to get dose.

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Protocol 2-110 - Behavioral

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Ensure scene safety and consider law enforcement for Physical Restraint, if necessary.
- Verbal de-escalation. Stay calm and calm the patient.
- Identify possibel causes. Obtain history of current event, crisis, Toxic Exposure, Drugs, ETOH, suicidal, or homicidal.
- Provide emotional support:
  - Help meet basic needs.
  - Provide simple, clear, and accurate information.
  - Listen with compassion.
  - Be friendly and calm.
  - Provide support and "presence."

EMT:

- Ensure completion of applicable EMR items above.
- Consider performing Blood Glucometry Check.
- **Patient is in any form of restraints**:
  - Vitals shall be documented at least every 15 minutes.
  - Mandatory ALS patient.

AEMT:

- Ensure completion of applicable EMT items above.

RN

Medic:

- Ensure completion of all applicable BLS items above.

- **Mild behavioral emergency (responds to verbal de-escalation)**:
  - Consider Versed 1 mg IV/IM.
Adult:	Pediatric:
▪ Consider Haldol 2-5 mg IV/IM.	▪ NA.
  - Transport in position of COMFORT.

- **Moderate to severe behavioral emergency (requires Restraint for crew and/or patient safety)**:
  Contact MEDICAL CONTROL for chemical or Physical Restraints. **Note**: If imminent risk of harm or danger, contact MEDICAL CONTROL after sedation.
  - **Adult:**
    - Physical Restraint:
      - Restraints include BOTH chemical AND Physical Restraints; not one or the other.
        - **Utilize the least restrictive option appropriate for the situation**: Manual Restraint or Four-Point Soft Restraint
        - **If handcuffed**: Law enforcement must be present throughout the entire transport.
    - Consider Versed 5 mg IV/IM/IN.
    - Consider Haldol 2-5 mg IV/IO.
    - Consider Haldol 10 mg IM.
    - Consider Benadryl 50 mg IV/IM.
    - Consider Ketamine 1-2 mg/kg IV/IO.
      - Click "calculate" to get dose.
      - **Greater than 65 years old**: Half the dose.
        - Click "calculate" to get dose.
    - Consider Ketamine 4-5 mg/kg IM.
      - Click "calculate" to get dose.
      - **Greater than 65 years old**: Half the dose.
        - Click "calculate" to get dose.
  - **Pediatric:**
    - Consider Versed 0.05-0.1 mg/kg IV.
      - Click "calculate" to get dose.
    - Consider Versed 0.1-0.15 mg/kg IM.
      - Click "calculate" to get dose.
    - Consider Versed 0.3 mg/kg IN.
      - Click "calculate" to get dose.
    - Consider Benadryl 1 mg/kg IV/IM.
      - Click "calculate" to get dose.
    - Consider Ketamine 1 mg/kg IV.
      - Click "calculate" to get dose.
    - Consider Ketamine 3 mg/kg IM.
      - Click "calculate" to get dose.
    - **If over 6 years old**: Consider Haldol 1-3 mg IM.
  - Monitor Waveform Capnography.
  - Transport in position of SAFETY.

- **Haldol administered**: Obtain a 12-Lead ECG, if able. Assess QTc.

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Protocol 2-132 - Bites and Envenomations

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Open and maintain the airway.
- **Systemic Anaphylactic Reaction**: Refer to Protocol 2-066 - Allergic Reaction.
- Remove clothin and jewelry from affected area.
- Consider applying Cardiac Monitor limb leads and/or combo pads.
- Mark leading edge of swelling and tenderness every 15 minutes.
- Immobilize (splint and compression wrap) and elevate extremity. Encourage patient not to move the extremity.
- **DO NOT attempt to capture the animal or insect**. If possible to do from a safe distance, take a photograph.

EMT:

- Ensure completion of applicable EMR items above.
- Consider assisting ALS with Capnography .
- **Snakebite with systemic signs or symptoms (i.e. hypotension, GI problems, bleeding disorder, neurological problems)**: Transport to Level I Trauma Center. Refer to Protocol 2-924 - Universal Patient Care for trauma destination matrix.

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV NS/LR.

RN

Medic:

- Ensure completion of all applicable BLS items above.
  Consider contacting MEDICAL CONTROL and/or POISON CONTROL at 888-268-4195.
- **Pain**: Refer to Protocol 2-660 - Pain Control.
- **Nausea**: Refer to Protocol 2-990 - Vomiting.

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Protocol 2-154 - Bradycardia

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Calm and reassure patient. Ensure patient does not exert themselves.
- Oxygen to maintain SpO2 between 94-99%.
- Apply Cardiac Monitor limb leads.
-

Adult:	Pediatric:
◦ **HR less than 60**: Apply Combo Pads anterior/posterior.	◦ **HR less than 80**: Apply Combo Pads anterior/posterior. ◦ **HR less than 50**: Ventilate, then initiate chest compressions if ventilation does not raise HR above 60.

EMT:

- Ensure completion of applicable EMR items above.
- Consider assisting ALS with Capnography .

AEMT:

- Ensure completion of applicable EMT items above.
- IV NS/LR.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Obtain 12-Lead ECG.
- Consider IO NS/LR. Do not delay for IV/IO if symptomatic.
  Contact MEDICAL CONTROL if Hypothermia patient.
- **Adult: Rate less than 50 and symptomatic:**
  - **Unstable**:
    - Consider Pacing
    - Consider Pain Control
  - **Stable**:
    - Atropine 1 mg IV/IO. Repeat every 3-5 min (max 3 mg).
  - Consider Epinephrine 1:10,000 0.02-0.2 mcg/kg/min titrated to MAP greater than 65.
    - Click "calculate" to get dose.
  - Consider Dopamine 5-20 mcg/kg/min IV/IO.
    - Click "calculate" to get dose.
  - Consider Epinephrine 1:10,000 2-10 mcg/min IV/IO:
    - Mix 1 mg in 100 ml NS/LR.
    - 2 mcg/min = 12 ml/hr.
    - 10 mcg/min = 60 ml/hr.
- **Pediatric: Rate less than 60 and symptomatic:**
  - Consider Epinephrine 1:10,000 0.01 mg/kg IV/IO repeat every 3-5 min.
    - Click "calculate" to get dose.
  - Consider Atropine 0.02 mg/kg IV/IO may repeat once (min 0.1 mg) (max 0.5 mg).
    - Click "calculate" to get dose.
  - **Consider Pacing at age appropriate rate**:
0-1 yr old:	2-3 yr old:	4-5 yr old:	6-9 yr old:	10-16 yr old:
135 BPM	130 BPM	105 BPM	90 BPM	80 BPM
    - Consider Pain Control
- Consider and correct treatable causes: Hypovolemia, hypoxia, hypo/hyperkalemia, hypothermia, hypoglycemia, acidosis, tension pneumothorax, toxins, thrombosis, and cardiac tamponade.

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Protocol 2-176 - Burns

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- **Dispatch a non-dedicated standby ambulance to the following incident types**:
  - 1st alarm commercial structure fire,
  - 2nd alarm residential structure fire,
  - 2nd alarm natural cover fire, OR
  - 2nd alarm vehicle fire.
  - **Alarm definitions**:
    - 1st alarm = Initial dispatch.
    - 2nd alarm = Mutual aid dispatched.

EMR:

- **Hazardous atmosphere standby**: Refer to Guideline 1-300 - Ambulance Operations.
- Stop the burning process.
- **Chemical burn**:
  - Decontaminate the patient according to Protocol 2-924 - Universal Patient Care.
    Contact MEDICAL CONTROL and/or POISON CONTROL (888-268-4195).
  - **Fluorine or Hydrofluoric Acid contact**: Calcium Chloride and KY Jelly Mixture applied to exposed contact area.
- Assist Ventilations as needed.
- Consider Oxygen 100%.
- Consider Saran Wrap (or similar) to prevent heat loss.
- Consider applying Cardiac Monitor limb leads.
- Remove all jewelry.
- Keep patient warm.

EMT:

- Ensure completion of applicable EMR items above.
- Consider assisting ALS with Capnography .
- Consider direct transport to a Burn Unit.

AEMT:

- Ensure completion of applicable EMT items above.
- Refer to Protocol 2-176-50 - Burns - Rule of Nines.
- Consider IV LR fluid bolus:
  - **Greater than 20% BSA of 2nd° & 3rd°**:
    - **Modified Parkland Formula (first 8 hours)**: (2 ml/kg) * (% BSA).
      - Click "calculate" to get dose.
      - Goal is for the calculated volume to be administered within 8 hours of the burn.
  - **Less than 20% BSA of 2nd° & 3rd°**:

Adult:	Pediatric:
▪ 500 ml/hr.	▪ **6-13 yr old**: 250 ml/hr. ▪ **0-6 yr old**: 125 ml/hr.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO LR.
- **Consider Protocol 2-044 - Airway: RSI if any of the following:**
  - Brassy cough,
  - Carbonaceous sputum,
  - Deep facial burns,
  - Hoarse voice, OR
  - Rhonchi / rales / crackles.
- **Smoke inhalation with altered mental status**: Refer to Protocol 2-352 - Exposure: Cyanide.
- **Pain**: Refer to Protocol 2-660 - Pain Control.

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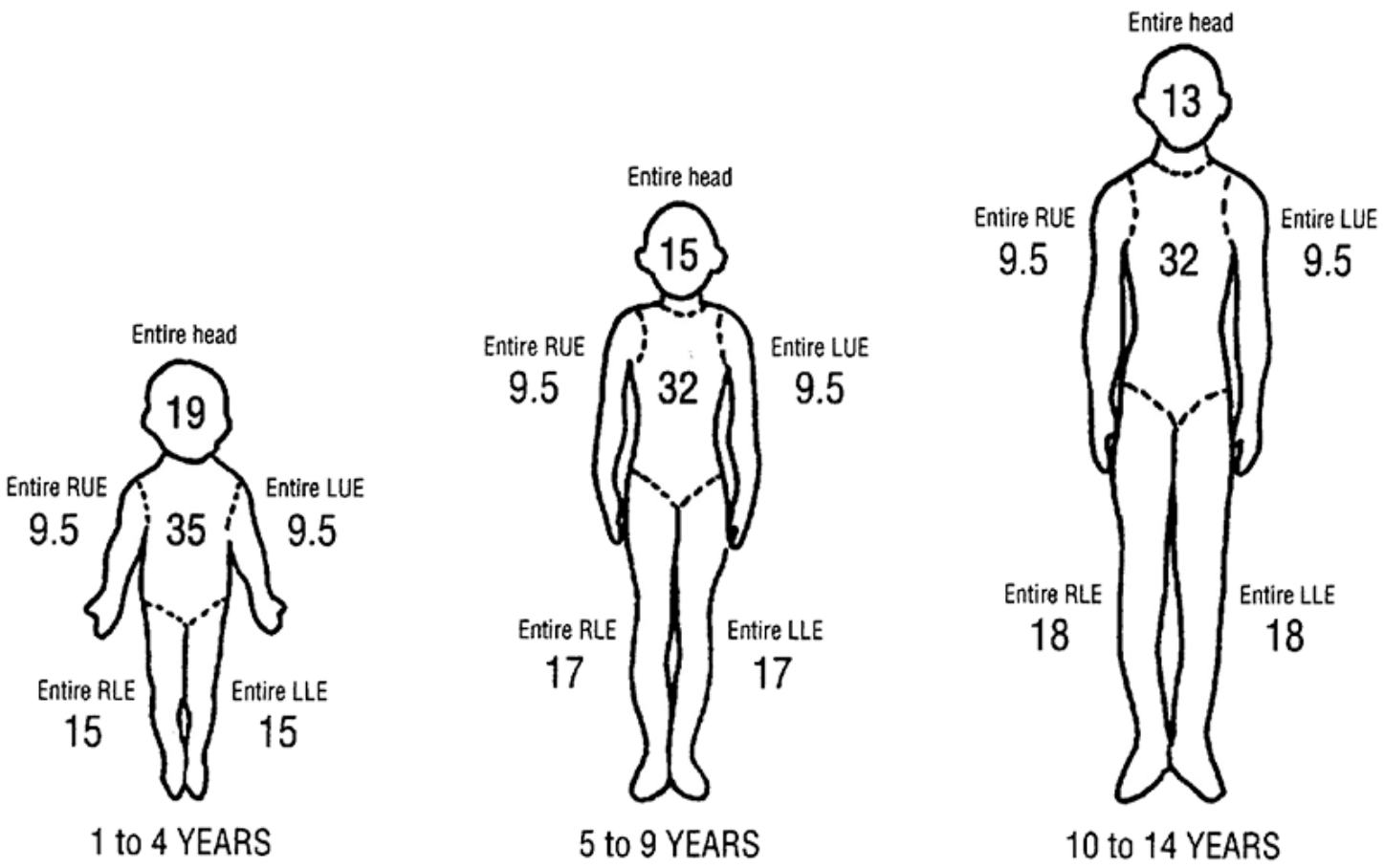
Protocol 2-176-50 - Burns - Rule of Nines

Polk, Hickory, Cedar, & St Clair EMS Protocols



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Protocol 2-198 - Cardiac Arrest

Polk, Hickory, Cedar, & St Clair EMS Protocols

COMMUNITY RESPONDER:

- Call or have someone call 9-1-1. Follow the instructions given by the dispatcher.
- Ensure the scene is safe and protect yourself from body substances.
- **If the patient is unresponsive and not breathing (or only gasping)**:
  - Get or have someone get the AED. Follow the instructions given by the AED once it arrives.
  - Lay the patient flat on his/her back on the ground and remove any pillows.
  - Place the heel of your hand on the breastbone and put your other hand on top of that hand.
  - Pump the chest hard and fast at a rate of about 110 compressions per minute. Compressions should be about 2 inches deep on an adult or 1/3 the depth of the chest on a child.
  - Rotate compressors (if possible) after 200 compressions (about 2 minutes).
  - Continue compressing at a rate of about 110 per minute until emergency responders relieve you.
- **As soon as the AED is available**:
  - Put the AED on the ground next to the patient's head on the side closest to you.
  - Undo or remove any clothing from his/her chest. If the chest is wet, dry it off.
  - Open the AED (if necessary) and press the "ON" button (if there is one).
  - Open the pads package and plug them into the machine.
  - Peel off the pad backing and apply them to his/her bare chest as shown on the pads.
  - Follow the AED's instructions.
- Refer to Equipment 8-018 - Automated External Defibrillator for AED accessibility, supplies, maintenance, and instructions after use

EMD:

- **MPDS Protocol 9 (Cardiac Arrest) - Cardiac arrest pathway**: Continuous compressions instructions provided to callers until responder arrival is the treatment preference for adult arrest with suspected cardiac origin
- **MPDS Protocol 9 (Cardiac Arrest) - Obvious death**: The following conditions indicate obvious death:
  - Decapitation,
  - Decomposition,
  - Putrefaction, OR
  - Incineration.
- **MPDS Protocol 9 (Cardiac Arrest) - Expected death**: The following conditions indicate expected death:
  - DNR order, OR
  - Hospice care.

EMR:

- Ensure completion of applicable Community Responder items above.
- Resuscitation should not be started if:
  - Decapitation,
  - Rigor mortis,
  - Tissue decomposition,
  - Extreme dependent lividity,
  - Obvious mortal injury,
  - Properly documented DNR order, OR
  - Properly documented advance directive.
- Request ALS support if not already en route.
- Confirm pulselessness and apnea.
- Consider AED or Cardiac Monitor in AED mode
- Perform Compressions.
  - Consider Chest Compressor.
  - Minimize interruptions.
  - Use CPR metronome set at 110/min, if available or count out loud.
  - Rotate human compressors every 2 minutes.
  - Continuous Compressions at 110/min with Oxygen 15 LPM via BVM or tube.

- Attach Cardiac Monitor combo pads and limb leads.
- Attempt to determine down-time, history, and DNR status.

  - The documented wishes of patients not wanting to be resuscitated shall be honored. DNR Documentation must contain both the patient's and physician's signature. If any doubt exists regarding the validity of the documentation, immediate resuscitation should be initiated.
  - All therapeutic care and vigorous support (IVs, medications, etc.) shall be given until the point of cardiac respiratory arrest.
  - If a valid DNR form is present, it may be honored without contacting medical control. If a valid DNR is presented after resuscitation has been initiated, it can also be honored without contacting medical control and resuscitation may be terminated.

EMT:

- Ensure completion of applicable EMR items above.
- Prepare IV/IO supplies and any requested medications from ALS.
- Consider insterting an NPA, King, or LMA airway.
- Attach Capnography even if only using BVM and no airway device.
- Check blood sugar.
- **Pregnant**: Oxygenation and airway should be prioritized. Fetal monitoring should not be done during resuscitation.
- Prepare for termination or transport.

AEMT:

- Ensure completion of applicable EMT items above.
- Start IV with LR fluid bolus.
- Consider Narcan 2 mg IN for possible overdose.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO with LR fluid bolus. IV is preferred and should be attempted first.
- Epinephrine IV/IO every 3-5 min or drip over 5 min.
Adult:	Pediatric:
1 mg.	0.01 mg/kg. ▪ Click "calculate" to get dose.
- **Pulseless Electrical Activity (PEA)**: Refer to Protocol 2-748 - Pulseless Electrical Activity.
- **Ventricular fibrillation, ventricular tachycardia, ventricular ectopy, or Torsades de Pointes**: Refer to Protocol 2-968 - V-Fib / Pulseless V-Tach.
- Consider Atropine 1 mg IV/IO for Bradycardia every 3-5 min.
- Consider Narcan 2 mg IV/IO for possible overdose.
- Consider Sodium Bicarbonate 1 mEq/kg IV/IO for acidosis.
  - Click "calculate" to get dose.
- Consider Pacing.
- Consider Dextrose 25 g IV/IO for Hypoglycemia.

  Dialysis Patient or Known Hyperkalemia: Consider contacting MEDICAL CONTROL for Calcium Chloride 1 g IV/IO.
- Consider Intubation without interruption of Compressions to facilitate continuous Compressions.
- Perform Physical Exam.
- **Consider and correct treatable causes**: Hypovolemia, hypoxia, hypo/hyperkalemia, hypothermia, hypoglycemia, acidosis, tension pneumothorax, toxins, thrombosis, and cardiac tamponade.
- Begin termination/transportation conversation. Consider full ACLS efforts for adult, non-trauma, non-poisoning arrest patients for 20 minutes prior to transport or termination. **The following scenarios should always be transported to the closest appropriate facility as soon as possible and field termination is not an option**:
  - Pediatrics, Drownings, Poisonings, Hypothermia, or pregnant with fetus greater than 24 weeks gestation.
  - If airway cannot be maintained and/or IV/IO cannot be accessed.
- When considering termination, RN/Paramedic should consult with the family. If family believes the patient would wish continued resuscitative efforts, resuscitation will continue and the patient shall be transported to closest appropriate facility.

  In the event there is no clear evidence to withhold CPR, however patient has a terminal condition and the patient's wishes have been conveyed by the family, contact MEDICAL CONTROL to withhold resuscitation.

  Field termination may be requested from MEDICAL CONTROL for victims of trauma with no signs of life regardless of how long ACLS efforts have been underway.
- After resuscitation has been terminated, contact local law enforcement and remain on scene until at least law enforcement or coroner arrival on the scene. If at healthcare facility, scene may be cleared prior to body retrieval.
- **Peri-arrest patient requiring comfort measures (Hospice, TPOPP, MOLST, or POLST)**: Refer to Protocol 2-198-01 - Peri-Arrest Comfort Measures.

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Protocol 2-198-50 - Cardiac Arrest - Peri-Arrest Comfort Measures

Polk, Hickory, Cedar, & St Clair EMS Protocols

RN

Medic:

- **Peri-arrest patient requiring comfort measures (Hospice, TPOPP, MOLST, or POLST)**: Use these guidelines for comfort interventions during transport or when providing interim comfort care on site. Medications contained within the patient's comfort kit may be used as indicated below. Do not give Narcan to comfort measures patients. If patient dies during transport, continue on to destination
  If additional comfort measure orders are specified on the form, contact MEDICAL CONTROL.
  - **Anxiety, agitated delirium, or hallucinations**:
    - Consider Ativan 0.5-2 mg PO.
    - Consider Haldol 2-5 mg PO.
    - Consider trial of Versed 1-3 mg IV/IN in increasing doses (max 3 mg). Watch for worsening of agitation.
  - **Dehydration**: Consider LR 10-20 ml/kg IV.
    - Click "calculate" to get dose.
  - **Fever**:
    - Consider Acetaminophen 325-650 mg PO/suppository.
    - Cool cloth to forehead, neck, and/or underarms.
  - **Nausea**:
    - Consider Zofran 4-8 mg PO/IV.
    - Consider Ativan 0.5-2 mg PO.
  - **Pain management**:
    - Consider Morphine 1-5 mg PO/IV every 10 minutes PRN.
    - Consider Fentanyl 25-50 mcg IV/IN every 10 minutes PRN.
  - **Work of breathing**: Tachypnea, accessory muscle use, or hypoxia with agitation (Low SpO2 alone does not indicate work of breathing).
    - Consider Oxygen NC max 10 LPM.
    - Alert patient with history of CPAP use: Consider CPAP. Do not BVM.
    - Consider Fentanyl 25 mcg with 2 ml NS Nebulized.
    - Consider Versed 2-5 mg IV.

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Protocol 2-220 - Chest Pain / Suspected Cardiac Event

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- **MPDS Aspirin Diagnostic**: EMDs are NOT authorized to suggest self-administration of Aspirin.

EMR:

- Calm and reassure patient. Ensure patient does not exert themselves.
- Oxygen to maintain SpO2 between 94-99%.
- Apply Cardiac Monitor limb leads.
- **STEMI** verified by ALS or physician:
  - Consider Combo Pads anterior / posterior
  - Remove clothing and place patient in gown.

EMT:

- Ensure completion of applicable EMR items above.
- Obtain 12-Lead ECG within 10 minutes of patient contact.
- If ALS is unavailable, transmit to closest ER or CMH ER and contact ER by phone to obtain interpretation.
Adult:	Pediatric:
No trauma: Aspirin 324 mg (4 chewable tablets - 81 mg each) within 5 minutes of patient contact. Unless contraindicated, healthcare-provider Aspirin administration must be completed and documented in ePCR for all cardiac chest pain patients. **Flail chest**: Consider assisting respirations with positive pressure BVM or assisting ALS with CPAP.	NA.
- Consider assisting ALS with Capnography.
- **STEMI** verified by ALS or physician:
  - Transport according to Protocol 2-220-50 - STEMI Destination Matrix.

AEMT:

- Ensure completion of applicable EMT items above.
- IV NS/LR in AC (left is preferred) with pigtail extension with 18 ga or greater. Consider second 18 ga IV in right AC.
Adult:	Pediatric:
No trauma and SBP greater than 100: Nitroglycerin 0.4 mg SL (1 spray or 1 tablet). Every 5 min until no Pain or SBP less than 90. Ensure IV access prior to Nitroglycerin administration, if possible. Contraindicated if phosphodiesterase inhibitor (i.e., Viagra) within 48 hours.	NA.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO NS/LR.
- Interpret 12-Lead ECG within 10 minutes of patient contact. Refer to Protocol 8-108-01 - ECG Interpretation Guide.
    - 15-Lead ECG indicated when: normal ECG, inferior MI, ST depression in V-leads.
    - **Cath Lab Activation**:
        - Contact ER to activate Cath Lab as early as possible via encrypted radio (CMH ER) or CMH ER Charge Nurse at 417-328-6923.
        - Transmit ECG to receiving facility ER (if possible).
- Consider serial 12-Lead ECGs.
- **Pulmonary edema**: Refer to Protocol 2-726 - Pulmonary Edema.
Adult:	**Pediatric:**
No trauma: **Right-sided MI (ST elevation in V4R)**: LR 1-2 L followed by Nitroglycerin 5+ mcg/min IV/IO. **SBP less than 100**: Consider Nitroglycerin 10+ mcg/min IV/IO titrated to blood pressure and Pain. **Continued discomfort or Pain**: Consider Morphine 2 mg IV/IO (max 10 mg). Maintain SBP greater than 100. Consider Fentanyl 50-100 mcg every 5-20 min (max 300 mcg) IV/IO/IN. **Over 65 yr old**: 0.5-2 mcg/kg. Click "calculate" to get dose. Consider contacting MEDICAL CONTROL for Heparin 4,000 u.	NA.
- **Nausea or vomiting**: Refer to Protocol 2-990 - Vomiting.

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Protocol 2-220-50 - Chest Pain - STEMI Destination Matrix

Polk, Hickory, Cedar, & St Clair EMS Protocols

This matrix was developed using geographical analysis of designated facilities and historical ambulance transport statistics. It also follows Missouri regulations found in 19 CSR 30-40.790 (Transport protocol for trauma, stroke, and STEMI patients).

- These are guidelines only. Scene or patient conditions may influence an alternate destination determination.
- Patients have the right to refuse transport to the recommended destination. If the patient refuses recommended destination, document "transport / refused care" and have patient sign refusal.
- When initial transport from the scene would be prolonged, the patient may be transported to the nearest appropriate facility.

Refer to ECG Interpretation Guide.

Consider transporting to the closest STEMI center for any one the following criteria:

- ST elevation of one or more mm (1 mm) in two leads in the following areas:
  - Anterior (V3 and V4),
  - Inferior (II, III, and/or aVF),
  - Lateral Left (I, aVL, V5, and/or V6), OR
  - Septal (V1 and V2).
- ST elevation of ½ or more mm (0.5 mm) in the following areas:
  - Lateral Right (V4R), OR
  - Posterior (V8 and V9)
- New onset LBBB,
- Sgarbossa criteria,
- DeWinters syndrome, OR
- Wellens syndrome.

Location	Destination	STEMI Designation	Notes
Bolivar	Citizens Memorial	Level II	**If cardiogenic shock**: Transport to Level I STEMI center
Osage Beach	Lake Regional	Level II	

Consider transporting to the closest Level I STEMI center for any one the following criteria:

- Any criteria above, and/or
- Any of the following:
  - Cardiogenic shock OR
  - Three Vessel Disease.

Location	Destination	Trauma Designation	Notes
Aircraft	Aircraft crew determination	NA	**If over 45 min drive time**: Utilize aircraft
Springfield	Cox South	Level I	
	Mercy	Level I	
Kansas City	Research	Level I	
	St. Luke's	Level I	

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Protocol 2-242 - Childbirth / Labor

Polk, Hickory, Cedar, & St Clair EMS Protocols

In general, this protocol's scope covers management of delivering a baby up to the point of cutting the umbilical cord. After cutting the cord:

- Care for mom following appropriate protocol(s) (i.e., Protocol 2-462 - Gynecologic Emergencies).
- Care for baby/babies following Protocol 2-616 - Newly Born.

EMD:

- **MPDS Protocol 24 (Pregnancy) - High risk complications**: The following conditions indicate a high-risk pregnancy or childbirth.
    - Premature birth, multiple birth, bleeding disorder, placenta abruption, placenta previa, breech, prolapsed cord, OR unknown/ignored pregnancy.

EMR:

- Consider Oxygen if SpO2 less than 88%.
- Inspect for active bleeding/crowning. Determine amount of blood loss.
- Consider applying Cardiac Monitor limb leads.
- **Crowning**: Stop transport and DELIVER infant. Both crew members should be available during delivery.
    - Consider cleaning vaginal area prior to birth.
    - **Prolapsed cord**:
        - Place mother on hands and knees.
        - Do not handle cord. Cover it with moist dressing.
        - Protect cord from compression with fingers.
        - Rapid transport to nearest hospital with OB department.
    - **Breech**: Deliver as best you can (see below).
    - **No complications**:
        - Provide peritoneal pressure during delivery to prevent tearing.
        - Check for cord around neck as soon as head is delivered and slip it over the head if found.
        - Guide head down to facilitate delivery of anterior shoulder and then up to facilitate delivery of posterior shoulder.
        - Only Suction airway if infant is in distress.
        - Dry, warm, and stimulate. Do not routinely Suction.
        - Place infant skin-to-skin with mother while she breastfeeds, if possible.
        - Clamp and cut cord halfway between mother and infant after 1-3 min. Only clamp cord if full-term gestation baby.
            - **If resuscitation is needed**: Clamp and cut cord as soon as possible.
        - Expect placenta within 5-15 min and transport it with patients.
        - Perform fundal massage.
- **Once delivered**: Refer to Protocol 2-616 - Newly Born

EMT:

- Ensure completion of applicable EMR items above.
- **NOT crowning**:
  - Consider orthostatic vital signs.
  - Consider transport in left lateral recumbent position to reduce risk of Vena Cava compression.

AEMT:

- Ensure completion of applicable EMT items above.
- IV LR 500-1,000 ml bolus.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO LR titrated to blood pressure.
- **Pain**: Consider avoiding narcartic administration.

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Protocol 2-264 - Diving Emergencies

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- FUTURE content here.

EMR:

- FUTURE content here.

EMT:

- Ensure completion of applicable EMR items above.
- FUTURE content here.

AEMT:

- Ensure completion of applicable EMT items above.
- FUTURE content here.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- FUTURE content here.

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Protocol 2-286 - Drowning / Near Drowning

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- **MPDS Protocol 14 (Drowning) - Obvious death**: Submersion time does not indicate obvious death.

EMR:

- Remove from water.
- Open and maintain airway. Be prepared to Suction.
- **Pulseless**: Refer to Protocol 2-198 - Cardiac Arrest.
- **Pulmonary edema suspected**: Consider assiting ventilation with BVM.
- Dry and warm the patient.
- Obtain core body Temperature, if able.
- Consider applying Cardiac Monitor limb leads and/or combo pads.
- Attempt to determine down-time and history.

EMT:

- Ensure completion of applicable EMR items above.
Adult:	Pediatric:
◦ Consider assisting ALS with CPAP.	◦ NA.
- Consider assisting ALS with Capnography.

AEMT:

- Ensure completion of applicable EMT items above.
- IV warm NS/LR.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO warm NS/LR.
- **Pulseless**:
  - **Shockable ryhthm**: Refer to Protocol 2-968 - V-Fib / Pulseless V-Tach, however, only shock once.
  - **Core Temperature greater than 86° F**: Remember patients require longer intervals between drug administrations due to slower absorption and metabolism.
  - **Core Temperature less than 86° F**: Compressions only.
- Consider Protocol 2-044 - Airway: RSI.
- Treat cardiac dysrhythmias per specific protocol.

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Protocol 2-330 - Exposure: Biological / Infectious

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- **Situations where a biological or infectious agent may be present**, ask the following questions and advise responding units of the responses:
  - Has anyone in the home had flu-like symptoms, breathing problems, coughing, headache, fever, or other illness in the last 14 days?
  - Has anyone in the home traveled outside of the state in the last 14 days?
  - Has anyone in the home been evaluated for the illness?
  - Is anyone in the home currently under a quarantine?

EMR:

- Limit contact to only essential personel.
- **Situations where a biological or infectious agent may be present**, re-evaluate persons at the scene with the questions listed in the EMD section above.
- Perform as many of the assessments and treatments in well ventilated areas as possible.
- Maintain minimum distance of six (6) feet from all possibly infected patients.
- **If close contact is required**, responders should wear appropriate PPE (in order of most important to least):
  - Full-face respirator with N95 or equivalent cartridge,
  - N95 (minimum of a surgical mask),
  - Face shield (minimum of eye protection),
  - Gloves, and
  - Fluid-impermeable suit.
- **Large outbreak or pandemic scenario**:
  - If you are within six (6) feet of another person, wear a surgical mask.
  - If a patient is present, regardless of social distancing, place a sugical mask on the patient and all responders should wear surgical masks and eye protection.
  - If the patient is possibly infected, symptomatic, or high-risk procedure is being preformed, all responders should wear N95 masks and eye protection (full-face respirators is preferred).
  - If entering a facility with at-risk patients, limit responders to absolute minimum, and wear N95 and eye protection. Full-face respirators should not be worn due to exhalation valves are not filtered.
- **Fever or respiratory distress**:
  - Place the patient on a NRB at 15 LPM Oxygen and
  - Place a surgical mask over the exhaust ports of the mask.
- **Unresponsive or respiratory arrest**:
  - **If airway management and ventilation is mandatory**, insert an OPA and place a NRB over it with Oxygen 15 LPM. Limit or eliminate (preferred to eliminate) BVM and **strongly** recommended to NOT use the facemask portion of the BVM.
  - **If CPR is needed**, only provide chest compressions with the NRB and surgical mask described above.
- Before and after all patient contact, fully disinfect and clean equipment, uniform, PPE, and your hands.

EMT:

- Ensure completion of applicable EMR items above.
- **Unresponsive or respiratory arrest**:
  - **If airway management and ventilation is mandatory**, insert an NPA or supraglottic airway (NPA is preferred) with inline exhalation filter to bag. Limit or eliminate (preferred to eliminate) BVM and **strongly** recommended to NOT use the facemask portion of the BVM.
  - Place high-volume Suction in or near the patient's mouth.
    - Note: Ensure suction exhaust is not blowing contamination in the vacinity of responders by bystanders. CMH ambulance on-board suction exhaust is discharged under the vehicle.
- **During transport**:
  - Driver should remove gown and gloves, but retain respiratory protection.
  - Close pass-through between driver and passenger compartment.
  - Keep all windows down in the ambulance.
  - Limit occupants to minimum required.
  - All personnel in the back should continue to wear full PPE.

AEMT:

- Ensure completion of applicable EMT items above.
- **Fever or respiratory distress**:
  - Nebulizer treatements are STRONGLY discouraged. **Consider alternatives**:
    - Meter-dosed inhaler,
    - Epinephrine 1:1,000 IM in severe patients under 50 yrs old and no cardiac history, OR

Adult	Pediatric
0.3 mg	0.01 mg/kg (max 0.25 mg) ▪ Click "calculate" to get dose.

    - Epinephrine 1:100,000 (push-dose) IV every 10 min in severe patients under 50 yrs old and no cardiac history.

Adult	Pediatric
10 mcg	0.1 mcg/kg ▪ Click "calculate" to get dose.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- **Fever or respiratory distress**:
  - Do NOT perform CPAP or BiPAP.
- **Unresponsive or respiratory arrest**:
  - Endotracheal intubation is STRONGLY discouraged. **If required**, use a cuffed tube, filtered exhalation, induce deep paralysis, avoid nasotracheal, and stop CPR during intubation attempt.
- Notify receiving hospital as soon as possible to allow for preparation for your arrival.

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Protocol 2-352 - Exposure: Cyanide

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- Dispatch a non-dedicated standby ambulance to all hazmat releases where emergency response is required by other agencies.

EMR:

- Consider hazmat and DECON. Refer to Protocol 2-924 - Universal Patient Care for decontamination protocols.
- Identify possible causes and substance(s) involved.
- Consider Oxygen 100%.
- Consider applying Cardiac Monitor limb leads.

EMT:

- Ensure completion of applicable EMR items above.
- Perform Blood Sugar Check.
- Consider assisting ALS with Capnography.

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV NS/LR.

RN

Medic:

- Ensure completion of all applicable BLS items above.
  Contact POISON CONTROL at 888-268-4195.
- Consider IO NS/LR.
- Consider Protocol 2-044 - Airway: RSI.

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Protocol 2-374 - Exposure: Nerve Agents

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- Dispatch a non-dedicated standby ambulance to all hazmat releases where emergency response is required by other agencies.

EMR:

- Consider hazmat and DECON. Refer to Protocol 2-924 - Universal Patient Care for decontamination protocols.
- Identify possible causes and substance(s) involved.
- Consider Oxygen 100%.
    - **Paraquat poisoning**: Only administer Oxygen if SpO2 is less than 88%.
- Consider applying Cardiac Monitor limb leads.

EMT:

- Ensure completion of applicable EMR items above.
- Perform Blood Sugar Check.
- Consider assisting ALS with Capnography.

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV NS/LR.

RN

Medic:

- Ensure completion of all applicable BLS items above.
  Contact POISON CONTROL at 888-268-4195.
- Consider IO NS/LR.
- Consider Protocol 2-044 - Airway: RSI.
- Consider Atropine repeated until dry secretions. Likely to exceed 20 mg and may be as much as 2,000 mg.
Adult:	Pediatric:
○ 1-2+ mg IV/IO. ○ **If intubation needed**: 6 mg IV/IO.	○ 0.02-0.05 mg/kg IV/IO ▪ Click "calculate" to get dose.
- **Seizing**: Refer to Protocol 2-792 - Seizure.

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Protocol 2-396 - Extremity Trauma

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Consider SMR.
- Consider Oxygen 100%.
- **Extremity crush injury**: Do not release until ALS direction.
- Elevate injured extremity.
- Assess distal neurovascular status.
- Consider cold pack.
- Consider Splinting.
- Consider applying Cardiac Monitor limb leads.

EMT:

- Ensure completion of applicable EMR items above.
- Consider Pelvic Binder.

AEMT:

- Ensure completion of applicable EMT items above.
- **Extremity crush injury** (suspected compartment and/or crush syndrome if extremity pinned for 15 minutes to 6 hours depending on weight and other factors):
  - IV NS (NOT LR). Two large bore IVs wide open.
- **No crush injury**: Consider IV LR titrated to SBP greater than 100 after all active bleeding has been addressed.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- **Extremity crush injury**:
  - Consider IO NS (NOT LR). Two large bore vascular access points wide open.

Contact MEDICAL CONTROL:

- Consider Tourniquet.
- Consider NS 2,000 ml IV/IO prior to release, then 500 ml/hr after.
- Consider Sodium Bicarbonate 1 mEq/kg (max 100 mEq) IV/IO prior to release, then add 100 mEq to 1,000 ml NS and drip at 100 ml/hr.
  - Click "calculate" to get dose.
- Consider Calcium Chloride 1 g IV/IO over 10-15 minutes. Do not mix with Sodium Bicarbonate.
- Consider Albuterol 10-20 mg Neb.
- Consider Dextrose IV/IO.

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Protocol 2-418 - Eye Trauma

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Consider Oxygen if SpO2 less than 88%.
- Stabilize impaled objects as required.
- **Trauma**:
  - Cover injured eye with domed or cupped cover.
  - Do not apply pressure to eye.
- **Foreign substance without penetrating injury**: Flush eye with at least 1,000 ml LR over 20 minutes.

EMT:

- Ensure completion of applicable EMR items above.

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- **Foreign substance**:
  - Consider Tetracaine 1-2 drops in affected eye.
  - **Non-penetrating injury**: Consider Morgan Lens and flushing according to EMR section above.

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Protocol 2-440 - Fever / Sepsis

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Consider Oxygen to maintain SpO2 above 88%.
- Consider treating for shock.
- **Fever greater than 102° F**: Begin COOLING.
- **Assess for SEPSIS**:
  - **Adult**: Suspected infection AND two or more of the following:
    - Altered mental status,
    - Hypotension (SBP less than 100), OR
    - Tachypnea (respiratory rate greater than 22).
  - **Pediatric**: Suspected infection AND BOTH of the following:
    - One of the following:
      - Temperature greater than 101.3° F OR
      - Temperature less than than 96.8° F
    - One of the following:
      - Bradycardia for age OR
      - Tachycardia for age OR
      - Tachypnea for age
- Consider applying cardiac monitor limb leads.

EMT:

- Ensure completion of applicable EMR items above.
- Assist ALS with Capnography.
- Perform Blood Sugar Check.
  - **Blood sugar less than 60 mg/dl**: Refer to Protocol 2-572 - Hypoglycemia.

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV LR in AC (left is preferred) with pigtail extension with 18 ga or greater. Refer to Protocol 2-583 - Hypotension / Shock for LR dose.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO LR. Refer to Protocol 2-583 - Hypotension / Shock for LR dose.
- **Meets SEPSIS criteria**:
  - **If SBP less than 90 or MAP less than 70 after fluid bolus**:
    - Notify Emergency Room of incoming SEPTIC SHOCK patient.
    - Attempt to initiate two large-bore IVs.
    - Refer to Protocol 2-583 - Hypotension / Shock.
  - Consider Dextrose or Glucose administration according to Protocol 2-572 - Hypoglycemia to meet a target blood sugar level of 180 mg/dl.
  - Target scene time of 10 minutes.
  - Notify Emergency Room of incoming SEPTIC patient.
- **Fever greater than 102° F**:
Adult:	Pediatric:
▪ **Acetaminophen NOT given within 4 hours**: Consider Acetaminophen 325-650 mg PO. ▪ **Acetaminophen giving within 4 hours**: Consider Ibuprofen 200-400 mg PO.	▪ **Acetaminophen NOT given within 4 hours**: Consider Acetaminophen Elixer 15 mg/kg PO. ▪ Click "calculate" to get dose. ▪ **Acetaminophen giving within 4 hours**: Consider Ibuprofen Elixer 10 mg/kg PO. ▪ Click "calculate" to get dose.

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Protocol 2-451 - General Trauma Management

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- **Hemorrhage**:
  - Consider direct pressure.
  - Consider Oxygen 100%.
  - Consider Hemostatic Agent.
  - Consider bandage.
  - **Epistaxis**: Squeeze nose for 10-15 min continuously.
  - **Post-partum**: Refer to Protocol 2-462 - Gynecologic Emergencies.
- **Chest trauma**:
  - Consider Oxygen 100%.
  - Consider occlusive dressing to open wounds.
  - **Chest crush injury**: Immediate release and rapid transport.
- Consider SMR
- Maintain patient Temperature between 91-99 °F. Consider active re-warming.
- Consider splint.
- Consider stabilizing impaled object.
- **Superficial penetration**: Small penetrating objects such as Taser probes and fish hooks may be removed on the scene...
  - If all of the following apply:
    - The object is embedded superficially below the nipple line (not the genital area),
    - Cooperative patient,
    - Little to no pain,
    - Isolated injury, AND
    - Not grossly contaminated.
  - To remove:
    - **Taser probe**: Stabilize skin and remove by hand with a single, quick motion.
    - **Fish hook**: Wrap or cut off sharp points and remove without causing further injury.
    - Wipe wound(s) with antiseptic wipe and apply a dressing.
    - Instruct patient to follow up with their primary physician or public health agency for tetanus vaccination and infection monitoring.
  - Cardiac monitoring after Taser deployment is only required if the patient has an ALOC or cardiac symptoms.
- Refer to specific trauma protocols as appropriate:
  - Protocol 2-286 - Drowning / Near Drowning
  - Protocol 2-396 - Extremity Trauma
  - Protocol 2-418 - Eye Trauma
  - Protocol 2-484 - Head Trauma
  - Protocol 2-814 - Spinal Cord Trauma
  - Protocol 2-836 - Spinal Immobilization Clearance
  - Protocol 2-902 - Trauma Arrest

EMT:

- Ensure completion of applicable EMR items above.
- **Hemorrhage**:
  - **Upper extremity hemorrhage**: Consider Tourniquet on humerus until occlusion of distal pulse.
  - **Lower extremity hemorrhage**: Consider two Tourniquets side-by-side on femur until occlusion of distal pulse.
- Ensure receiving facility/staff are aware if the patient is on a blood thinner. Common blood thinners include:

▪ Aggrastat (Tirofiban) ▪ Apixaban (Eliquis) ▪ Arixtra (Fondaparinux) ▪ Aspirin (if greater than 81 mg per day) ▪ Brilinta (Ticagrelor) ▪ Cilostazol (Pletal) ▪ Clopidogrel (Plavix) ▪ Coumadin (Warfarin, Jantoven) ▪ Dabigatran (Pradaxa) ▪ Dalteparin (Fragmin) ▪ Dipyridamole (Persantine) ▪ Edoxaban (Savaysa)	▪ Effient (Prasugrel) ▪ Eliquis (Apixaban) ▪ Enoxaparin (Lovenox) ▪ Eptifibatide (Integrilin) ▪ Fondaparinux (Arixtra) ▪ Fragmin (Dalteparin) ▪ Heparin (Innohep) ▪ Innohep (Heparin) ▪ Integrilin (Eptifibatide) ▪ Jantoven (Warfarin, Coumadin) ▪ Lovenox (Enoxaparin) ▪ Persantine (Dipyridamole)	▪ Plavix (Clopidogrel) ▪ Pletal (Cilostazol) ▪ Pradaxa (Dabigatran) ▪ Prasugrel (Effient) ▪ Rivaroxaban (Xarelto) ▪ Savaysa (Edoxaban) ▪ Ticagrelor (Brilinta) ▪ Tirofiban (Aggrastat) ▪ Vorapaxar (Zontivity) ▪ Warfarin (Coumadin, Jantoven) ▪ Xarelto (Rivaroxaban) ▪ Zontivity (Vorapaxar)

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV LR bolus to maintain SBP above 100.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- **Chest trauma with dyspnea**: Suspect tension pneumothorax. Consider Decompression Needle.
  - 5th intercostal space, anterior axillary line OR
  - 2nd intercostal space, mid-clavicular line.
-

Adult:	Pediatric:
◦ **Majory injury or hemorrhage with signs of shock**: Consider TXA 1 g in 100 ml NS/LR over 10 min.	◦ Utilize Broselow tape for equipment and drug dosages.

- Consider IO LR bolus to maintain MAP above 65 or SBP above 100 .
- **Possible fracture**: Consider Protocol 2-660 - Pain Control.
- **Epistaxis that does not resolve with 15 minutes of pressure**: Consider Neo-Synephrine 2 sprays in each nare, then continued pinching of the nose for an additional 15 minutes.

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Protocol 2-451-50 - General Trauma Management - TRAUMA Destination Matrix

Polk, Hickory, Cedar, & St Clair EMS Protocols

This matrix was developed using geographical analysis of designated facilities and historical ambulance transport statistics. It also follows Missouri regulations found in 19 CSR 30-40.790 (Transport protocol for trauma, stroke, and STEMI patients).

- These are guidelines only. Scene or patient conditions may influence an alternate destination determination.
- Patients have the right to refuse transport to the recommended destination. If the patient refuses recommended destination, document "transport / refused care" and have patient sign refusal.
- When initial transport from the scene would be prolonged, the patient may be transported to the nearest appropriate facility.

Consider transporting to the closest TRAUMA center for any one the following criteria:

- GCS less than 14,
- Shock,
- Respiratory distress, or
- Severe injury.

Location	Destination	Trauma Designation	Notes
Bolivar	Citizens Memorial	Level III	**If possible head trauma**: Transport to Level I trauma center
Harrisonville	Cass Regional	Level III	
Osage Beach	Lake Regional	Level III	

Consider transporting to the closest Level I TRAUMA center for any one the following criteria:

- Any criteria above, and/or
- Possible head trauma.

Location	Destination	Trauma Designation	Notes
Aircraft	Aircraft crew determination	NA	**If over 45 min drive time**: Utilize aircraft
Springfield	Cox South	Level I	
	Mercy	Level I	
Kansas City	Research	Level I	
	St. Luke's	Level I	
	Truman	Level I	

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Protocol 2-462 - Gynecologic Emergencies

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Inspect for active bleeding / crowning.
- **Vaginal bleeding**: Consider Oxygen 100%.
- Determine amount of blood loss.
- Consider applying Cardiac Monitor limb leads.
- Consider treating for shock.
- **Post-partum hemorrhage**:
  - Massage the fundus.
  - Have mother breastfeed.
- Consider orthostatic vital signs.
- Consider transport in left lateral recumbent position to reduce risk of Vena Cava compression.

EMT:

- Ensure completion of applicable EMR items above.

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV LR titrated to SBP above 100.
- **Post-partum hemorrhage**: Rapidly infuse IV fluids.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO LR.
- **Post-partum hemorrhage**:
  Consider contacting MEDICAL CONTROL for Oxytocin 10-20 u in 1,000 ml LR. Run wide open.
- Consider Protocol 2-924 - Universal Patient Care for TXA.

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Protocol 2-484 - Head Trauma

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Consider SMR. C-collar is contraindicated with penetrating neck trauma.
- Assist Ventilations as needed.
- Consider Oxygen 100%.
- Consider applying Cardiac Monitor limb leads.
- **Head crush injury**: Immediate release and rapid transport.
- Maintain body temperature between 91° and 99° F.
- Elevate head of Cot.
- **Avulsed tooth**: Do not touch root. Place in NS.

EMT:

- Ensure completion of applicable EMR items above.
- Consider assisting ALS with Capnography.
- **Severe head injury with Cushing's Triad**: Moderate hyperventilation to target EtCO2 of 30-35.
- **If destination facility is on CT divert**: Bypass that facility and transport to next closest appropriate facility taking into consideration the patient's wishes.

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV LR 20 ml/kg (max 40 ml/kg or 2,000 ml) titrated to maintain SBP according to age.
  - Click "calculate" to get dose.
  - Refer to Protocol 2-924 - Universal Patient Care and do not exceed the lower range of the SBP indicated in the Normal Vital Signs table.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO LR.
- **GCS less than 8 OR Cushing's Triad**: Consider Protocol 2-044 - Airway: RSI.
-

Adult	Pediatric
◦ Consider Fentanyl 50-100 mcg every 5-20 minutes (max 300 mcg) IV/IO/IN. ▪ **Over 65 years old**: 0.5-2 mcg/kg. ▪ Click "calculate" to get dose. ◦ **Nausea**: Consider Zofran 4 mg (max 8 mg) IV/IO/IN/IM.	◦ **Less than 3 years old**: Atropine 0.02 mg/kg (min 0.1 mg) IV/IO. ▪ Click "calculate" to get dose. ◦ Consider Fentanyl 1-2 mcg/kg (max 150 mcg) IV/IO/IN. May repeat. ▪ Click "calculate" to get dose. Consider contacting MEDICAL CONTROL.

Cushing's Triad:

- Abnormal breathing AND
- Bradycardia AND
- Hypertension.

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Protocol 2-506 - Hyperglycemia

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Identify possible causes.
- Consider Oxygen if SpO2 less than 88%.
- Consider applying Cardiac Monitor limb leads.

EMT:

- Ensure completion of applicable EMR items above.
- Perform Blood Sugar Check. Refer to Equipment 8-324 - Glucometer for blood sugar critical levels.

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV NS/LR.
- **Blood sugar greater than 250 mg/dl AND symptomatic**:
  - **Adult:**
    - LR 1,000 ml IV.
  - **Pediatric:**
    - LR 10 ml/kg IV. May repeat up to 40 ml/kg after reassessment.
      - Click "calculate" to get dose.

RN

Medic:

- Ensure completion of all applicable BLS items above.

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Protocol 2-528 - Hypertension

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Calm and reassure the patient.
- Identify possible causes.
- Consider Oxygen if SpO2 less than 88%.
- Apply Cardiac Monitor limb leads.
- Obtain and compare blood pressures in both arms.
- Dim lights. Avoid loud noises and rough transport.
- Transport with head slightly elevated.
- **Epistaxis**: Squeeze nose for 10-15 minutes continuously.

EMT:

- Ensure completion of applicable EMR items above.
- **Pregnant**: Consider transport in left lateral recumbent position to reduce risk of Vena Cava compression.
- **If destination hospital is on CT divert and patient is symptomatic**: Transport to the next closest appropriate facility with a CT machine and taking into consideration the patient's wishes.

AEMT:

- Ensure completion of applicable EMT items above.
- IV NS/LR.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO NS/LR.
- Do not reduce MAP lower than 20% of the original.

DBP greater than 115 with nausea, ALOC, blurred vision, headache, or chest pain: Contact MEDICAL CONTROL for:

Adult:	Pediatric:
▪ Consider Labetalol 20 mg over 2 min IV/IO. ▪ Consider Hydralazine 10-20 mg IV/IO/IM. ▪ Consider Nitroglycerin 0.4 mg SL. ▪ Consider Nitroglycerin drip IV/IO.	▪ Consider Labetalol 0.4-1 mg/kg/hr IV/IO. ▪ Click "calculate" to get dose. ▪ Consider Hydralazine 0.1-0.2 mg/kg (max 20 mg) IV/IO/IM. ▪ Click "calculate" to get dose.

- **Pregnant** (20-weeks gestation through 4-weeks post-partum):
  - **Actively seizing**: Magnesium Sulfate 4 g IV/IO/IM (IV/IO in NS over 5 minutes). Refer to Protocol 2-792 - Seizure.

Consider contacting MEDICAL CONTROL for:
- Magnesium Sulfate 4-6 g IV/IO in NS over 20 minutes or 2 g/hr.
- OR Labetalol 20 mg IV/IO over 2 mintues.
- OR Hydralazine 5-20 mg IV/IO/IM.

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Protocol 2-550 - Hyperthermia

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Remove from exposure.
- Open and maintain airway.
- Attempt to determine down-time and history.
- Consider Oxygen if SpO2 less than 88%.
- Passively cool patient.
- Obtain core body Temperature, if able. If unable, consider patient with at least HEAT EXHAUSTION if Heat Index above 103° F.
- Consider applying Cardiac Monitor limb leads.
- **Altered mentation and/or Temperature greater than 104° F (HEAT STROKE)**: Active, rapid cooling is indicated using ice, evaporation, and/or cold packs. Attempt to cool to 102° F.
- **Normal mentation and Temperature less than 104° F (HEAT EXHAUSTION)**: Passive cooling. Treat specific complaints per protocol.

EMT:

- Ensure completion of applicable EMR items above.
- Assist ALS with Capnography.

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV cool NS/LR.
-

Adult:	Pediatric:
○ 125 ml/hr.	○ 20 ml/kg (may repeat once). ▪ Click "calculate" to get dose.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO cool NS/LR.
- Monitor closely for arrhythmias. Treat per protocol.

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Protocol 2-550-01 - Hyperthermia - Heat Index Chart

Polk, Hickory, Cedar, & St Clair EMS Protocols

Note: Heat exhaustion can occur in less than 30 minutes when heat index is above 103° F.

	Temperature															
Relative Humidity	**80° F**	**82° F**	**84° F**	**86° F**	**88° F**	**90° F**	**92° F**	**94° F**	**96° F**	**98° F**	**100° F**	**102° F**	**104° F**	**106° F**	**106° F**	**110° F**
40%	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45%	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50%	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55%	81	84	86	89	93	97	101	106	112	117	124	130	137			
60%	82	84	88	91	95	100	105	110	116	123	129	137				
65%	82	85	89	93	98	103	108	114	121	128	136					
70%	83	86	90	95	100	105	112	119	126	134						
75%	84	88	92	97	103	109	116	124	132							
80%	84	89	94	100	106	113	121	129								
85%	85	90	96	102	110	117	126	135								
90%	86	91	98	105	113	122	131									
95%	86	93	100	108	117	127										
100%	87	95	103	112	121	132										

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Protocol 2-572 - Hypoglycemia

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Identify possible causes.
- Consider Oxygen if SpO2 less than 88%.
- Consider applying Cardiac Monitor limb leads.

EMT:

- Ensure completion of applicable EMR items above.
- Perform Blood Sugar Check. Refer to Equipment 8-324 - Glucometer for blood sugar critical levels.
- **Blood sugar less than 60 mg/dl, conscious, AND able to swallow**: Glucose 15 g PO.
- **No transport**: Have patient eat after treatment.

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV NS/LR.
-

Adult:	Pediatric:
○ **Blood sugar less than 60 mg/dl AND symptomatic**: ▪ Dextrose 25 g IV. ▪ **If unable to obtain IV**: Consider Glucagon 1 mg IM/SQ/IN.	○ **Blood sugar less than 30 mg/dl AND symptomatic**: ▪ Dextrose 0.5-1 g/kg IV. Repeat as needed. ▪ Click "calculate" to get dose. ○ **If unable to obtain IV**: ▪ **Greater than 20 kg or 5 yr old**: Consider Glucagon 1 mg IM/SQ. ▪ **Less than 20 kg or 5 yr old**: Consider Glucagon 0.5 mg IM/SQ.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO NS/LR. Refer to AEMT section above for Dextrose administration via IO.
Adult:	Pediatric:
◦ **Blood sugar less than 60 mg/dl AND symptomatic**: Consider Thiamine 100 mg IM/IO. If given IV, infuse in NS/LR over 30 minutes.	◦ NA.

  Contact MEDICAL CONTROL prior to PRC if any of the following:
  - ◦ IV or IO access has been performed.
  - ◦ Oral hypoglycemic in patient medication list.
  - ◦ Long-acting insulin in patient medication list.
  - ◦ Treated with Glucagon.
  - ◦ Unknown cause of hypoglycemia.

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Protocol 2-583 - Hypotension / Shock

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Establish and maintain airway and ventilate, as needed, with Oxygen to maintain SpO2 as indicated by specific patient condition.

EMT:

- Ensure completion of applicable EMR items above.
- Assist ALS with Capnography.

AEMT:

- Ensure completion of applicable EMT items above.
- IV NS/LR.
-

Adult:	Pediatric:
◦ **Meets SEPSIS criteria**: ▪ LR bolus of 30 ml/kg. ▪ Click "calculate" to get dose. ◦ **Not septic and clear lung sounds**: LR 250-500 ml IV bolus (may repeat) to maintain MAP greater than 65 and/or SBP greater than 100.	◦ Consider LR 20 ml/kg IV bolus (may repeat) to maintain MAP greater than 65. ▪ Click "calculate" to get dose.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO NS/LR.

Adult:	Pediatric:
◦ **Meets SEPSIS criteria and SBP less than 90 or MAP less than 70 after fluid bolus**: ▪ Consider Norepinephrine 0.01-0.05 mcg/kg/min (max 3 mcg/kg/min). May increase in increments not to exceed 0.05 mcg/kg/min to obtain MAP greater than 65. ▪ Click "calculate" to get dose. ◦ **Not septic**: ▪ Consider Epinephrine 1:100,000 (Push-Dose) 5-20 mcg every 2-5 min. ▪ Consider Dopamine 5-20 mcg/kg/min IV/IO to maintain MAP greater than 65 and/or SBP greater than 100. ▪ Click "calculate" to get dose. ▪ Consider fluid bolus in AEMT section.	**Meets SEPSIS criteria and SBP less than 90 or MAP less than 70 after fluid bolus**: Contact MEDICAL CONTROL for: ▪ Norepinephrine. **Not septic**: Contact MEDICAL CONTROL for: ▪ Epinephrine 1:100,000 (Push-Dose) OR ▪ Dopamine 5-20 mcg/kg/min IV/IO. ▪ Click "calculate" to get dose. ◦ Consider fluid bolus in AEMT section.

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Protocol 2-594 - Hypothermia

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Remove from exposure.
- Open and maintain airway.
- Be prepared to Suction airway.
- **Pulseless**: Refer to Protocol 2-198 - Cardiac Arrest.
- **Drowning or near drowning**: Refer to Protocol 2-286 - Drowning / Near Drowning.
- Dry and warm patient.
- Remove constricting or wet clothing and jewelry.
- Cover effected tissue with loose, dry, sterile dressing.
- Obtain core body Temperature, if able.
- Consider applying Cardiac Monitor limb leads or combo pads.
- Attempt to determine down-time and history.

EMT:

- Ensure completion of applicable EMR items above.
- Assist ALS with Capnography.
- **Pulseless**:
  - Do not delay transport for rewarming.
  - Rapid transport to hospital.

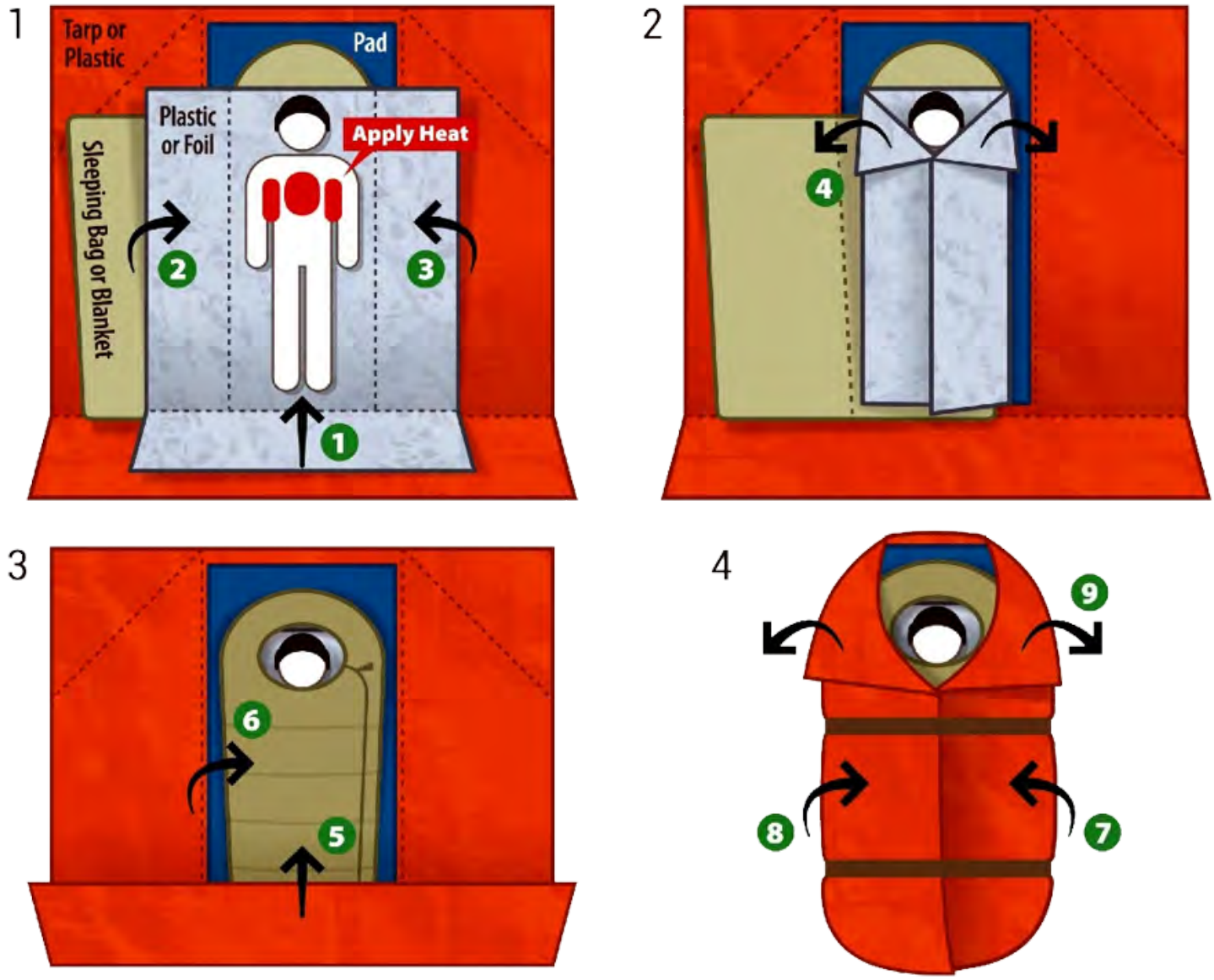
AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV warm NS/LR.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO warm NS/LR.
- Consider Protocol 2-044 - Airway: RSI.
- **Pulseless**:
  - **Shockable ryhthm**: Refer to Protocol 2-968 - V-Fib / Pulseless V-Tach, however, only shock once.
  - **Core Temperature greater than 86° F**: Remember patients require longer intervals between drug administrations due to slower absorption and metabolism.
  - **Core Temperature less than 86° F**: Compressions only.
- **Pain**: Refer to Protocol 2-660 - Pain Control.
- **Nausea**: Refer to Protocol 2-990 - Vomiting.



Sources: BICOrescue.com; Zafren, Giesbrecht, Danzl et al. Wilderness Environ Med. 2014, 25:S66-85.

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Protocol 2-616 - Newly Born

Polk, Hickory, Cedar, & St Clair EMS Protocols

In general, this protocol's scope covers management of the baby/babies after delivery and the point of cutting the umbilical cord. Before cutting the cord refer to Protocol 2-242 - Childbirth / Labor.

EMD:

- No specific protocol.

EMR:

- **Mother still in labor**: Refer to Protocol 2-242 - Childbirth / Labor.
- Confirm ABCs.
- **RESUSCITATION is required**:
  - Clamp and cut umbilical cord immediately.
  - Establish and maintain airway.
  - Suction thoroughly.
  - **HR less than 60**: Chest compressions at 120 per minute. Ratio of 3:1. Use BVM on room air unless you suspect hypoxic event.
  - **HR less than 100**: BVM with room air at 40-60 breaths per minute. Remember, newborn tidal volume may be 25 ml or less.
    - **If no improvement after 90 seconds**: BVM with 100% Oxygen.
  - Apply Cardiac Monitor limb leads.
- **Resuscitation is NOT required**:
  - Wait 1 minute to clamp and cord.
  - Consider Oxygen to maintain pre-ductal SpO2 according to chart found on Protocol 2-616-02 - Targeted Pre-Ductal SpO2.
- Maintain warmth of the infant.
- Suction mouth, then nose, with bulb syringe.
- Dry and STIMULATE with a clean towel.
- Obtain APGAR score at 1 minute and 5 minutes after delivery.
  - Refer to Protocol 2-616-01 - APGAR Scoring System.

EMT:

- Ensure completion of applicable EMR items above.
- **Blood sugar less than 30 mg/dl**: Refer to Protocol 2-572 - Hypoglycemia for treatment.

AEMT:

- Ensure completion of applicable EMT items above.
- **RESUSCITATION is required**:
  - Consider IV NS/LR 20 ml/kg.
    - Click "calculate" to get dose.
  - Consider Narcan 0.1 mg/kg IV/IN/IM/SQ/ET.
    - Click "calculate" to get dose.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- **RESUSCITATION is required**:
  - Consider IO NS/LR fluid bolus if IV in AEMT section unsuccessful.
  - **Meconium present**: Laryngoscopy and Deep Suction trachea with ET Tube. After intubation, prolonged positive pressure ventilation at 40-60 breaths per minute.
  - **No response after stimulation, BVM, compressions, and deep suctioning**: INTUBATE.

Gestational age	ET Size	Depth
Less than 28 weeks	2.5	6-7 cm
28-34 weeks	3.0	7-8 cm
34-38 weeks	3.5	8-9 cm
Greater than 38 weeks	4.0	9-10 cm

  - **HR remains less than 80 despite BVM and chest compressions**:
    - Epinephrine 1:10,000 0.01-0.03 mg/kg IV/IO.
      - Click "calculate" to get dose.
    - **No response to first Epi**: Epinephrine 1:1,000 0.05-0.1 mg/kg ET.
      - Click "calculate" to get dose.

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Protocol 2-616-01 - Newly Born - APGAR Scoring System

Polk, Hickory, Cedar, & St Clair EMS Protocols

APGAR Scoring System

	Question	Answer	Options
A	Appearance (skin color)	2 - Completely pink	2 - Completely pink 1 - Body pink, extremities blue 0 - Blue, pale
P	Pulse	2 - Above 100 BPM	2 - Above 100 BPM 1 - Below 100 BPM 0 - Absent
G	Grimace (reflex irritability)	2 - Active motion (sneeze, cough, pull away	2 - Active motion (sneeze, cough, pull away 1 - Some flexion of extremities 0 - Flaccid
A	Activity (muscle tone)	2 - Active movement	2 - Active movement 1 - Arms and legs flexed 0 - Absent
R	Respiration	2 - Vigorous cry	2 - Vigorous cry 1 - Slow, irregular 0 - Absent

Calculate APGAR score

APGAR score:

- Click "calculate" to show APGAR score.
  - **Less than 4** = Severely depressed.
  - **4-6** = Moderately depressed.
  - **Greater than 6** = Excellent condition.

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Protocol 2-616-02 - Newly Born - Targeted Pre-Ductal SpO2

Polk, Hickory, Cedar, & St Clair EMS Protocols

Time after Birth	Target SpO2
1 minute	60-65%
2 minutes	65-70%
3 minutes	70-75%
4 minutes	75-80%
5 minutes	80-85%
10 minutes	85-90%

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Protocol 2-638 - Overdose / Toxic Ingestion

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- Dispatch a non-dedicated standby ambulance to all hazmat releases where emergency response is required by other agencies.

EMR:

- Consider hazmat and DECON. Refer to Protocol 2-924 - Universal Patient Care for decontamination protocols.
- **Caustic material or chemical burns**: Refer to Protocol 2-176 - Burns.
- **Excited delirium**: Refer to Protocol 2-110 - Behavioral.
- Identify possible causes and substance(s) involved.
- Consider Oxygen 100%.
  - **Paraquat poisoning**: Only administer Oxygen if SpO2 is less than 88%.
- Consider applying Cardiac Monitor limb leads.
- **Narcotic overdose with respiratory depression and unable to ventilate**:
  - Note: Narcan administration should be limited to "last resort" situations and only after risk/benefit has been assessed regarding potential violent patient after administration.
Adult:	Pediatric:
▪ Narcan 0.2-0.4 mg IN. Repeat as necessary to maintain airway, SpO2, and ETCO2	▪ Narcan 0.1 mg/kg IN. Repeat as necessary to maintain airway, SpO2, and ETCO2 ▪ Click "calculate" to get dose.

EMT:

- Ensure completion of applicable EMR items above.
- Perform Blood Sugar Check.
- Consider assisting ALS with Capnography.

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV NS/LR.
- **Narcotic overdose with respiratory depression and unable to ventilate**: Narcan IV/IM/SQ same doses as EMT above.

RN

Medic:

- Ensure completion of all applicable BLS items above.

  Contact POISON CONTROL at 888-268-4195.
  If the patient can protect their own airway: Consider contacting MEDICAL CONTROL for Activated Charcoal 0.5-1 g/kg PO.
  - Click "calculate" to get dose.
- Consider IO NS/LR.
- **If suspected intentional poisoning or overdose**: MANDATORY ALS patient and pre-hospital IV or IO access is REQUIRED.
- Consider Protocol 2-044 - Airway: RSI.
- **Beta-blocker overdose**:
  - Refer to Protocol 2-154 - Bradycardia.

  Consider contacting MEDICAL CONTROL for:

Adult:	Pediatric:
Glucagon 2-5 mg IV/IO. Repeat at 10 mg if Bradycardia or hypotension occur.	**25-40 kg**: Glucagon 1 mg IV/IO (max 20 mg/kg or 1 g). **Less than 25 kg**: Glucagon 0.5 mg IV/IO (max 20 mg/kg or 1 g).
- **Calcium channel blocker overdose**:

  Consider contacting MEDICAL CONTROL for:

Adult:	Pediatric:
Calcium Chloride 50 mg/min (max 1 g).	NA.
- **Caustic substance ingestion**:

  Consider contacting MEDICAL CONTROL for water or milk ingestion within a few minutes immediately after ingestion.

Adult:	Pediatric:
Max 8 oz.	Max 4 oz.
- **Monoamine Oxidase Inhibitor (MAOI) overdose**:

  Hyperthermia: Contact MEDICAL CONTROL for Versed 0.1 mg/kg in 2 mg increments slow IV/IO (max 5 mg). Half dose if over 65 years old.
  - Click "calculate" to get dose.
  - Click "calculate" to get dose.
- **Narcotic overdose**:
  - Narcan IV/IO/IM/SQ same doses as EMR above.
- **Selective Serotonin Reuptake Inhibitor (SSRI) overdose**:
  - Aggressively control Hyperthermia with active cooling measures.
  - **Hypotension**: LR IV/IO 20 ml/kg.
    - Click "calculate" to get dose.

  Contact MEDICAL CONTROL.

- **Tricyclic Antidepressant overdose**:
  - **Hypotension**: LR IV/IO 20 ml/kg.
    - Click "calculate" to get dose.

    QRS greater than 100 ms: Contact MEDICAL CONTROL for Sodium Bicarbonate 1-2 mEq/kg IV/IO. Repeat as necessary to narrow QRS and improve BP.
    - Click "calculate" to get dose.

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Protocol 2-660 - Pain Control

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Identify possible causes.
- Consider Oxygen if SpO2 is less than 88%.
- Consider applying Cardiac Monitor limb leads.
- **Consider BLS pain relief actions**:
  - Splinting or immobilizing.
  - Elevating.
  - Cold pack.
  - Verbal sedation.

EMT:

- Ensure completion of applicable EMR items above.
- **If narcotic administered**: Consider assisting ALS with Capnography.

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV NS/LR.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO NS/LR.
- **Painful procedure of short duration** (i.e., cardioversion or extrication):
  - **Cardioversion**: Consider Etomidate 0.1 mg/kg IV/IO.
    - Click "calculate" to get dose.

    Consider contacting MEDICAL CONTROL for Ketamine (dissociative dose):
    - 1-2 mg/kg IV/IO.
    - 4-5 mg/kg IM.
    - **Over 65 years old**: Half dose.
    - Click "calculate" to get dose.
    - Click "calculate" to get dose.
    - Click "calculate" to get dose.
    - Click "calculate" to get dose.
- **Severe pain**: Consider Ketamine (analgesic dose):
  - 0.1-0.5 mg/kg *[ideal body weight]* IV/IO.
  - 0.8-1 mg/kg *[ideal body weight]* IM.
  - **Over 65 years old**: Half dose.
  - Enter weight and height and click "calculate" to get dose based on IDEAL weight.
  - Enter weight and height and click "calculate" to get dose based on IDEAL weight.
  - Enter weight and height and click "calculate" to get dose based on IDEAL weight.
  - Enter weight and height and click "calculate" to get dose based on IDEAL weight.
- **Acute or chronic (acute exacerbation with autonomic signs and symptoms) pain**:

Adult:	**Pediatric:**
▪ Consider Fentanyl 12.5-100 mcg IV/IO/IM/IN. May repeat every 5 minutes. ▪ **Over 65 years old**: 12.5-50 mcg. May repeat every 5 minutes (max 150 mcg). ▪ Consider Morphine 2-5 mg IV/IO/IM (max 10 mg). Maintain SBP greater than 100. ▪ Consider Benadryl 25-50 mg IV/IO to potentiate Morphine and reduce hypotension. ▪ Consider Toradol 30 mg IV/IO or 60 mg IM. ▪ Contraindicated in pregnancy. ▪ **Over 65 years old**: 15 mg IV/IO or 30 mg IM.	▪ Consider Fentanyl 1-2 mcg/kg IV/IO/IN. May repeat every 5 minutes. ▪ Click "calculate" to get dose. ▪ Consider Morphine 0.1-0.2 mg/kg IV/IO/IM. May repeat every 5 minutes. ▪ Click "calculate" to get dose. ▪ Consider Benadryl 1 mg/kg (max 50 mg) IV/IO to potentiate Morphine and reduce hypotension. ▪ Click "calculate" to get dose.

- **Chronic pain without autonomic signs and symptoms**: Transport in position of comfort.
- Any patient receiving narcotics must be transported.

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Protocol 2-682 - Patient Refusal

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- A Patient Care Report (PCR) must be completed for every EMS response. An Electronic Patient Care Report (ePCR) is required for EMS transport agencies.
  - Every effort should be made to have the PCR shall be completed within 24 hours if volunteer responder (by end of shift if career employee) and be available to the Medical Director (or designee) within 24 hours of completion, if requested.
- **Always act in the best interest of the patient**:
  1. Treating and transporting is preferable to PRC.
  2. PRC is preferable to NCN.

- **Patient Refusal of Care** (PRC):
  - If the patient refuses care and/or transport, patient should be informed of potential risks, and need for transport and comprehensive Physician evaluation.
  - **No ambulance dispatched**: EMR or EMT may obtain a PRC.

    In the absences of an ALS assessment, BLS-only ambulance crew must contact MEDICAL CONTROL or on-duty EMS Supervisor prior to obtaining PRC.
    - Patients electing to go to walk-in clinic or ER via personal vehicle (and witnessed leaving with family or bystander) may be PRC'd by EMR or EMT without the need for ALS assessment or contacting medical control or supervisor.
    - **EMR or EMT may PRC a patient without ALS if the following are met**:
      - Minor mechanisms of injury (i.e. falls from standing or vehicle accidents with no passenger compartment damage) AND
      - All requirements for NCN have been met (i.e. no pain, no altered mental status, and patient did not request an ambulance).

    If any ALS intervention has been performed, MEDICAL CONTROL must be contacted prior to PRC.
  - Obtain signature of patient. If patient refuses to sign, document this fact.
  - Obtain signature of witness. Preferably law enforcement official or family member.

- **No Care Needed** (NCN):
  - After scene assessment, there may be no patients (i.e. false alarms). A PCR shall be completed including: situation description, number of individuals, and medical screening, if done.
  - If an individual exhibits any significant mechanism of injury, pain behaviors, indications of altered mental status, or the individual at any time requested medical treatment or ambulance transport: **Treatment and transport or PRC must be completed**.

EMT:

- Ensure completion of applicable EMR items above.
- Refer to Guideline 1-700 - General Operations for documentation requirements.

AEMT:

- Ensure completion of applicable EMT items above.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- If patient care would have met ALS criteria, PRC must be completed by the RN or Paramedic.
  MEDICAL CONTROL and an ALS assessment is required before PRC for all of the following:
  - Drug or alcohol intoxication,
  - Acute mental impairment, OR
  - Attempted suicide, verbalized suicidal intent, or EMS providers suspect Suicidal Intent.

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Protocol 2-704 - Post Resuscitation

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Establish and maintain airway and ventilate with Oxygen.
  - Avoid hyperventilation.
  - **Conscious**: Attempt to maintain SpO2 between 92-98%.
  - **Unconscious**: Attempt to maintain SpO2 between 88-92%
- Apply Cardiac Monitor Combo Pads and limb leads.

EMT:

- Ensure completion of applicable EMR items above.
- Assist ALS with Capnography.

AEMT:

- Ensure completion of applicable EMT items above.
- IV NS/LR. Refer to Protocol 2-583 - Hypotension / Shock for LR dose.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Obtain 12-Lead ECG.
- Treat rate and rhythm per protocol.
- Secure airway, if necessary.
- **Hypotensive**:
  - Consider IO NS/LR.
  - Refer to Protocol 2-583 - Hypotension / Shock.
- **Continued sedation**: Refer to continued sedation section of Protocol 2-044 - Airway: RSI.
- Consider remaining on scene for at least ten (10) minutes after ROSC to stabilize the patient before initiating transport.
- Consider RSI and cooling with cold packs and cold IV fluids if ALL of the following:
  - No trauma,
  - No purposeful movement, AND
  - SBP greater than 90.

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Protocol 2-726 - Pulmonary Edema

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Oxygen to maintain SpO2 between 94-99%.
- Apply cardiac monitor limb leads.
- Elevate head of Cot.

EMT:

- Ensure completion of applicable EMR items above.
- Assist ALS with Capnography.
Adult:	Pediatric:
○ Consider assisting ALS with CPAP.	○

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV lock in AC (left is preferred) with pigtail extension with 18 ga or greater.
- Consider Albuterol 2.5 mg in NS 3 ml Nebulized.
- **Wheezing or obstructed EtCO2 waveform**: Refer to Protocol 2-770 - Respiratory Distress, however, do NOT administer Epinephrine.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider Protocol 2-044 - Airway: RSI.
- Consider IO lock.
- Obtain 12-Lead ECG. Consider 15-Lead ECG.
Adult:	Pediatric:
SBP less than 110: ▪ Consider Captopril 12.5 mg SL. ▪ Consider Dopamine 5-10 mcg/kg/min IV/IO. ▪ Click "calculate" to get dose. ▪ Consider Nitroglycerine 60+ mcg/min IV/IO. Titrate to SBP greater than 90 and dyspnea. **SBP greater than 110**: ▪ Consider Captopril 25 mg SL. ▪ Consider Nitroglycerine 0.4-0.8 mg SL every 3-5 minutes until no dyspnea or SBP less than 90.	Consider contacting MEDICAL CONTROL.

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Protocol 2-748 - Pulseless Electrical Activity

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Refer to Protocol 2-198 - Cardiac Arrest.

EMT:

- Ensure completion of applicable EMR items above.

AEMT:

- Ensure completion of applicable EMT items above.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Until proven otherwise, PEA should be considered and treated as **PROFOUND SHOCK**.
Adult:	Pediatric:
◦ **Slow PEA rate**: ▪ Consider Atropine 1 mg IV/IO every 3-5 min (max 3 mg). ▪ Consider Pacing. ◦ **Suspected mechanical cardiac activity**: ▪ Consider large fluid bolus. ▪ Consider Dopamine 5-20 mcg/kg/min IV/IO. ▪ Click "calculate" to get dose.	◦
- Narrow complex PEA should **NOT** be terminated in the field.

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Protocol 2-770 - Respiratory Distress

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Oxygen to maintain SpO2 between 88-92%.
- Consider moving patient to a cold air environment.
- Apply cardiac monitor limb leads.

EMT:

- Ensure completion of applicable EMR items above.
- Assist ALS with Capnography.
Adult:	Pediatric:
◦ Consider assisting ALS with a trial of CPAP.	◦

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV NS/LR in AC (left is preferred) with pigtail extension with 18 ga or greater.
- Consider Albuterol 2.5 mg in NS 3 ml Nebulized.
Adult:	Pediatric:
◦ Consider Duoneb 3 ml Nebulized (max 1 dose). ◦ **HR greater than 110**: Consider Xopenex 0.63-1.25 mg Nebulized. ◦ Consider Epinephrine 1:1,000 0.3-0.5 mg IM/SQ. Caution when greater than 55 yr old with cardiac history.	◦ Consider Duoneb 1.5 ml Nebulized (max 1 dose). ◦ **Greater than 6 yr old**: Consider Xopenex 0.31-0.63 mg Nebulized.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO NS/LR.
- Consider 12-Lead ECG.
Adult:	Pediatric:
◦ Consider Decadron 16 mg Nebulized. ◦ Consider Solu-Medrol 125 mg IV/IO/IM. Consider contacting MEDICAL CONTROL for Magnesium Sulfate 1-2 g IV/IO in NS over 15-20 min.	◦ **Croup or epiglottitis**: Consider Racemic Epinephrine 0.5 ml with 3 ml NS Nebulized. ▪ In the absence of Racemic Epinephrine, Epinephrine 1:1,000 0.5 ml/kg (max 5 ml) may be Nebulized. ▪ Click "calculate" to get dose. ◦ Consider Decadron 4-8 mg Nebulized. Consider contacting MEDICAL CONTROL: ▪ Consider Solu-Medrol 1-2 mg/kg IV/IO/IM. ▪ Click "calculate" to get dose. ▪ Consider Magnesium Sulfate 25-50 mg/kg IV/IO in NS over 15-20 min.
- **CHF or pulmonary edema**, refer to Protocol 2-726 - Pulmonary Edema.
- Consider Protocol 2-044 - Airway: RSI.

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Protocol 2-792 - Seizure

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Ensure open Airway.
- Identify possible causes. Options include:
  - Alcohol use or withdrawl
  - Brain injury or tumor
  - Drug use or withdrawl
  - Epilepsy
  - Fever
  - Hypertension
  - Hyperthermia
  - Hypoglycemia
  - Poisoning
  - Stroke
- Clear area to decrease chance of injury.
- Consider Oxygen if SpO2 less than 88%.
- Apply Cardiac Monitor limb leads.

EMT:

- Ensure completion of applicable EMR items above.
- Perform Blood Sugar Check.
- Consider assisting ALS with Capnography.
- **No history of siezures, afebrile, and destination hospital is on CT divert**: Bypass that facility and transport to next closest appropriate facility taking into consideration the patient's wishes.

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV NS/LR.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO NS/LR.
- **Actively seizing**: Continue Versed as below until seizures stopped. Max single dose of 5 mg IV/IO/IN or 10 mg IM.
Adult:	**Pediatric:**

▪ Consider Versed 10 mg IM.
  ▪ OR Versed 2.5-5 mg IV/IO/IN
▪ **Pregnant Hypertension (20-week gestation through 4-week post-partum)**: Magnesium Sulfate 4 g IM/IV/IO (IV/IO in NS over 5 minutes) and refer to Protocol 2-528 - Hypertension.
	▪ **12-18 year old**: Consider Versed same as adult.
	▪ **1-12 year old**: Consider Versed 0.15 mg/kg (max 5 mg) IM/IV/IO. May repeat every 5 minutes.
	  ▪ Click "calculate" to get dose.
	▪ **1-12 month old**: Consider Versed 0.2 mg/kg IM/IN (max 5 mg). May repeat every 5 minutes.
	  ▪ Click "calculate" to get dose.

- Use RSI with caution in seizure patients. Paralysis only masks the manifestation of seizure.
  - **Continued sedation for intubated patient**: Versed 2.5-5 mg IV/IO.

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Protocol 2-814 - Spinal Cord Trauma

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Consider SMR. C-collar is contraindicated with penetrating neck trauma.
- Assist Ventilations as needed.
- Consider Oxygen 100%.
- Consider applying Cardiac Monitor limb leads.
- Maintain body temperature between 91° and 99° F.

EMT:

- Ensure completion of applicable EMR items above.
- **Sporting Event Standby**:
  - Park the emergency vehicle in a manner to allow view of the scene from a distance but always have the ability to leave the scene in an expedient manner.
  - Make contact with athletic trainers upon arrival (if they are present).
  - Prepare equipment for rapid deployment.
  - If medical care is needed for a player, event staff should wave EMS onto the field/track if you are needed.
  - **Football player or other event with significant padding and helmet**:
    - Assist athletic trainers in removing athletic equipment prior to transport.
    - If unable or not recommended by athletic trainer, secure player to Backboard with helmet and pads remaining in place.
    - Apply C-collar and Backboard if spinal injury is suspected.
    - Use 8-person lift or scoop stretcher to move patient from the ground to the backboard. Avoid use of log-roll procedure unless posterior inspection is required.
    - Utilize athletic trainer staff and equipment for Extremity splinting.
  - Preferred to request second unit to transport and standby unit remain at event.
    - Consider requesting a second unit to cover standby if critical patient.
    - Athletic training staff may ride with patient in back if requested.
    - Air Ambulance landing zone should not be on the playing field.
  - A standby PCR report shall be completed for all dedicated standbys. Be specific about which standby it is and which location.

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV LR titrated to maintain SBP according to age.
  - Refer to Protocol 2-924 - Universal Patient Care and do not exceed the lower range of the SBP indicated in the Normal Vital Signs table.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO LR.
- Consider Protocol 2-044 - Airway: RSI.

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Protocol 2-836 - Spinal Immobilization Clearance

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Providers should not manually stabilize alert and spontaneously moving patients, since patients with Pain will self-limit movement, and forcing immobilization in this scenario may unnecessarily increase discomfort and Anxiety.
- **Indications for full SMR**:
  - **High-energy mechanism of injury AND any of the following**:
    - Drug or alcohol intoxication,
    - Inability to communicate,
    - Altered mental status, OR
    - Distracting injury.
  - Unconscious with unknown history of event.
  - Spinal pain, tenderness, or deformity.
  - Neurologic complaint (i.e. numbness or motor weakness).
  - Patients "cleared" by transferring physician being taken to trauma center meeting requirements for SMR must have SMR.
- **Indications for partial SMR** (C-Collar only):
  - Patients found to be ambulatory at the scene.
  - Extended transport time.
  - Severe epistaxis or facial bleeding.
  - Respiratory Distress when supine.
  - Airway compromise when supine.
  - Penetrating trauma with NO evidence of spinal injury.
- **Contraindications for SMR**:
  - Penetrating neck injury regardless of neurologic symptoms.
  - Elderly fall from standing with isolated Extremity fracture (i.e. hip fracture) without mechanism for spinal injury.

EMT:

- Ensure completion of applicable EMR items above.

AEMT:

- Ensure completion of applicable EMT items above.

RN

Medic:

- Ensure completion of all applicable BLS items above.

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Protocol 2-858 - Supraventricular Tachycardia

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Calm and reassure patient. Ensure patient does not exert themselves.
- Oxygen to maintain SpO2 between 94-99%.
- Apply cardiac monitor limb leads.
Adult:	Pediatric:
◦ **Rate greater than 150**: Apply combo pads anterior / posterior	◦ **Rate greater than 180 (child) or 220 (infant)**: Apply combo pads anterior / posterior

EMT:

- Ensure completion of applicable EMR items above.
- Consider assisting ALS with capnography.

AEMT:

- Ensure completion of applicable EMT items above.
- IV LR in AC (left is preferred) with pigtail extension with 18 ga or greater.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Obtain 12-Lead ECG.
- Consider IO LR. Do not delay IV/IO if symptomatic.
- **Determine and treat the cause of tachycardia before medication administration (i.e. infection, dehydration, pain, etc.).**

- **Adult:**
  - **Unstable/symptomatic and rate greater than 150**:
    - **Conscious**: Consider Protocol 2-660 - Pain Control.
    - Synchronized Cardioversion 125 J. **If unsuccessful**, repeat at 200 J.
  - **Stable/asymptomatic and rate greater than 150**:
    - **Vagal maneuver**: Have patient blow on 10 ml syringe to move the plunger for 15 seconds while sitting and immediately place supine and elevate feet afterward.
    - **Regular rhythm (not A-Fib/A-Flutter)**: Adenosine 6 mg RAPID IV/IO.
      - **If ineffective**, second dose at 12 mg.
      - **If not converted**, consider Amiodarone, Cardizem, or Synchronized Cardioversion.
    - **Pulmonary edema or WPW**: Amiodarone 150 mg IV/IO over 10 min. May repeat at 150 mg over 10 min if tachycardia returns (max 300 mg). If converted with Amiodarone, begin drip at 1 mg/min.
    - **No pulmonary edema and/or A-Fib**: Cardizem 0.25 mg/kg (max 20 mg) IV/IO over 2 min.
      - Click "calculate" to get dose.
      - May repeat after 15 min at 0.35 mg/kg (max 25 mg) IV/IO over 2 min.
        - Click "calculate" to get dose.
      - **If converted**, Cardizem drip at 10 mg/hr.

Pediatric:

- **Vagal maneuver**: Place bag of ice on the patient's face for 15 seconds while sitting and immediately place supine and elevate feet afterward.
- **Unstable/symptomatic and rate greater than 180 (child) or 220 (infant)**:
  - Adenosine 0.1 mg/kg (max 6 mg) RAPID IV/IO.
    - Click "calculate" to get dose.
    - **If ineffective**, second dose at 0.2 mg/kg (max 12 mg).
      - Click "calculate" to get dose.
  - Consider Protocol 2-660 - Pain Control.
  - Consider Synchronized Cardioversion 0.5-1 J/kg. Subsequent Cardioversion should be at 2 J/kg.
    - Click "calculate" to get dose.
- **Stable/asymptomatic and rate greater than 180 (child) or 220 (infant)**:

  Consider contacting **MEDICAL CONTROL**:
  - Consider Adenosine 0.1 mg/kg (max 6 mg) RAPID IV/IO.
    - Click "calculate" to get dose.
    - **If ineffective**, second dose at 0.2 mg/kg (max 12 mg).
      - Click "calculate" to get dose.
  - Consider Cardizem.
  - Consider Protocol 2-660 - Pain Control.
  - Consider Synchronized Cardioversion 0.5-1 J/kg.
    - Click "calculate" to get dose.

- Consider and correct treatable causes: Hypovolemia, hypoxia, hypo/hyperkalemia, hypothermia, hypoglycemia, acidosis, tension pneumothorax, toxins, thrombosis, and cardiac tamponade

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Protocol 2-880 - Suspected Stroke

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- **MPDS Protocol 18 (Headache) and Protocol 28 (Stroke) - Stroke time window**: Time window set by MEDICAL CONTROL is 24 hours. Greater than 24 hours since the patient was last seen normal is usually outside the therapeutic window.

EMR:

- Complete Protocol 2-880-24 - STROKE Assessment Tool.
- Oxygen to maintain SpO2 between 94-99%.
- Apply Cardiac Monitor limb leads.
- Elevate head of Cot.

EMT:

- Ensure completion of applicable EMR items above.
- Perform Blood Sugar Check. **If blood sugar less than 60 mg/dl**: Refer to Protocol 2-572 - Hypoglycemia.
- Obtain and record contact information for family and/or witnesses. **If transporting by Aircraft: Contact receiving facility with this information.**
- Begin recording information found on Protocol 2-880-48 - STROKE EMS Information Form for handoff to aircraft or ER.
- Assist patient to walk to the Cot to assess gait.
- Transport according to Protocol 2-880-72 - STROKE Destination Matrix.

AEMT:

- Ensure completion of applicable EMT items above.
- IV NS/LR (18 ga in left AC is preferred). Avoid multiple IV attempts. Two IV are preferred.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO NS/LR.
- Obtain 12-Lead ECG.
- Do NOT treat hypertension.
- **If transfer with tPA**:
  - Sending hospital should stabilize hypertension prior to departure if SBP above 180 or DBP above 105.
  - Document GCS and NIHSS every 15 minutes.
  - Document family contact method.
  - Document tPA bolus total dose and time of administration.
  - Verify tPA drip estimated time of completion.
  - Have the sending hospital remove and waste excess tPA so when the drip is complete, the bottle will be empty. Label the bottle with actual dose.
  - When the bottle is empty, connect NS/LR and restart the infusion at the same rate to finish the tPA in the tubing.

    If complications: Turn off tPA and contact receiving facility MEDICAL CONTROL.
    Complications include:
    - Lips or tongue swelling,
    - Muffled voice,
    - Dyspnea,
    - Severe headache,
    - Acute hypertension,
    - Nausea, OR
    - Vomiting.

    If hypertensive (greater than 180/105) OR hypotensive (less than 140/80): Contact receiving facility MEDICAL CONTROL.

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Protocol 2-880-24 - Suspected Stroke - Assessment Tool

Polk, Hickory, Cedar, & St Clair EMS Protocols

Score only the first attempt. Do not coach. Do not go back and re-score.

STEP 1

- Perform **BEFAST** stroke assessment:

Balance	Eyes	Face	Arm	Speech	Time
Trouble walking, stumbling, falling, dizziness, or spinning sensation	Vision loss, blurry vision, or double vision	One side of face is weak or numb, the face appears uneven, or drooping	Weakness or numbness in the arm (or leg), especially if it is only one side	Slurred speech, trouble getting words out, or speaking gibberish	Begin rapid transport to a stroke center and complete stroke assessment and treatment

  - **If ANY deficit**: Perform the STROKE Assessment below.
  - **If NO deficits**: Transport to any ER, however, consider performing the STROKE Assessment below anyway.

STEP 2

-

Last Seen Normal (Calculate based on arrival at a STROKE center)	Patient age	
Greater than 12 hours ago	Greater than 89 years old	**Either >12 hrs OR >89 yr old**: Transport to any ER.
8-12 hours ago	Less than 90 years old	Perform STROKE Assessment below.
4-8 hours ago		CLASS 2 STROKE. Perform STROKE Assessment below.
0-4 hours ago		CLASS 1 STROKE. Perform STROKE Assessment below.

STEP 3

	Question	Answer	RACE Options	NIHSS Options
1A	Level of **consciousness**?	0 - Alert	NA	0 - Alert 1 - Drowsy 2 - Stuporous 3 - Coma
1B	Ask the patient two questions one at a time: • What **month** is it? • What is their **age**?	0 - Both answers correct	NA	0 - Both answers correct 1 - Only one answer correct 2 - Neither answer correct
1C	Upon verbal command (simultanously given): • **Open and close eyes**. • **Grip and release good hand**.	0 - Both tasks complete	0 - Both tasks complete 1 - Only one task complete 2 - Neither task complete	0 - Both tasks complete 1 - Only one task complete 2 - Neither task complete
2	Can patient **follow your finger horizontally** with their eyes?	0 - Normal	0 - Normal 1 - Only one direction 2 - Neither direction	0 - Normal 1 - Only one direction 2 - Neither direction
3	Can patient **see all four quadrants peripherally** (one eye at a time)?	0 - No loss	NA	0 - No loss 1 - One eye with loss 2 - Both eyes with loss on same side 3 - Both eyes with loss on both sides

	Question	Answer	RACE Options	NIHSS Options
4	After demonstration, can the patient do the following one at a time: • **Show teeth**? • **Raise eyebrows**? • **Close eyes tightly**?	0 - Normal	NA	0 - Normal 1 - Minor paralysis 2 - Lower paralysis only 3 - Complete paralysis
5A	**Unaffected side arm drift**: Palm down, 90° for 10 seconds. If ataxic due to weakness, select "no drift."	0 - No drift	NA	0 - No drift 1 - Drift or jerky 2 - Some effort but falls 3 - No effort 4 - No movement
5B	**Affected side arm drift**: Palm down, 90° for 10 seconds. If ataxic due to weakness, select "no drift."	0 - No drift	0 - No drift 0 - Drift or jerky 1 - Some effort but falls 2 - No effort 2 - No movement	0 - No drift 1 - Drift or jerky 2 - Some effort but falls 3 - No effort 4 - No movement
6A	**Unaffected side leg drift**: 30° for 10 seconds. If ataxic due to weakness, select "no drift."	0 - No drift	NA	0 - No drift 1 - Drift or jerky 2 - Some effort but falls 3 - No effort 4 - No movement

	Question	Answer	RACE Options	NIHSS Options
6B	**Affected side leg drift**: 30° for 10 seconds. If ataxic due to weakness, select "no drift."	0 - No drift	0 - No drift 0 - Drift or jerky 1 - Some effort but falls 2 - No effort 2 - No movement	0 - No drift 1 - Drift or jerky 2 - Some effort but falls 3 - No effort 4 - No movement
7	Test unaffected side first, then affected side: • Can patient **touch nose with finger**? • Can patient **slide heel against other shin**?	0 - Able to complete	NA	0 - Able to complete 1 - Unable in one limb 2 - Unable in multiple limbs
8	Can patient feel **pinprick to face, arms, trunk, and legs**?	0 - Normal	NA	0 - Normal 1 - Mild to moderate loss 2 - Severe loss
9	Measure the best response: • "**What is your name**?" • "**Describe what you see in the picture**?" • "**Read the sentences**."	0 - No aphasia	0 - No aphasia 1 - Mild to moderate aphasia 2 - Severe aphasia 3 - Mute or global aphasia	0 - No aphasia 1 - Mild to moderate aphasia 2 - Severe aphasia 3 - Mute or global aphasia
10	Can the patient repeat the following words: • "**Mama**"? • "**Tip-top**"? • "**Fifty-fifty**"? • "**Thanks**"? • "**Huckleberry**"? • "**Baseball player**"?	0 - Normal articulation	NA	0 - Normal articulation 1 - Mild to moderate dysarthria 2 - Severe dysarthria

	Question	Answer	RACE Options	NIHSS Options
11	Can the patient answer appropriately: • "**Whose arm is this**?" (showing affected arm) • "Can you **move this arm**?" (indicating affected arm)	0 - No neglect	0 - No neglect 1 - Not recognized OR unable to move 2 - Not recognized AND unable to move	0 - No neglect 1 - Not recognized OR unable to move 2 - Not recognized AND unable to move

Calculate STROKE scores

STROKE scores:

Click "calculate" to show NIHSS score.

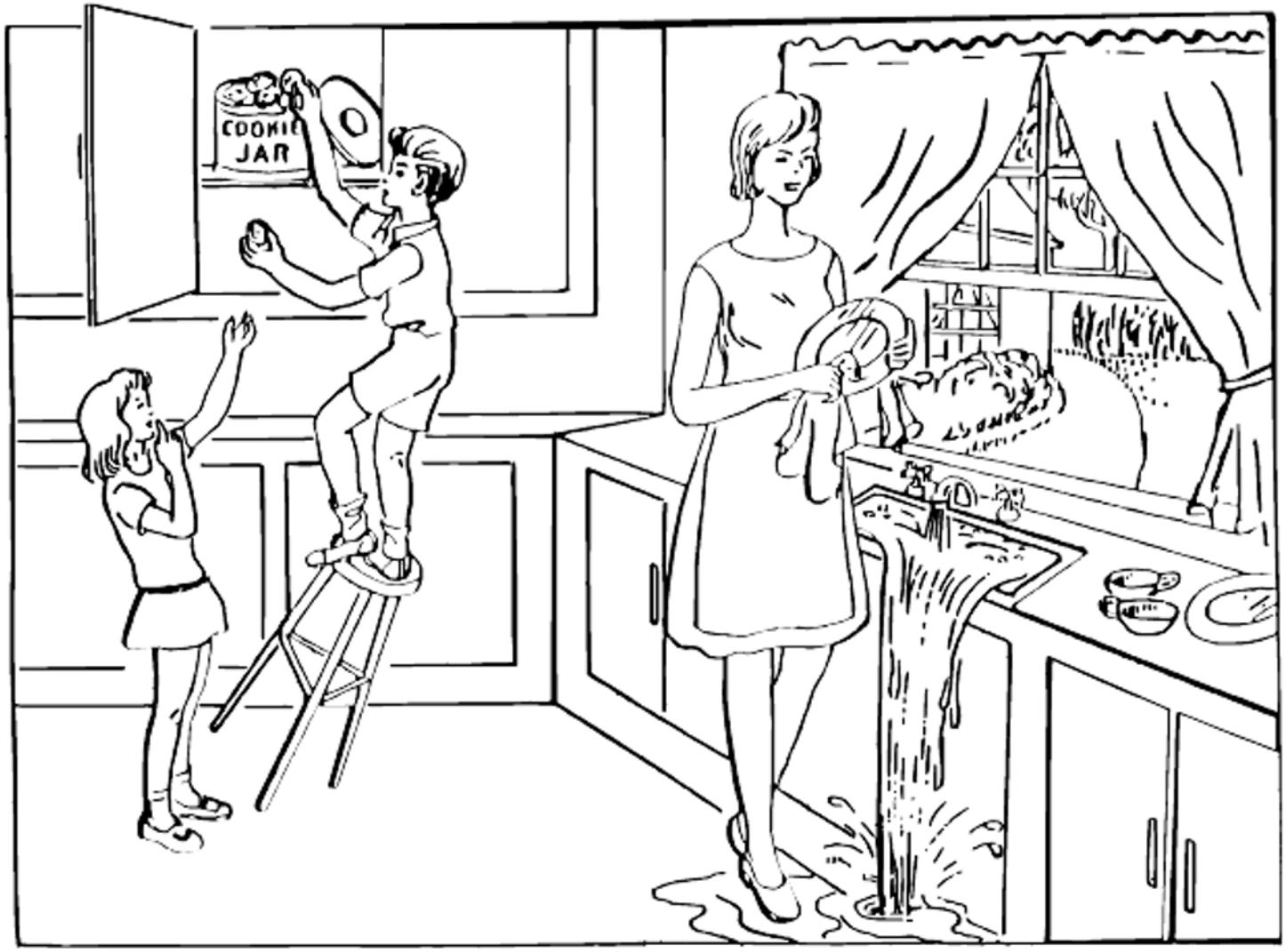
- **NIH greater than 6** = SEVERE STROKE.
- **NIH 1-5** = Mild to moderate stroke.
- **NIH 0** = No indication of stroke.

Click "calculate" to show RACE score.

- **RACE greater than 4** = LARGE VESSEL OCCLUSION.
- **RACE 0-3** = No LVO.

Definitions:

- **Aphasia**: Loss of ability to understand or express speech.
- **Apraxia**: Inability to carry out familiar tasks.
- **Ataxia**: Loss of full control of bodily movements.
- **Dysarthria**: Difficult or unclear articulation of speech.
- **Dysphagia**: Difficulty in swallowing.
- **Dysphasia**: Difficulty in the generation of speech or its comprehension.
- **Hemiparesis**: Weakness on one side of the body.
- **Hemiplegia**: Paralysis on one side of the body.



You know how.

Down to earth.

I got home from work.

Near the table in the dining room.

They heard him speak on the radio last night.

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Protocol 2-880-48 - Suspected Stroke - EMS Information Form

Polk, Hickory, Cedar, & St Clair EMS Protocols

This form is a communication tool from EMS to ER with the goal of expidited patient care of stroke patients.

Patient Demographics

Patient name:	
Patient DOB:	
Family/caregiver/witness name:	
Family/caregiver/witness phone number:	

Assessment Results

Abnormal Balance:	☐ Yes	☐ No
Abnormal Eyes/Vision:	☐ Yes	☐ No
Abnormal Face:	☐ Yes	☐ No
Abnormal Arm:	☐ Yes	☐ No
Abnormal Speech:	☐ Yes	☐ No
Time (Last Known Well):		
Blood glucose reading:		
Blood pressure:	/	
Taking blood thinner:	☐ Yes, list:	☐ No
RACE score:		
NIH score:		
Patient weight:	lb / kg	

tPA exclusion checklist

Hemorrhage:	☐ Yes, hemorrhage	☐ No
Intracranial or intraspinal surgery within three (3) months:	☐ Yes, recent neuro surgery	☐ No
Serious head trauma within three (3) months:	☐ Yes, recent head trauma	☐ No
Other intercranial conditions (i.e. neoplasms, aneurysms):	☐ Yes, IC conditions	☐ No
Current, severe, uncontrolled hypertension: Current BP:	☐ Yes, hypertensive	☐ No
Age greater than 80 years: Current age:	☐ Yes, over 80	☐ No
NIHSS greater than 25:	☐ Yes, NIHSS > 25, see page 1	☐ No
History of diabetes:	☐ Yes, diabetic	☐ No
History of prior stroke:	☐ Yes, prior stroke	☐ No
Taking an oral anticoagulant:	☐ Yes, see list on page 1	☐ No

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Protocol 2-880-72 - Suspected Stroke - Destination Matrix

Polk, Hickory, Cedar, & St Clair EMS Protocols

This matrix was developed using geographical analysis of designated facilities and historical ambulance transport statistics. It also follows Missouri regulations found in 19 CSR 30-40.790 (Transport protocol for trauma, stroke, and STEMI patients).

- These are guidelines only. Scene or patient conditions may influence an alternate destination determination.
- Patients have the right to refuse transport to the recommended destination. If the patient refuses recommended destination, document "transport / refused care" and have patient sign refusal.
- When initial transport from the scene would be prolonged, the patient may be transported to the nearest appropriate facility.

Consider transporting to the closest tPA-capable emergency room for any one the following criteria:

- Transporting to a STROKE center will take the patient out of the tPA treatment window (four hours).

Location	Destination	Stroke Designation	Notes
Bolivar	Citizens Memorial	None	**If on CT divert**: Transport to the next closest stroke center.
El Dorado Springs	Cedar County Memorial	Level III	
Harrisonville	Cass Regional	Level III	

Consider transporting to the closest STROKE center for the following criteria:

- Last seen normal within 12 hours, AND
- One or more of the following:
  - New onset of facial droop, arm drift, abnormal speech, one-sided neurological deficit, or abnormal gait, or
  - NIHSS score greater than zero.

Location	Destination	Stroke Designation	Notes
Osage Beach	Lake Regional	Level II	**If LARGE VESSEL OCCLUSION or SEVERE STROKE**: Transport to the closest level I stroke center.
Springfield	Mercy	Level II	

Consider transporting to the closest Level I STROKE center for any one the following criteria:

- Any criteria above, and/or
- Large vessel occlusion (either of the following):
  - NIHSS score greater than 6, or
  - RACE score greater than 4.

Location	Destination	Stroke Designation	Notes
Aircraft	Aircraft crew determination		**If under 45 minute drive time**: Transport by ground.
Springfield	Cox South	Level I	
Kansas City	Research	Level I	
	St Lukes	Level I	

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Protocol 2-902 - Trauma Arrest

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Confirm apnea and pulselessness.
- Attempt to determine down-time and history.
- Consider SMR.
- Begin CPR and refer to Protocol 2-198 - Cardiac Arrest.

EMT:

- Ensure completion of applicable EMR items above.
- Consider Pelvic Binder.

AEMT:

- Ensure completion of applicable EMT items above.
- IV LR wide open. Consider second line wide open as well.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- **Chest trauma**: Consider bilateral Needle Decompression and refer to Protocol 2-220 - Chest Pain.
- Consider IO LR.
- **If hypovolemia or obstructive shock is suspected**: Treatment of those conditions should take priority over all other treatments (potentially including CPR).
- Consider Intubation.
-

Adult	Pediatric
◦ Narrow complex PEA should NOT be terminated in the field. Field termination may be requested from MEDICAL CONTROL regardless of how long resuscitation efforts have been underway.	◦ Pediatric arrest should NOT be terminated in the field.

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Protocol 2-924 - Universal Patient Care

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- Utilize appropriate MPDS protocol for all calls where a patient may be ill or injured.

EMR:

- Wear high-visibility and retro-reflective apparel when deemed appropriate.
- Scene safety. **Potentially contaminated scene or patients**:
  - Identify the substance with two sources, if possible: NIOSH, WebWISER
  - Notify receiving facilities as soon as possible with possible contamination agent.
  - **Establish decontamination procedures according to research**:
    - **All persons leaving the hot zone must be gross decontaminated**:
      - Remove outer clothing and jewelry.
      - If contaminated with liquids, high volume water rinsing.
      - Irrigate eyes and face.
    - **All persons leaving the warm zone must be technically decontaminated**:
      - Do not contaminate ambulances with patients or responders that have not been decontaminated.
      - Do not perform most ALS procedures until technical decontamination has been performed due to causing additional breaks in the skin.
      - Remove ALL clothing and jewelry.
      - Gentle washing with soap and water.
- Coordinate with or establish incident command. Establish hot, warm, and cold zones, if applicable.
- BSI and ensure proper PPE.
- Determine nature of illness and/or mechanism of injury.
- Determine number of patients. **Mass casualty scene** (defined as greater than five (5) patients):
  - EMS scene communications should be conducted on **VTAC12**.
  - Notify receiving facilities as soon as possible with number of patients.
  - Coordinate with Crew Leader for scene management.
  - Ambulance crews should prioritize transporting patients to the ER and returning to the scene. On-scene and at-destination activities such as triage and treatment should be limited or elimitated (i.e. Do not get out of the ambulance. Once your ambulance is full of the first people that get there, initiate transport.).
- Determine need for additional resources.
- ABCs.
- LOC.
- **Altered mental status**: Consider and correct treatable causes:
  - Cardiac event,
  - Hyperglycemia / Hypoglycemia,
  - Hyperthermia / Hypothermia,
  - Hypovolemia,
  - Hypoxia,
  - Stroke,
  - Toxins,
- SAMPLE history.

- Focused assessment.
- Baseline vitals.
  - Refer to Protocol 2-924-24 - Normal Vital Signs.
  - Refer to Protocol 2-924-48 - Glasgow Coma Scale (GCS).
  - Two sets of vitals should be obtained that include time, blood pressure, pulse, respirations, SpO2, and Pain level. If patient contact time is less than 15 minutes (i.e. very short transport time with a critical patient), one set of vitals may be appropriate.
  - When appropriate, additional vitals may include Temperature, orthostatic blood pressure, and glucose. Consider assisting ALS with ETCO2.
- Treat per appropriate protocol.

EMT:

- Ensure completion of applicable EMR items above.
- **Responsive and no significant MOI**:
  - Treatment and transport decision (BLS/ALS).
  - Goal of moving a TCD patient (Sepsis, STEMI, Stroke, or Trauma) towards definitive care within 10 minutes.
- Interfacility transfer of patients meeting BLS criteria with the only exception of Heparin- or Saline-locked IV may be transported BLS.
- Four-lead cardiac monitoring does not require the patient to be transported ALS, but an ALS patient does require cardiac monitoring. Any cardiac monitor for cardiac assessment or 12-Lead ECG must be transported ALS or transmitted to the ER for interpretation.
- A BLS ambulance with an ALS patient shall request ALS intercept or transport to the nearest emergency room or CMH unless the destination is refused by the patient.
- Transport.
  - Routine use of lights and sirens is not warranted.
  - **Transport to the closest facility unless one of the two below**:
    - If the patient refuses the closest facility, transport to their choice, and obtain a refusal signature.
    - **Altered mental status and the closest facility is on CT divert**, bypass and transport to next closest appropriate facility.
    - **Time critical diagnosis:** Transport according to detination matrix:
      - **STEMI**: Protocol 2-220-50 - STEMI Destination Matrix
      - **Stroke**: Protocol 2-880-72 - STROKE Destination Matrix
      - **Trauma**: Protocol 2-451-50 - TRAUMA Destination Matrix
  - Ensure accurate weight is obtained on all patients upon arrival at the ER, if able.

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV LR bolus to maintain SBP above 100.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- **ALS indicated when new onset of the following**:
  - Significant MOI.
  - Unresponsive.
  - **Responsive meeting one of the following**:
    - Altered mental status.
    - Chest discomfort.
    - Need for IV/IO or medications.
    - Overdose or poisoning.
    - Respiratory distress.
    - Severe pain.
    - Signs of shock.
- Rapid medical and/or trauma assessment.
- Treat per appropriate protocol.
- **If transfer out of the hospital**:
  - Refer to Guideline 1-200-72 - Transfer Priority Calculator.
  - **If Priority 1 transfer**:
    - Shall be responded to in the same fashion and promptness as any other priority 1 dispatches.
    - Patient care shall be provided by the RN or paramedic.
  - **If patient on a Ventilator and sedated with Propofol**:
    - Consider replacing Propofol at hospital bedside with Ketamine from ambulance stock.
    - Ketamine 1 mg/kg IV/IO.
      - Click "calculate" to get dose.
Adult:	Pediatric:
▪ Consider Fentanyl 50-100 mcg IV/IO/IN (max 300 mcg).	▪ Consider Fentanyl 1-2 mcg/kg IV/IO/IN (max 150 mcg) ▪ Click "calculate" to get dose.
  - **If patient on tPA drip**, refer to Protocol 2-880 - Suspected Stroke.

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Protocol 2-924-24 - Universal Patient Care - Normal Vital Signs

Polk, Hickory, Cedar, & St Clair EMS Protocols

Description	Age	Ideal Weight	Broslow / Handtevy	Pulse Rate	Respiratory Rate	Systolic BP	Diastolic BP	MAP	Temp
Preemie	Before due date	2 kg	Grey	120-170	40-70	55-90			
Newborn / Neonate	0-1 mo	4 kg	Grey	Awake: 100-205 Asleep: 90-160	30-60	67-84	35-53	45-60	98.0-100.0 °F
Infant	1-6 mo	6 kg	Pink	Awake: 100-180 Asleep: 90-160	30-53	72-104	37-56	50-62	96.8-99.6 °F
	6-12 mo	8 kg	Red						
Toddler	1 yr	10 kg	Purple	Awake: 98-140 Asleep: 80-120	22-37	86-106	42-63	49-62	
	2 yr	12 kg	Yellow						
Preschooler	3 yr	15 kg	White		20-28	89-112	46-72	58-69	98.6 °F
	4 yr	17 kg	White						
	5 yr	20 kg	Blue						
Schoolager	6 yr	22 kg	Blue	Awake: 75-118 Asleep: 58-90	18-25	97-120	57-80	66-79	
	7 yr	25 kg	Orange						
	8 yr	27 kg	Orange						
	9 yr	30 kg	Green						
	10 yr	35 kg	Green						
	11 yr	40 kg	Green						
Adolescent	12 yr	50 kg	Green	Awake: 60-100 Asleep: 50-90	12-20	110-131	64-83	73-84	
	13 yr	60 kg	Green						
	14-16 yr	60-75 kg	Green						
Early Adult	17-40 yr	75 kg	Light Blue	60-100		90-140			
Middle Adult	41-60 yr	100 kg	Light Blue						
Older Adult	61+ yr		Light Blue						

Other references:

- Refer to Protocol 2-044-66 - Airway Equipment Sizes.
- Refer to Protocol 2-616-66 - Targeted Pre-Ductal SpO2.
- Refer to Equipment 8-324 - Glucometer for blood sugar ranges.
- Refer to Equipment 8-864 - Thermometer for normal temperature ranges.

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Protocol 2-924-48 - Universal Patient Care - Glasgow Coma Scale

Polk, Hickory, Cedar, & St Clair EMS Protocols

Question	Answer	Adult Options	Pediatric Options
Eye Opening	4 - Spontaneous	4 - Spontaneous 3 - To speech 2 - To pain 1 - None	4 - Spontaneous 3 - To speech 2 - To pain 1 - None
Verbal Response	5 - Oriented (coos and babbles)	5 - Oriented 4 - Confused 3 - Inappropriate 2 - Incomprehensible 1 - None	5 - Coos and babbles 4 - Irritable cry 3 - Cries to pain 2 - Moans to pain 1 - None
Best Motor Response	6 - Obeys commands (spontaneous movement)	6 - Obeys commands 5 - Localizes pain 4 - Withdraws from pain 3 - Abnormal flexion 2 - Abnormal extension 1 - None	6 - Spontaneous movement 5 - Withdraws to touch 4 - Withdraws from pain 3 - Abnormal flexion 2 - Abnormal extension 1 - None

Calculate GCS score

GCS score:

Click "calculate" to show GCS score.

- **Less than 8** = Severe deficit.
- **9-12** = Moderate deficit.
- **13-14** = Mild deficit.
- **15** = No deficit.

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Protocol 2-946 - Ventricular Tachycardia

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Calm and reassure patient. Ensure patient does not exert themselves.
- Oxygen to maintain SpO2 between 94-99%.
- Apply Cardiac Monitor limb leads.
Adult:	Pediatric:
◦ **Heart rate greater than 150**: Apply Combo Pads anterior / posterior	◦ **Child with heart rate greater than 160 OR infant with heart rate greater than 220**: Consider applying Combo Pads anterior / posterior.

EMT:

- Ensure completion of applicable EMR items above.
- Consider assisting ALS with Capnography.

AEMT:

- Ensure completion of applicable EMT items above.
- IV NS/LR in AC (left is preferred) with pigtail extension with 18 ga or greater.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Obtain 12-Lead ECG as soon as able.
- Consider IO NS/LR. Do not delay for IV/IO if symptomatic.
- **Adult:**
  - **Heart rate greater than 150**:
    - **Symptomatic**:
      - **Conscious**: Consider Protocol 2-660 - Pain Control.
      - Synchronized Cardioversion 125 J/kg. If unsuccessful, increase to 200 J.
    - **Asymptomatic**:
      - Amiodarone 150 mg IV/IO over 10 min. Repeat as needed (max 2.2 gm over 24 hr). If converted by Amiodarone, consider drip at 1 mg/min.
    - **QTc greater than 0.300 sec**: Magnesium Sulfate 1-2 g IV/IO in NS over 15-20 min.
- **Pediatric:**
  - **Child with heart rate greater than 160 OR infant with heart rate greater than 220**:
  - **Symptomatic**:
    - **Conscious**: Consider Protocol 2-660 - Pain Control.
    - Synchronized Cardioversion 0.5-1 J/kg.
      - Click "calculate" to get dose.

    Consider contacting MEDICAL CONTROL for Amiodarone as dosed in asymptomatic below.
  - **Asymptomatic. Contact MEDICAL CONTROL for**:
    - Consider Adenosine 0.1 mg/kg (max 6 mg). May repeat at 0.2 mg/kg (max 12 mg).
      - Click "calculate" to get dose.
      - Click "calculate" to get dose.
    - Consider Amiodarone 5 mg/kg IV/IO over 20-60 min (max 150 mg).
      - Click "calculate" to get dose.
    - Consider Protocol 2-660 - Pain Control.
    - Consider Synchronized Cardioversion 0.5-1 J/kg.
      - Click "calculate" to get dose.
- **Consider and correct treatable causes**: Hypovolemia, hypoxia, hypo/hyperkalemia, hypothermia, hypoglycemia, acidosis, tension pneumothorax, toxins, thrombosis, and cardiac tamponade.

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Protocol 2-968 - V-Fib / Pulseless V-Tach

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Refer to Protocol 2-198 - Cardiac Arrest.

EMT:

- Ensure completion of applicable EMR items above.

AEMT:

- Ensure completion of applicable EMT items above.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- **If ALS and Cardiac Monitor is available**, manual defibrillation is preferred.
- **Winessed arrest by EMS**: Immediate Defibrillation.
- **Unwitnessed arrest**: Perform 2 min of Compressions, then Defibrillation. Immediately start Compressions for 2 min after each shock before rhythm or pulse check.
- Every 2 minutes, charge Monitor in anticipation of shock able rhythm. During pause in Compressions, Defibrillate or dump charge.

Adult:	Pediatric:

▪ 360 J (OR consider biphasic dose of 200 J).	▪ 4 J/kg.
	  ▪ Click "calculate" to get dose.
	▪ Add 2 J/kg each shock (max 10 J/kg).
	  ▪ Click "calculate" to get dose.

- Consider Lidocaine 1-1.5 mg/kg IV/IO.
  - Click "calculate" to get dose.
  - **Recurrent VF/VT**: Repeat Lidocaine at 3-5 min at half dose (0.5-0.75 mg/kg).
    - Click "calculate" to get dose.
  - OR consider Amiodarone IV/IO:

Adult:	Pediatric:
300 mg.	5 mg/kg. Click "calculate" to get dose.

  - **Recurrent VF/VT**: Repeat Amiodarone:

Adult:	Pediatric:
150 mg.	2.5 mg/kg. Click "calculate" to get dose.

- **Persistent fibrillation after five (5) attempted Defibrillations:** Consider Dual-Sequential or Dual-Simultaneous Defibrillation.
- **Torsades de Pointes**:

Adult:	Pediatric:
Magnesium Sulfate 1-2 g over 2 min. Follow with Magnesium Sulfate 0.5-1 g/hr IV/IO titrated to control Torsades de Pointes. **Conscious**: Consider Protocol 2-660 - Pain Control. Synchronized Cardioversion 200 J.	Magnesium Sulfate 25-50 mg/kg over 2 min. Click "calculate" to get dose. **Conscious**: Consider Protocol 2-660 - Pain Control. Synchronized Cardioversion 0.5-1 J/kg. Click "calculate" to get dose.

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Protocol 2-990 - Vomiting

Polk, Hickory, Cedar, & St Clair EMS Protocols

EMD:

- No specific protocol.

EMR:

- Identify possible causes.
- Consider Oxygen if SpO2 is less than 88%.
- Consider applying Cardiac Monitor limb leads.

EMT:

- Ensure completion of applicable EMR items above.

AEMT:

- Ensure completion of applicable EMT items above.
- Consider IV NS/LR.

RN

Medic:

- Ensure completion of all applicable BLS items above.
- Consider IO NS/LR.

Adult:	Pediatric:
◦ Consider Zofran 4 mg IV/IO/IM/IN/PO/SL (max 8 mg). ◦ Consider Phenergan 6.25-25 mg: ▪ IM OR ▪ IV/IO infused in NS/LR over 15-30 minutes OR ▪ Diluted in NS flush and pushed VERY slowly. ◦ Consider Benadryl 12.5-25 mg IV/IO/IM.	◦ **Greater than 2 years old**: ▪ Consider Zofran 0.1-0.2 mg/kg IV/IO/IM/IN/PO/SL (max 8 mg). ▪ Click "calculate" to get dose. ▪ Consider Phenergan: ▪ 0.25-0.5 mg/kg IM OR ▪ Click "calculate" to get dose. ▪ 0.25-0.5 mg/kg IV/IO infused in NS/LR over 15-30 minutes OR ▪ Click "calculate" to get dose. ▪ 0.25 mg/kg diluted in NS flush and pushed VERY slowly. ▪ Click "calculate" to get dose. ◦ Consider Benadryl 0.1 mg/kg IV/IO/IM (max 25 mg). ▪ Click "calculate" to get dose.

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Part 7-000 - Medications

Polk, Hickory, Cedar, & St Clair EMS Protocols

Contents:

- 7-490 - Procainamide (Pronestyl)
- 7-500 - Propofol (Diprivan)
- 7-505 - Reglan (Metoclopramide)
- 7-520 - Rocuronium (Zemuron)
- 7-530 - Sodium Bicarbonate (Soda)
- 7-540 - Solu-Medrol (Methylprednisolone)
- 7-550 - Succinylcholine (Anectine)
- 7-560 - Tetracaine
- 7-570 - Thiamine (Vitamin B1)
- 7-575 - Toradol (Ketorolac)
- 7-577 - tPA (Tissue Plasminogen Activator) (pending)
- 7-578 - TXA (Tranexamic Acid)
- 7-580 - Valium (Diazepam)
- 7-590 - Vecuronium (Norcuron)
- 7-600 - Versed (Midazolam)
- 7-610 - Xopenex (Levalbuterol)
- 7-620 - Zofran (Ondansetron)

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Medication 7-001 - Medications on Response Vehicles

Polk, Hickory, Cedar, & St Clair EMS Protocols

19 CSR 30-40.303(2)(C) states "the medical director, in cooperation with the ambulance service administrator, shall develop, implement, and annually review medications and medical equipment to be utilized." This section fulfils that requirement for equipment.

Refer to Equipment 8-001 - Equipment on Response Vehicles for equipment.

ALS Ambulance:

Location	Medication	Quantity
Bag, Big	Lactated Ringers	1 bag - 1 L
Bag, Medication	Adenosine	3 vials
	Amiodarone	3 vials - 150 mg ea
	Atropine	3 vials
	Benadryl	1 vial
	Dextrose	1 bag - 250 ml D10W
	Epinephrine 1:1,000	2 vials
	Epinephrine 1:10,000	4 vials
	Glucagon	1 kit
	Lidocaine	2 vials
	Magnesium Sulfate	4 vials - 1 g ea
	Narcan	2 vials
	Normal Saline	1 bag 100 ml
	Sodium Bicarbonate	2 vials
	Thiamine	1 vial
Bag, Oxygen	Albuterol	1 vial
	Normal Saline	1 vial - 3 ml
	Oxygen	1 cylinder
Bag, Small	Lactated Ringers	1 bag - 1 L
Box, Medication	Acetaminophen	2 cups
	Activated Charcoal	1 tube
	Aspirin	16 tabs
	Atropine	1 vial multidose
	Calcium Chloride	2 vials
	Captopril	2 tabs
	Cardizem [CMH Only]	2 kits
	Decadron	1 vial - 16 mg

	Glucose	2 tubes
	Haldol [CMH Only]	2 vials
	Heparin [CMH Only]	2 vials
	Hydralazine [CMH Only]	2 vials
	Ibuprofen	2 cups
	Labetalol	2 vials
	Neo-Synephrine [CMH Only]	1 bottle
	Nitroglycerin	1 bottle
	Oxytocin	2 vials
	Phenergan	2 vials
	Solu-Medrol	2 vials
	Tetracaine	2 bottles
	Toradol	2 vials
	TXA	2 vials
	Zofran	6 vials
Box, Narcotics	Fentanyl	4-8 vials
	Ketamine [CMH Only]	2 vials
	Morphine	2-6 vials - 4 mg ea
	Morphine	2-6 vials - 10 mg ea
	Versed	3-6 vials
Cabinets	Albuterol	6 vials
	Dopamine Drip	1 kit
	Duoneb	4 vials
	Epinephrine Racemic	1 vial
	Lactated Ringers	4 bags - 1 L ea
	Lidocaine Drip	1 kit
	Nitroglycerin Drip	1 kit
	Normal Saline	1 vial - 3 ml
	Normal Saline	4 bags - 500 ml ea
	Oxygen	2 cylinders
Cot	Albuterol	1 vial
	Oxygen	1 cylinder
IV Tray	Normal Saline	10 flushes
Monitor	Aspirin	4 tabs
	Nitroglycerin	1 bottle
RSI Kit [CMH Only]	Atropine	1 vial
	Etomidate	1 vial
	Rocuronium	4 vials

BLS Ambulance:

Location	Medication	Quantity
Bag, Medication	Same as ALS Ambulance	
Cabinets	Lactated Ringers	1 bag - 1 L
	Normal Saline	1 bag - 500 ml
	Oxygen	2 cylinders
Cot	Same as ALS Ambulance	
Monitor	Same as ALS Ambulance	

EMS Supervisor Vehicle:

Location	Medication	Quantity
Bag, Big	Same as ALS Ambulance	
Bag, Medication	Same as ALS Ambulance	
Bag, Oxygen	Same as ALS Ambulance	
Box, Medication	Same as ALS Ambulance	
Box, Narcotics	Same as ALS Ambulance	
Monitor	Same as ALS Ambulance	
RSI Kit [CMH Only]	Same as ALS Ambulance	

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Medication 7-010 - Acetaminophen (Tylenol)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

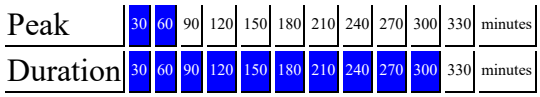
Route(s):

- PO,

Pharmacodynamics (class and mechanism of action):

- Analgesic (mechanism unknown).
- Antipyretic (through direct action on hypothalmus).

Pharmacokinetics:

- **Half-life**: 1-4 hours.
- **Onset time**: 30-45 minutes.
- **Peak action time**: 30-60 minutes.
- **Duration of action**: 4-6 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-440 - Fever.
- Medication 7-300 - Ibuprofen.

Contraindications:

- Hypersensitivity.

Preganancy Risk Factor:

Category B

No risk in other studies: Animal reproduction studies have failed to demonstrate a risk to the fetus and there are no adequate and well-controlled studies in pregnant women, or animal studies have shown adverse effects, but adequate and well-controlled studies in pregnant women have failed to demonstrate a risk to the fetus in any trimester.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- Avoid in patients with severe liver disease.
- Use caution with Chronic alcohol use.
- Use caution with Impaired renal function.
- Use caution with Phenylketonuria (PKU).
- May cause rash, uticaria, Nausea.

Antidote:

- Acetylcysteine or mucomyst.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.

- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-020 - Activated Charcoal (Actidose)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Route(s):

- PO,

Pharmacodynamics (class and mechanism of action):

- Adsorbent (adsorbs toxins by chemical binding and prevents gastrointestinal absorption).

Pharmacokinetics:

- **Half-life**: Unknown.
- **Onset time**: Immediate.
- **Peak action time**: Unknown.
- **Duration of action**: Unknown.
- Peak 1 minutes
  Duration 1 minutes

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-638 - Overdose / Toxic Ingestion.

Contraindications:

- No gag reflex.
- Any altered mental state.
- Ingestion of acids, alkalis, ethanol, methanol, Cyanide, iron salts, lithium, Pesticides, petroleum products.
- Acetaminophen overdose unless the receiving hospital has IV antidote.
- GI obstruction.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- Aspiration may cause pneumonitis.
- May cause nausea, vomiting, constipation, diarrhea.

Antidote:

- NA.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-030 - Adenosine (Adenocard)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Antiarrhythmic (slows AV conduction).

Pharmacokinetics:

- **Half-life**: less than 10 seconds.
- **Onset time**: Immediate.
- **Peak action time**: Immediate.
- **Duration of action**: Unknown.
- Peak 1 seconds
  Duration 1 seconds

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-858 - Supraventricular Tachycardia.
- Protocol 2-946 - Ventricular Tachycardia.

Contraindications:

- 2nd or 3rd degree heart block.
- Sick Sinus Syndrome.
- Non-cardiac-related Tachycardia (i.e. hypovolemia, dehydration, etc.).

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- Arrhythmias, including blocks, are common at the time of Cardioversion.
- Use caution in patients with Asthma.
- May cause flushing, headache, Shortness of Breath, dizziness, Nausea, sense of impending doom, Chest Pressure, and/or numbness.
- May be a brief episode of asystole after administration.

Antidote:

- NA.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-040 - Albuterol (Proventil, Ventolin)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

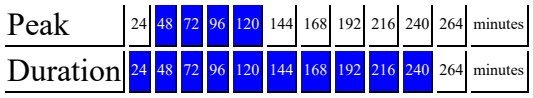
Route(s):

- Neb,

Pharmacodynamics (class and mechanism of action):

- Beta-2 selective sympathomimetic (Binds and stimulates beta-2 receptors, resulting in relaxation of bronchial smooth muscle).

Pharmacokinetics:

- **Half-life**: 1.6 hours.
- **Onset time**: 5-15 minutes.
- **Peak action time**: 30-120 minutes.
- **Duration of action**: 2-6 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-396 - Extremity Trauma.
- Protocol 2-726 - Pulmonary Edema.
- Protocol 2-077 - Respiratory Distress.

Contraindications:

- Angioedema.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- Potassium depleater and may cause hypokalemia.
- Blood pressure, pulse, and ECG should be monitored.
- Use caution in patients with known heart disease.
- May cause Palpitations, Anxiety, headache, dizziness, sweating, Hyperglycemia, insomnia, Tachycardia, Nausea, Vomiting, throat irritation, dry mouth, epistaxis, Hypertension, dyspepsia, and paradoxical Bronchospasm.

Antidote:

- NA.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-050 - Amiodarone (Cordarone)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Class III antiarrhythmic.
- Potassium channel blocker. Prolongs intranodal conduction. Prolongs refractoriness of the AV node.

Pharmacokinetics:

- **Half-life**: 40-50 days.
- **Onset time**: Unknown.
- **Peak action time**: Unknown.
- **Duration of action**: Variable.
- Peak 1 minutes
  Duration 1 minutes

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-198 - Cardiac Arrest.
- Protocol 2-858 - Supraventricular Tachycardia.
- Protocol 2-946 - Ventricular Tachycardia.
- Protocol 2-968 - V-Fib / Pulseless V-Tach.

Contraindications:

- Pregnancy.
- Cardiogenic shock.
- Sinus Bradycardia.
- 2nd or 3rd degree AV block.
- Sick Sinus Syndrome.
- Sensitivity to benzyl alcohol and iodine.

Preganancy Risk Factor:

Category D

Positive evidence of risk: There is positive evidence of human fetal risk based on adverse reaction data from investigational or marketing experience or studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- Use caution with Proarrhythmic with concurrent antiarrhythmic meds.
- Consider slower administration on patients with hepatic or renal dysfunction.
- May prolong QT interval. 12-lead is indicated after administration.
- May cause hypotension, Bradycardia (slow down the rate of infusion).

Antidote:

- Medication 7-100 - Calcium Chloride.
- Medication 7-240 - Glucagon.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.

- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-060 - Aspirin (Bayer)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Dispatcher
- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

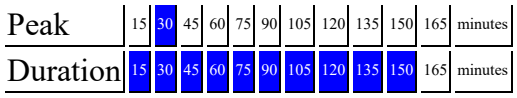
Route(s):

- PO,

Pharmacodynamics (class and mechanism of action):

- Platelet inhibitor (Prevents formation of thromboxane A2).
- Anti-inflammatory.
- Analgesic.

Pharmacokinetics:

- **Half-life**: 15-20 minutes.
- **Onset time**: 5-30 minutes.
- **Peak action time**: 25-40 minutes.
- **Duration of action**: 1-4 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-220 - Chest Pain / Suspected Cardiac Event.

Contraindications:

- Pregnancy.
- GI bleeding.
- Active ulcer disease.
- Hemorrhagic Stroke.
- Bleeding disorders.
- Children with chickenpox or flu-like symptoms.

Preganancy Risk Factor:

Category D

Positive evidence of risk: There is positive evidence of human fetal risk based on adverse reaction data from investigational or marketing experience or studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- Aspirin may trigger Asthma attacks in certain individuals with sensitivity.
- Use caution with GI bleeding and upset stomach, trauma, decreased LOC of unknown origin.

Antidote:

- Medication 7-530 - Sodium Bicarbonate.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.

- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-070 - Ativan (Lorazapam)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Route(s):

- IM/SQ, IV, PO, PR, SL,

Pharmacodynamics (class and mechanism of action):

- Sedative (Benzodiazepine: Binds to benzodiazepine receptor and enhances effects of GABA).
- Anticonvulsant (Skeletal muscle relaxant).

Pharmacokinetics:

- **Half-life**: 9-16 hours.
- **Onset time**:
  - **IM**: 15-30 minutes.
  - **IV**: 5 minutes.
  - **PO**: 1 hour.
- **Peak action time**:
  - **IM/IV**: 60-90 minutes.
  - **PO**: 2 hours.
- **Duration of action**:
  - **IM/IV**: 6-8 hours.
  - **PO**: 12-24 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-198 - Cardiac Arrest.

Contraindications:

- Pregnancy and nursing.
- Sensitivity to benzodiazepines, polyethylene glycol, benzyl alcohol.
- COPD.
- Shock.
- Coma.
- Closed angle glaucoma.

Preganancy Risk Factor:

Category D

Positive evidence of risk: There is positive evidence of human fetal risk based on adverse reaction data from investigational or marketing experience or studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- Use caution with Suicidal Tendencies, Depressive Disorders, Psychosis, acute alcohol intoxication, renal or hepatic impairment, organic brain syndrome, myasthenia gravis, GI disorders, elderly or debilitated, limited pulmonary reserve.
- May cause apnea, Nausea, Vomiting, drowsiness, restlessness, delirium, anterior grade amnesia, weakness, unsteadiness, depression, sleep disturbances, confusion, hallucinations, Hypertension, hypotension, blurred vision, Abdominal Discomfort.

Antidote:

- Flumazenil.

Controlled Substance Information:

Schedule IV

- Moderate potential for abuse. Abusing the drug may lead to moderate mental or physical addiction.

- **DEA number**: 2885.
- **Narcotic**: No.
- **Street names**: Control, Silence.

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Medication 7-080 - Atropine (Sal-Tropine)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

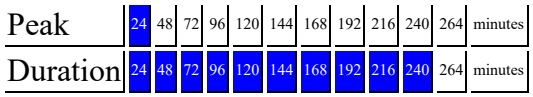
Route(s):

- ET, IO, IV,

Pharmacodynamics (class and mechanism of action):

- Anticholinergic / Parasympatholytic (Competes with acetylcholine at the site of muscarinic receptor. Increases heart rate).

Pharmacokinetics:

- **Half-life**: 2 hours.
- **Onset time**: Immediate.
- **Peak action time**: 2-4 minutes.
- **Duration of action**: 4 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-044 - Airway: RSI.
- Protocol 2-154 - Bradycardia.
- Protocol 2-198 - Cardiac Arrest.
- Protocol 2-374 - Exposure: Nerve Agents.
- Protocol 2-484 - Head Trauma.
- Protocol 2-748 - Pulselss Electrical Activity.

Contraindications:

- None when used in emergency situations.

Pregnancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- Medication 7-270 - Heparin.

Precautions and Adverse Effects:

- Use cautiously in the presence of myocardial ischemia and hypoxia because it increases oxygen demand on the heart and can worsen ischemia.
- May prolong QT interval. 12-lead is indicated after administration.
- May cause Hypertension and/or Bradycardia if dose is too low or administered too slowly.
- May cause palpitations, Tachycardia, headache, dizziness, anxiety, dry mouth, pupillary dilation, blurred vision, urinary retention (especially older males), hot skin temperature, intense facial flushing, and/or restlessness.

Antidote:

- Physostigmine (Antilirium).

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-090 - Benadryl (Diphenhydramine)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

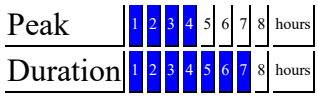
Route(s):

- IM/SQ, IO, IV,

Pharmacodynamics (class and mechanism of action):

- Antihistamine (Blocks H1 histamine receptors).
- Has some sedative effects.

Pharmacokinetics:

- **Half-life**: 2.4-9.3 hours.
- **Onset time**: Immediate.
- **Peak action time**: 1-4 hours.
- **Duration of action**: 6-8 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-066 - Allergic Reaction.
- Protocol 2-110 - Behavioral.
- Protocol 2-660 - Pain Control.
- Protocol 2-990 - Vomiting.
- Medication 7-060 - Haldol.
- Medication 7-390 - Morphine.
- Medication 7-480 - Phenergan.
- Medication 7-505 - Reglan.

Contraindications:

- Asthma.
- Nursing mothers.

Preganancy Risk Factor:

Category B

No risk in other studies: Animal reproduction studies have failed to demonstrate a risk to the fetus and there are no adequate and well-controlled studies in pregnant women, or animal studies have shown adverse effects, but adequate and well-controlled studies in pregnant women have failed to demonstrate a risk to the fetus in any trimester.

Potential Incompatibilities:

- Medication 7-530 - Sodium Bicarbonate.

Precautions and Adverse Effects:

- May prolong QT interval. 12-lead is indicated after administration.
- May cause dedation, drying and thickening of bronchial secretions, blurred vision, headache, palpitations, dizziness, excitability, wheezing, chest tightness, hypotension, dry mouth, Nausea, vomiting, and/or diarrhea.

Antidote:

- Physostigmine (Antilirium).

Controlled Substance Information:

Not a scheduled drug
- The DEA and FDA have not identified this drug with a schedule classification.

- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-100 - Calcium Chloride (Calciject)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

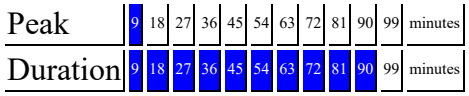
Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Electrolyte (Facilitates cardiac contractility).

Pharmacokinetics:

- **Half-life**: Unknown.
- **Onset time**: Immediate.
- **Peak action time**: Immediate.
- **Duration of action**: 0.5-2 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-176 - Burns.
- Protocol 2-198 - Cardiac Arrest.
- Protocol 2-396 - Extremity Trauma.
- Protocol 2-638 - Overdose / Toxic Ingestion.
- Medication 7-050 - Amiodarone.
- Medication 7-380 - Magnesium Sulfate.

Contraindications:

- Patients on Digitalis.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- Medication 7-530 - Sodium Bicarbonate.

Precautions and Adverse Effects:

- May cause Bradycardia, Asystole, and hypotension.

Antidote:

- NA.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-110 - Captopril (Capoten)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

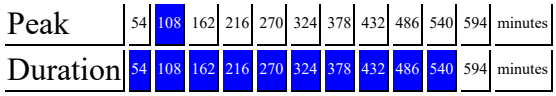
Route(s):

- IO, IV, SL,

Pharmacodynamics (class and mechanism of action):

- ACE inhibitor (Competitive inhibitor of Angiotension Converting Enzyme).

Pharmacokinetics:

- **Half-life**: 1.9 hours.
- **Onset time**: 15-60 minutes.
- **Peak action time**: 60-90 minutes.
- **Duration of action**: 6-12 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-726 - Pulmonary Edema.

Contraindications:

- Pregnancy.
- Hypersensitivity to any ACE inhibitor.

Preganancy Risk Factor:

Category D

Positive evidence of risk: There is positive evidence of human fetal risk based on adverse reaction data from investigational or marketing experience or studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- Use caution with aortic stenosis, bilateral renal artery stenosis, hypertrophic obstructive cardiomyopathy, pericardial tamponade, elevated serum potassium levels, and acute kidney failure.
- May cause hyperkalemia, especially in patients with renal deficiency.
- May cause hypotension, angioedema, headache, dizziness, fatigue, depression, Chest Pain, palpitations, cough, Dyspnea, nausea, vomiting, rash, pruritus, and/or renal failure.

Antidote:

- NA.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-120 - Cardizem (Diltiazem)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

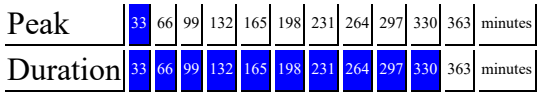
Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Calcium channel blocker (Slows conduction through the AV node).

Pharmacokinetics:

- **Half-life**: 3-9 hours.
- **Onset time**: 2 minutes.
- **Peak action time**: 2-7 minutes.
- **Duration of action**: 1-10 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-858 - Supraventricular Tachycardia.

Contraindications:

- Heart blocks.
- Conduction disturbances.
- Wolff-Parkinson White. Perform a 12-lead to rule out WPW before administration.
- Congestive heart failure.
- Hypotension.
- Should not be used in patients receiving IV Beta-Blockers.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- May cause hypotension, Nausea, Vomiting, dizziness, Bradycardia, flushing, headache, heart block, and/or Cardiac Arrest.

Antidote:

- Medication 7-100 - Calcium Chloride.
- Medication 7-240 - Glucagon.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.

- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-140 - Decadron (Dexamethasone)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

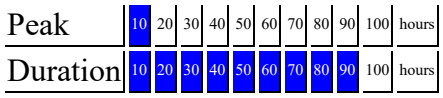
Route(s):

- IM/SQ, IO, IV, Neb, PO,

Pharmacodynamics (class and mechanism of action):

- Steriod.
- Anti-inflammatory (Reduces inflammation and immune response).
- Increases pulmonary microcirculation.

Pharmacokinetics:

- **Half-life**: 1-2 days.
- **Onset time**: 1-2 hours.
- **Peak action time**: 1-2 hours.
- **Duration of action**: 2-6 days.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-770 - Respiratory Distress.

Contraindications:

- None in emergency setting.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- Use with caution with Cushings, fungal infections, measles, and varicella.
- May cause Nausea, Vomiting, headache, vertigo, anxiety, hypokalemia, Hyperglycemia, tremors, Hypertension, and immunosuppression.

Antidote:

- NA.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.

- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-150 - Dextrose

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Carbohydrate (Elevates blood sugar level rapidly).

Pharmacokinetics:

- **Half-life**: Unknown.
- **Onset time**: Immediate.
- **Peak action time**: Immediate.
- **Duration of action**: Unknown.
- Peak 1 minutes
  Duration 1 minutes

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-198 - Cardiac Arrest.
- Protocol 2-396 - Extremity Trauma.
- Protocol 2-572 - Hypoglycemia.

Contraindications:

- Intracranial hemorrhage.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- If alcohol abuse or malnourishment is suspected, then Thiamine should be administered to facilitate Dextrose use by cells.
- May cause local venous irritation, Hyperglycemia, warmth, and/or thrombosis.

Antidote:

- NA.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.

- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-160 - Dilaudid (Hydromorphone)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Route(s):

- IM/SQ, IO, IV,

Pharmacodynamics (class and mechanism of action):

- Narcotic analgesic (Analgesia and sedation. CNS depressant. Decreased sensitivity to pain.).

Pharmacokinetics:

- **Half-life**: 2-4 hours.
- **Onset time**: 10-15 minutes.
- **Peak action time**:
  - **IM**: 30-60 minutes.
  - **IV**: 15-30 minutes.
- **Duration of action**:
  - **IM**: 4-5 hours.
  - **IV**: 2-3 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Not in current standing order protocols.

Contraindications:

- Hypersensitivity.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- Medication 7-270 - Heparin.

Precautions and Adverse Effects:

- Respiratory depression may last longer than analgesia.
- May cause Bradycardia, respiratory depression, and/or euphoria.

Antidote:

- Medication 7-400 - Narcan.

Controlled Substance Information:

Schedule II
- High potential for abuse. Abusing the drug can cause severe physical and mental addiction.

- **DEA number**: 9150.
- **Narcotic**: Yes.
- **Street names**: Big D, Crazy 8, D, Dill, Dillies, Dilly, Drug Store Heroin, Dust, Footballs, Hillbilly Heroin, Hospital Heroin, Hydros, Juice, M2, M80s, Moose, Peaches, Shake and Bake, Smack, Super 8, White Triangles.

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Medication 7-170 - Dopamine (Intropin)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

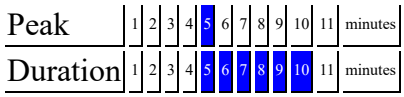
Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Sympathomimetic (Stimulates alpha and beta adrenergic receptors. Increases cardiac contractility. Causes peripheral vasoconstriction.).

Pharmacokinetics:

- **Half-life**: 2 minutes.
- **Onset time**: 5 minutes.
- **Peak action time**: Unknown.
- **Duration of action**: Less than 10 minutes.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-154 - Bradycardia.
- Protocol 2-704 - Post Resuscitation.
- Protocol 2-726 - Pulmonary Edema.
- Protocol 2-748 - Pulseless Electrical Activity.

Contraindications:

- Hypovolemic shock where complete fluid resuscitation has not occurred.
- Severe tachyarrhythmias such as Ventricular Fibrillation or Ventricular Arrhythmias.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- May cause Ventricular irritability, Ventricular Tachyarrhythmias, Hypertension, Angina, Dyspnea, Nausea, Vomiting, and/or headache.

Antidote:

- Rigitine.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-180 - Duoneb (Ipratropium and Albuterol, Combivent)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

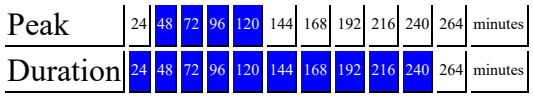
Route(s):

- Neb,

Pharmacodynamics (class and mechanism of action):

- Anticholinergic (Beta adrenergic. Binds and stimulates beta-2 receptors, resulting in relaxation of bronchial smooth muscle. Antagonizes the acetylcholine receptor, producing bronchodilation.).

Pharmacokinetics:

- **Half-life**: 1.6-2 hours.
- **Onset time**: 5-15 minutes.
- **Peak action time**: 0.5-2 hours.
- **Duration of action**: 2-6 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-770 - Respiratory Distress.

Contraindications:

- Hypersensitivity to Ipratropium, Albuterol, or Atropine.
- Allergy to soybeans or peanuts.
- Closed angle glaucoma.
- Bladder neck obstruction.
- Prostatic hypertrophy.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- Use caution in patients with known heart disease.
- Blood pressure, pulse, and ECG should be monitored.
- May cause paradoxical acute bronchospasm, palpitations, anxiety, headache, dizziness, sweating, Tachycardia, cough, Nausea, arrhythmias, paradoxical acute Bronchospasm.

Antidote:

- Physostigmine.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-200 - Epinephrine (Adrenalin)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

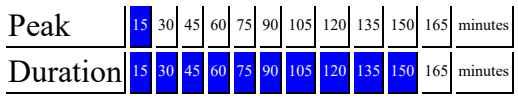
Route(s):

- ET, IM/SQ, IO, IV, Neb,

Pharmacodynamics (class and mechanism of action):

- Sympathomimetic (Binds with both alpha and beta receptors increasing chronotropy, dromotropy, inotropy, and bronchodilation.).

Pharmacokinetics:

- **Half-life**: Unknown.
- **Onset time**:
  - **IM**: Variable
  - **IO/IV**: Immediate.
  - **Neb**: 1-5 minutes.
- **Peak action time**:
  - **IM**: Unknown.
  - **IO/IV**: 5 minutes.
  - **Neb**: Unknown.
- **Duration of action**:
  - **IM**: 1-4 hours.
  - **IO/IV**: Short.
  - **Neb**: 1-3 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).
- **Epinephrine 1:1,000** = 1 mg/ml (ampule or vial).
  - Do not administer IV or IO without dilution.
- **Epinephrine 1:10,000** = 0.1 mg/ml (pre-filled syringe).
- **Epinephrine 1:100,000** = 0.01 mg/ml (mixed push-dose pressor).

Instructions for preparing Push-Dose Epi:

1. Waste 10 ml out of 100 ml NS bag.
2. Push 10 ml (1 mg) of Epinephrine 1:10,000 into bag.
3. You now have Epinephrine 1:100,000 (1,000 mcg in 100 ml) at a concentration of 10 mcg/ml.
4. Do not hang bag or connect bag directly to a patient with a pulse.
5. Draw 10 ml at a time for a typical push dose of 5-20 mcg (0.5-2 ml) every 2-5 minutes.

Indications:

- Protocol 2-066 - Allergic Reaction.
- Protocol 2-154 - Bradycardia.
- Protocol 2-198 - Cardiac Arrest.
- Protocol 2-583 - Hypotension / Shock.
- Protocol 2-616 - Newly Born.
- Protocol 2-770 - Respiratory Distress.
- Medication 7-340 - Labetalol.

Contraindications:

- **When used on patients with a pulse**:
  - Cardiovascular disease.
  - Cerebrovascular disease.
  - Severe Hypertension.
  - Pregnancy.
  - Patients with tachyarrhythmias.
- **When used for cardiac arrest**:
  - None when used in emergency setting.

Pregnancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- Use caution in patients with diabetic patients. Monitor blood sugar levels after administration.
- Medication should be protected from light.
- Blood pressure, pulse and ECG must be constantly monitored.
- Can be deactivated by alkaline solutions.
- May cause palpitations, Tachycardia, anxiousness, headache, tremor, Myocardial Ischemia in older patients, anxiety, Nausea, Vomiting, and/or Hypertension.

Antidote:

- NA.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-210 - Epinephrine Racemic (Micronefrin)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

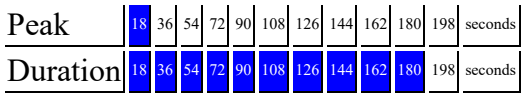
Route(s):

- Neb,

Pharmacodynamics (class and mechanism of action):

- Nonselective alpha and beta agonist (Arteriole constriction. Positive inotrope. Positive chronotrope. Bronchial smooth muscle relaxant. Blocks histamine release. Inhibits insulin secretion. Relaxes GI smooth muscle.).

Pharmacokinetics:

- **Half-life**: 2 minutes.
- **Onset time**: Rapid.
- **Peak action time**: Unknown.
- **Duration of action**: 3 minutes.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-770 - Respiratory Distress.

Contraindications:

- Glaucoma.
- Elderly.
- Cardiac disease.
- Hypertension.
- Thyroid disease.
- Diabetes.
- Sensitivity to sulfites.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- Patient must be observed for 2-4 hours after administration.
- May cause palpitations, anxiety, headache, Hypertension, Nausea, Vomiting, arrhythmias, rebound edema, dizziness, tremors, and/or Tachycardia.

Antidote:

- NA.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-220 - Etomidate (Amidate)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

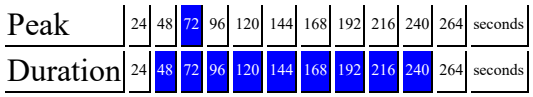
Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Sedative, non-barbiturate hypnotic (Unknown GABA-like effects. No analgesic effects. Has few cardiovascular or respiratory effects. Cerebro-protective: Decreases ICP and IOP.).

Pharmacokinetics:

- **Half-life**: 75 minutes.
- **Onset time**: 30-60 seconds.
- **Peak action time**: 1 minute.
- **Duration of action**: 3-5 minutes.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-044 - Airway: RSI.
- Protocol 2-660 - Pain Control.
- Equipment 8-108 - Cardiac Monitor.

Contraindications:

- Hypersensitivity.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- Use with caution in patients with Sepsis.
- Single dose only.
- May cause marked hypotension, Severe Asthma, myoclonic skeletal muscle movements, Apnea, Hypertension, dysrhythmias, Nausea, Vomiting, hiccups, snoring, adrenal insufficiency, laryngospasm, and/or cardiac arrhythmias.

Antidote:

- NA.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-230 - Fentanyl (Sublimaze)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

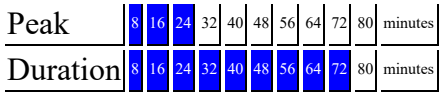
Route(s):

- IM/SQ, IN, IO, IV,

Pharmacodynamics (class and mechanism of action):

- Narcotic analgesic (Binds to opiate receptors. Analgesia and sedation. Central nervous system depressant. Decreased sensitivity to Pain.).

Pharmacokinetics:

- **Half-life**: 3.5 hours.
- **Onset time**:
  - **IM**: 7-15 minutes.
  - **IN**: 5-15 minutes.
  - **IO/IV**: 1-2 minutes.
- **Peak action time**:
  - **IM/IN**: 20-30 minutes.
  - **IO/IV**: 3-5 minutes.
- **Duration of action**:
  - **IM**: 1-2 hours.
  - **IN**: Unknown.
  - **IO/IV**: 30-60 minutes.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-044 - Airway: RSI.
- Protocol 2-220 - Chest Pain / Suspected Cardiac Event.
- Protocol 2-484 - Head Trauma.
- Protocol 2-660 - Pain Control.
- Equipment 8-288 - Endotracheal Tube.
- Equipment 8-486 - King Airway.
- Equipment 8-522 - Laryngeal Mask Airway (LMA).

Contraindications:

- Hypersensitivity.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- Medication 7-270 - Heparin.

Precautions and Adverse Effects:

- Respiratory depression may last longer than the analgesic effects.
- Narcan should be available.
- Give slowly, rapid injection could cause rigid chest syndrome (usually occurs when dose is greater than 200 mcg).
- Use with caution in Traumatic Brain Injury.
- May cause Bradycardia, respiratory depression, euphoria, hypotension, Nausea, Vomiting, dizziness, sedation, Tachycardia, palpitations, Hypertension, diaphoresis, syncope.
- There may be a possible beneficial effect in Pulmonary Edema.

Antidote:

- Medication 7-400 - Narcan.

Controlled Substance Information:

Schedule II
- High potential for abuse. Abusing the drug can cause severe physical and mental addiction.

- **DEA number**: 9801.
- **Narcotic**: Yes.
- **Street names**: Apache, China Girls, China Town, China White, Dance Fever, Fent, Friend, Goodfellas, Great Bear, HeMan, Jackpot, King Ivory, Magic, Murder 8, Perc-A-Pop, Poison, Tango and Cash, TNT.

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Medication 7-240 - Glucagon

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

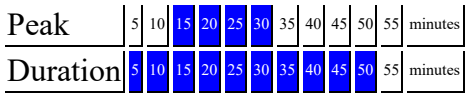
Route(s):

- IM/SQ, IO, IV,

Pharmacodynamics (class and mechanism of action):

- Other endocrine/metabolism (Converts hepatic glycogen to Glucose).

Pharmacokinetics:

- **Half-life**: 8-18 minutes.
- **Onset time**:
  - **IM**: 4-10 minutes.
  - **IV**: Immediate.
- **Peak action time**:
  - **IM**: 13 minutes.
  - **IV**: 30 minutes.
- **Duration of action**:
  - **IM**: 12-32 minutes.
  - **IV**: 60-90 minutes.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-572 - Hypoglycemia.
- Protocol 2-638 - Overdose / Toxic Ingestion.

Contraindications:

- Pheochromocytoma (adrenal tumor).
- Insulinoma (pancreas tumor).

Pregnancy Risk Factor:

Category B

No risk in other studies: Animal reproduction studies have failed to demonstrate a risk to the fetus and there are no adequate and well-controlled studies in pregnant women, or animal studies have shown adverse effects, but adequate and well-controlled studies in pregnant women have failed to demonstrate a risk to the fetus in any trimester.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- May cause severe rebound Hyperglycemia , hypotension, Nausea, Vomiting, Uticaria, Respiratory Distress, and/or Tachycardia.

Antidote:

- NA.

Controlled Substance Information:

Not a scheduled drug
- The DEA and FDA have not identified this drug with a schedule classification.

- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-250 - Glucose

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Route(s):

- PO,

Pharmacodynamics (class and mechanism of action):

- Carbohydrate (Elevates blood sugar levels).

Pharmacokinetics:

- **Half-life**: NA.
- **Onset time**: NA.
- **Peak action time**: NA.
- **Duration of action**: NA.
- Peak 1 minutes
  Duration 1 minutes

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-572 - Hypoglycemia.

Contraindications:

- Patients with altered level of consciousness that cannot protect their airway.

Preganancy Risk Factor:

No Category
FDA has not yet classified the drug into a specified pregnancy category.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- If alcohol abuse or malnourishment is suspected, then Thiamine should be administered to facilitate Glucose use by cells.

Antidote:

- NA.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-260 - Haldol (Haloperidol)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Route(s):

- IM/SQ, IO, IV,

Pharmacodynamics (class and mechanism of action):

- Antipsychotic (Competitive postsynaptic dopamine receptor blocker).

Pharmacokinetics:

- **Half-life**: 21 hours.
- **Onset time**: Unknown.
- **Peak action time**:
  - **IM**: 10-20 minutes.
  - **IO/IV**: Unknown.
- **Duration of action**: Unknown.
-

Peak	126	252	378	504	630	756	882	1008	1134	1260	1386	minutes
Duration	126	252	378	504	630	756	882	1008	1134	1260	1386	minutes

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-110 - Behavioral.

Contraindications:

- Parkinson’s disease.
- Severe CNS depression.
- Comatose states.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- Use caution with severe cardiovascular disorders due to possible hypotension. If vasopressor is needed, use Levophed.
- May prolong QT interval. 12-lead is indicated after administration.
- May cause drowsiness, tardive dyskinesia, hypotension, Hypertension, Tachycardia, and/or Torsades de Pointes.
- **Possible Extra-Pyramidal Symptoms (EPS) / dystonic reactions**:
  - EPS is a movement disorder such as the inability to move or restlessness.
  - Treat with Medication 7-090 - Benadryl.

Antidote:

- Medication 7-090 - Benadryl.

Controlled Substance Information:

Not a scheduled drug
- The DEA and FDA have not identified this drug with a schedule classification.

- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-270 - Heparin

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

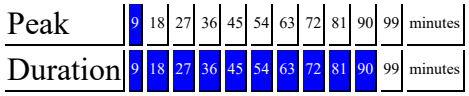
Route(s):

- IV,

Pharmacodynamics (class and mechanism of action):

- Anticoagulant (Inhibition of Thrombin. Acts on antithrombin III to reduce ability to clot.).

Pharmacokinetics:

- **Half-life**: 1-2 hours.
- **Onset time**: Immediate.
- **Peak action time**: Unknown.
- **Duration of action**: Variable.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-220 - Chest Pain / Suspected Cardiac Event.

Contraindications:

- Previously given low molecular weight Heparin.
- Dissecting thoracic aortic aneurysm.
- Peptic ulceration.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- Medication 7-080 - Atropine.
- Medication 7-160 - Dilaudid.
- Medication 7-230 - Fentanyl.
- Medication 7-390 - Morphine.
- Medication 7-480 - Phenergan.
- Medication 7-600 - Versed.

Precautions and Adverse Effects:

- Use caution with oral anticoagulants and bleeding.

Antidote:

- NA.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-280 - Hydralazine (Apresoline)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

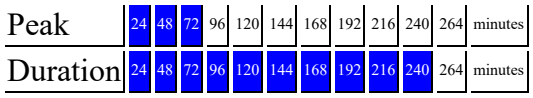
Route(s):

- IM/SQ, IO, IV,

Pharmacodynamics (class and mechanism of action):

- Vasodilator (Directly dilates peripheral blood vessels.).

Pharmacokinetics:

- **Half-life**: 3-7 hours.
- **Onset time**:
  - **IM**: 10-30 minutes.
  - **IO/IV**: 5-20 minutes.
- **Peak action time**:
  - **IM**: 60 minutes.
  - **IO/IV**: 10-80 minutes.
- **Duration of action**: 2-6 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-528 - Hypertension.

Contraindications:

- Taking diazoxide or MAOIs.
- Coronary artery disease.
- Stroke.
- Angina.
- Aortic aneurysm.
- Heart disease.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- May cause reflex Tachycardia, headache, Angina, flushing, palpitations, anorexia, Nausea, Vomiting, diarrhea, hypotension, syncope, vasodilation, edema, and/or paresthesias.

Antidote:

- NA.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-300 - Ibuprofen (Advil, Pediaprofen)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

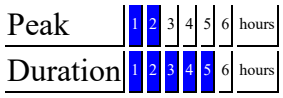
Route(s):

- PO,

Pharmacodynamics (class and mechanism of action):

- NSAID (Inhibits cyclooxygenase and lipoxygenase and reduces prostaglandin synthesis.).

Pharmacokinetics:

- **Half-life**: 3-4 hours.
- **Onset time**:
  - **Analgesia**: 30-60 minutes.
  - **Anti-Inflammatory**: 7 days.
- **Peak action time**:
  - **Analgesia**: 1-2 hours.
  - **Anti-Inflammatory**: 1-2 weeks.
- **Duration of action**:
  - **Analgesia**: 4-6 hours.
  - **Anti-Inflammatory**: Unknown.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-440 - Fever.
- Medication 7-010 - Acetaminophen.

Contraindications:

- Pregnancy.
- ASA/NSAID-induced Asthma.
- History of GI bleeds.
- Renal insufficiency.

Preganancy Risk Factor:

Category D

Positive evidence of risk: There is positive evidence of human fetal risk based on adverse reaction data from investigational or marketing experience or studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- Caution in Hypertension and CHF.
- Avoid in patients currently taking anticoagulants such as Coumadin.
- May cause Anaphylaxis, Abdominal Pain, Nausea, headache, dizziness, and/or rash.

Antidote:

- NA.

Controlled Substance Information:

Not a scheduled drug
- The DEA and FDA have not identified this drug with a schedule classification.

- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-320 - Ipratropium (Atrovent)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

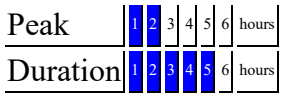
Route(s):

- Neb,

Pharmacodynamics (class and mechanism of action):

- Acetylcholine antagonist via blockade of muscarinic cholinergic receptors. Blocking cholinergic receptors decreases the production of cyclic guanosine monophosphate (cGMP). This decrease in the lung airways will lead to decreased contraction of the smooth muscles. The actions of intranasal ipratropium mimic the action of atropine by inhibiting salivary and mucous glands secretions as well as dilating bronchial smooth muscle.
- Compared to atropine, orally inhaled ipratropium is a more potent antimuscarinic and bronchial dilator of smooth muscle. Intranasal ipratropium produces a local parasympathetic response, leading to decreased water secretions of mucosal glads of the nasal system alleviating symptoms of rhinorrhea.

Pharmacokinetics:

- **Half-life**: 2 hours.
- **Onset time**: 5-15 minutes.
- **Peak action time**: 1-2 hours.
- **Duration of action**: 3-6 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Not in current standing order protocols.

Contraindications:

- Hypersensitivity to Ipratropium, Albuterol, or Atropine.
- Allergy to soybeans or peanuts.
- Closed angle glaucoma.
- Bladder neck obstruction.
- Prostatic hypertrophy.

Preganancy Risk Factor:

Category B

No risk in other studies: Animal reproduction studies have failed to demonstrate a risk to the fetus and there are no adequate and well-controlled studies in pregnant women, or animal studies have shown adverse effects, but adequate and well-controlled studies in pregnant women have failed to demonstrate a risk to the fetus in any trimester.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- Blood pressure, pulse, and ECG should be monitored.
- Use caution in patients with known heart disease.
- May cause paradoxical acute bronchospasm.
- May cause palpitations, Anxiety, headache, dizziness, sweating, Tachycardia, cough, Nausea, and/or arrhythmias.

Antidote:

- Physostigmine (Antilirium).

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.

- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-330 - Ketamine (Ketalar)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

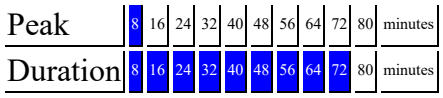
Route(s):

- IM/SQ, IO, IV,

Pharmacodynamics (class and mechanism of action):

- Dissociative anesthetic (NMDA receptor antagonist. Produces state of anesthesia while maintaining airway reflexes, heart rate, and blood pressure. Acts on cortex and limbic receptors, producing dissociative analgesia and sedation. Higher doses act on the μ (Mu) opiod receptor.).

Pharmacokinetics:

- **Half-life**: 2.5-3 hours.
- **Onset time**:
  - **IM**: 1-5 minutes.
  - **IV**: Seconds.
- **Peak action time**: Unknown.
- **Duration of action**:
  - **IM**: 0.5-2 hours.
  - **IV**: Unknown.
- 

Dosing:

- Use IDEAL body weight for analgesic dosing, NOT actual body weight.
- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-044 - Airway: RSI.
- Protocol 2-110 - Behavioral.
- Protocol 2-660 - Pain Control.

Contraindications:

- Hypersensitivity.

Pregnancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- NA.

Precautions and Adverse Effects:

- Calculate analgesic dose based on **IDEAL** body weight.
- Slow push to avoid apnea.
- Use caution in patients where significant Hypertension would be hazardous (i.e. Stroke, Head Trauma, ICP, MI).
- May cause glaucoma, hypovolemia, dehydration, cardiac disease, emergence phenomena, Hypertension, Tachycardia, hypotension, Bradycardia, arrhythmias, respiratory depression, apnea, laryngospasms, tonic/clonic movements, and/or Vomiting.

Antidote:

- NA.

Controlled Substance Information:

- Schedule III
  - Medium potential for abuse. Abusing the drug can cause severe mental addiction, or moderate physical addiction.
- **DEA number**: 7285.
- **Narcotic**: No.
- **Street names**: Black Hole, Bump, Cat Killer, Cat Valium, Coke, Green, Honey Oil, Jet, K Hole, K, Ket, Kit Kat, Kitty Flipping, Purple, Special K, Special LA, Super Acid, Super C, Vitamin K.

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Medication 7-340 - Labetalol (Nomadyne)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

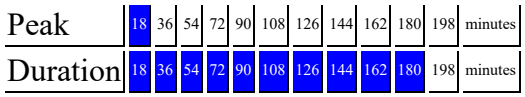
Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Antihypertensive (Alpha and beta blockade. Binds with α1 (alpha-1), β1 (beta-1), and β2 (beta-2) receptors in vascular smooth muscle. Inhibits strength of heart's contractions and rate.).

Pharmacokinetics:

- **Half-life**: 5.5 hours.
- **Onset time**: 2-5 minutes.
- **Peak action time**: 5 minutes.
- **Duration of action**: 2-4 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-528 - Hypertension.

Contraindications:

- Bronchial Asthma.
- Heart block.
- Cardiogenic shock.
- Bradycardia.
- Hypotension.
- Pulmonary Edema.
- Heart failure.
- Sick Sinus Syndrome.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- Medication 7-360 - Lasix.

Precautions and Adverse Effects:

- Blood pressure should be constantly monitored.
- Cannot give at the same time with Lasix.
- May cause dizziness, flushing, Nausea, Vomiting, headaches, weakness, postural hypotension, hypotension, Bronchospasm, arrhythmia, Bradycardia, AV block

Antidote:

- Medication 7-200 - Epinephrine.
- Medication 7-240 - Glucagon.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-350 - Lactated Ringers (LR)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Crystalloid solution.

Pharmacokinetics:

- **Half-life**: NA.
- **Onset time**: NA.
- **Peak action time**: NA.
- **Duration of action**: NA.
- Peak 1 minutes
  Duration 1 minutes

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Virtually all protocols.

Contraindications:

- None.

Preganancy Risk Factor:

No Category
FDA has not yet classified the drug into a specified pregnancy category.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- May cause Pulmonary Edema.
- May precipitate in IV line when mixed with other medications.

Antidote:

- None.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-360 - Lasix (Furosemide)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

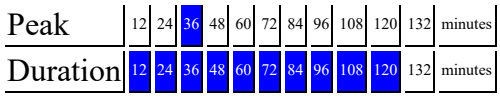
Route(s):

- IM/SQ, IO, IV,

Pharmacodynamics (class and mechanism of action):

- Potent diuretic (Inhibits reabsorption of sodium chloride. Promotes prompt diuresis. Vasodilation. Decreases absorption of water and increased production of urine.).

Pharmacokinetics:

- **Half-life**: 30 minutes.
- **Onset time**: 5 minutes.
- **Peak action time**: 30 minutes.
- **Duration of action**: 2 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Not in current standing order protocols.

Contraindications:

- Pregnancy.
- Dehydration.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- Some studies suggest prehospital diagnosis of heart failure vs. pneumonia is only correct 60% of the time. Routine administration of Lasix to patients in suspected CHF should be discontinued.
- Should be protected from light.
- Use caution with dehydration.
- May prolong QT interval. 12-lead is indicated after administration.
- May cause hypotension.

Antidote:

- None.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-370 - Lidocaine (Xylocaine)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

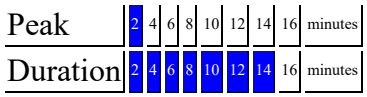
Route(s):

- ET, IO, IV, Topical

Pharmacodynamics (class and mechanism of action):

- Antiarrhythmic (Blocks sodium channels, increasing recovery period after repolarization. Suppresses automaticity in the His-Purkinje system and depolarization in the ventricles.).

Pharmacokinetics:

- **Half-life**: 1.5-2 hours.
- **Onset time**: Immediate.
- **Peak action time**: Immediate.
- **Duration of action**: 10-20 minutes.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-968 - V-Fib / Pulseless V-Tach.
- Equipment 8-135 - Intraosseus Needle.

Contraindications:

- High degree heart blocks.
- PVCs in conjunction with Bradycardia.
- Bleeding.

Pregnancy Risk Factor:

Category B

No risk in other studies: Animal reproduction studies have failed to demonstrate a risk to the fetus and there are no adequate and well-controlled studies in pregnant women, or animal studies have shown adverse effects, but adequate and well-controlled studies in pregnant women have failed to demonstrate a risk to the fetus in any trimester.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- Monitor for CNS toxicity.
- Liver disease or greater than 70yrs old: reduce dosage by 50%.
- Use with caution in Bradycardia, hypovolemia, shock, Adams-Stokes, Wolff-Parkinson-White.
- May cause Anxiety, drowsiness, dizziness, confusion, Nausea, Vomiting, convulsions, widening of QRS, arrhythmias, and/or hypotension.

Antidote:

- None.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.

- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-380 - Magnesium Sulfate

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Anticonvulsant. Smooth muscle relaxer. (CNS depressant. Cofactor in neurochemical transmission and muscular excitability. Controls Seizure by blocking peripheral neuromuscular transmission. Peripheral vasodilator and platelet inhibitor.).

Pharmacokinetics:

- **Half-life**: Unknown.
- **Onset time**:
  - **IM**: 1 hour.
  - **IV**: 1-2 minutes.
- **Peak action time**: Unknown.
- **Duration of action**: Unknown.
- Peak 1 minutes
  Duration 1 minutes

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-528 - Hypertension.
- Protocol 2-770 - Respiratory Distress.
- Protocol 2-946 - Ventricular Tachycardia.
- Protocol 2-968 - V-Fib / Pulseless V-Tach.

Contraindications:

- Heart block.
- Recent MI.
- Renal insufficiency or renal failure.
- GI obstruction.

Preganancy Risk Factor:

Category A

No risk in controlled human studies: Adequate and well-controlled human studies have failed to demonstrate a risk to the fetus in the first trimester of pregnancy (and there is no evidence of risk in later trimesters).

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- Do not exceed 1 g per minute dose rate. Monitor for Magnesium toxicity.
- Use caution with Digitalis and hypotension.
- May cause Respiratory depression and/or drowsiness.

Antidote:

- Medication 7-100 - Calcium Chloride.
- Medication 7-240 - Glucagon.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.

- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-390 - Morphine

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

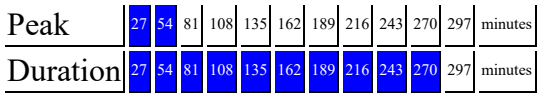
Route(s):

- IM/SQ, IO, IV,

Pharmacodynamics (class and mechanism of action):

- Opiate. (CNS depressant. Causes peripheral vasodilation. Decreases sensitivity to Pain. Binds with opiod receptors. Depresses vasomotor centers of brain. Releases histamine. Reduces stimulation of sympathetic nervous system.).

Pharmacokinetics:

- **Half-life**: 2-3 hours.
- **Onset time**:
  - **IM**: 10-30 minutes.
  - **IV**: 5 minutes.
- **Peak action time**:
  - **IM**: 30-60 minutes.
  - **IV**: 20 minutes.
- **Duration of action**: 4-5 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-220 - Chest Pain / Suspected Cardiac Event.
- Protocol 2-660 - Pain Control.

Contraindications:

- Head Injury.
- Volume depletion.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- Medication 7-270 - Heparin.
- Medication 7-480 - Phenergan.

Precautions and Adverse Effects:

- May worsen Bradycardia and heart block in patients with acute inferior wall MI.
- Use caution with acute Asthma.
- May cause dizziness, ALOC, respiratory depression, hypotension, Nausea, Vomiting, lightheadedness, sedation, diaphoresis, euphoria, and/or dysphoria.
- Possible beneficial effect in Pulmonary Edema.

Antidote:

- Medication 7-090 - Benadryl may be used to reduce the histamine reaction caused by Morphine and reduce the incidence and severity of hypotension.
- Medication 7-400 - Narcan.

Controlled Substance Information:

Schedule II
  - High potential for abuse. Abusing the drug can cause severe physical and mental addiction.
- **DEA number**: 9300.
- **Narcotic**: Yes.
- **Street names**: C & M, Cotton Brothers, Dreamer, Emsel, First Line, God's Drug, Hows, M, Miss Emma, Mister Blue, Morf, Morpho, MS, New Jack Swing, Unkie.

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Medication 7-400 - Narcan (Naloxone)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

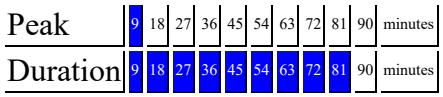
Route(s):

- ET, IM/SQ, IN, IO, IV,

Pharmacodynamics (class and mechanism of action):

- Narcotic antagonist. (Binds to opiod receptor and blocks the effect of Narcotics.).

Pharmacokinetics:

- **Half-life**:
  - **Adults**: 80-90 minutes.
  - **Neonates**: 3 hours.
- **Onset time**:
  - **IM**: 2-5 minutes.
  - **IV**: 1-2 minutes.
- **Peak action time**: 5-15 minutes.
- **Duration of action**: Variable.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-198 - Cardiac Arrest.
- Protocol 2-616 - Newly Born.
- Protocol 2-638 - Overdose / Toxic Ingestion.
- Medication 7-230 - Fentanyl.
- Medication 7-390 - Morphine.

Contraindications:

- Hypersensitivity.

Preganancy Risk Factor:

Category B

No risk in other studies: Animal reproduction studies have failed to demonstrate a risk to the fetus and there are no adequate and well-controlled studies in pregnant women, or animal studies have shown adverse effects, but adequate and well-controlled studies in pregnant women have failed to demonstrate a risk to the fetus in any trimester.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- Short acting, should be augmented every 5 minutes.
- Monitor airway and ventilatory status.
- Patients who have gone from a state of somnolence from a Narcotic Overdose may become wide awake and Combative.
- May cause withdrawal effects, Nausea, Vomiting, restlessness, diaphoresis, Tachycardia, Hypertension, tremulousness, Seizure, and/or Cardiac Arrest.

Antidote:

- None.

Controlled Substance Information:

Not a scheduled drug
- The DEA and FDA have not identified this drug with a schedule classification.

- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-410 - Neo-Synephrine (Phenylephrine)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

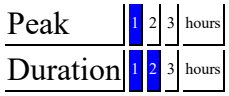
Route(s):

- IN,

Pharmacodynamics (class and mechanism of action):

- Vasoconstrictor. (α (alpha) agonist. Topical vasoconstriction.).

Pharmacokinetics:

- **Half-life**: 2.1-3.4 hours.
- **Onset time**: Rapid.
- **Peak action time**: Unknown.
- **Duration of action**: 0.5-4 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-924 - Universal Patient Care.
- Equipment 8-288 - Endotracheal Tube.

Contraindications:

- Hypertension.
- Thyroid disease.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- Use caution with enlarged prostate with dysuria.
- May cause nasal burning, stinging, sneezing, and/or increased nasal discharge.

Antidote:

- None.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-420 - Nitroglycerin (Nitrostat, Nitrolingual, Tridil)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

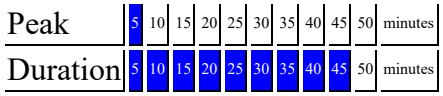
Route(s):

- IO, IV, PO, SL, Topical

Pharmacodynamics (class and mechanism of action):

- Nitrate vasodilator. (Smooth muscle relaxant. Dilates coronary and systemic arteries.).

Pharmacokinetics:

- **Half-life**: 1-4 hours.
- **Onset time**:
  - **IV**: Immediate.
  - **PO**: 20-45 minutes.
  - **SL**: 1-3 minutes.
  - **Topical**: 30 minutes.
- **Peak action time**: Unknown.
- **Duration of action**:
  - **IV**: 3-5 minutes.
  - **PO**: 3-8 hours.
  - **SL**: 30-60 minutes.
  - **Topical**: 2-24 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-220 - Chest Pain / Suspected Cardiac Event.
- Protocol 2-528 - Hypertension.
- Protocol 2-726 - Pulmonary Edema.

Contraindications:

- Age less than 12 yrs.
- Hypotension.
- Severe Bradycardia or Tachycardia.
- ICP.
- Patients taking erectile dysfunction medications: Phosphodiesterase inhibitor within 48 hours (i.e. Viagra, Levitra, Cialis).

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- Patients with inferior wall MI and right ventricular involvement may have more pronounced hemodynamic response. Must have IV access prior to administration. Monitor blood pressure.
- Drug must be protected from light.
- Expires quickly once bottle is opened.
- May cause syncope, headache, dizziness, hypotension, Bradycardia, lightheadedness, and/or flushing.

Antidote:

- None.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-430 - Norepinephrine (Levophed)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

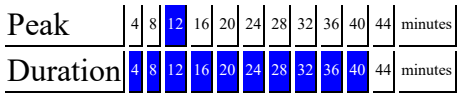
Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Sympathomimetic amine. (Stimulates α (alpha) and β (beta) adrenergic receptors. Increases cardiac contractility. Causes peripheral vasoconstriction. Limited chronotropic effects.).

Pharmacokinetics:

- **Half-life**: 1-2 minutes.
- **Onset time**: 1-2 minutes.
- **Peak action time**: 10 minutes.
- **Duration of action**: 20-60 minutes.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Not in current standing order protocols.

Contraindications:

- Allergies to sulfa.
- Patients taking MAOIs or triptyline/imipramine antidepressants.
- Hypotension due to hypovolemia (trauma or dehydration).

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- May cause ischemic injury due to vasoconstriction, Bradycardia, arrhythmias, Anxiety, headaches, Respiratory Difficulty, and/or extravasation necrosis at injection site.

Antidote:

- Rigitine.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-440 - Normal Saline (NS, Sodium Chloride)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Route(s):

- Inhalation, IO, IV, Neb, Topical

Pharmacodynamics (class and mechanism of action):

- Crystalloid solution.

Pharmacokinetics:

- **Half-life**: NA.
- **Onset time**: NA.
- **Peak action time**: NA.
- **Duration of action**: NA.
- Peak 1 minutes
  Duration 1 minutes

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Virtually all protocols for IV access and irrigation.

Contraindications:

- None.

Preganancy Risk Factor:

No Category
FDA has not yet classified the drug into a specified pregnancy category.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- May cause Pulmonary Edema.

Antidote:

- Rigitine.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-460 - Oxygen

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Route(s):

- ET, IN, Inhalation, Neb,

Pharmacodynamics (class and mechanism of action):

- Necessary for aerobic cellular metabolism.

Pharmacokinetics:

- **Half-life**: NA.
- **Onset time**: NA.
- **Peak action time**: NA.
- **Duration of action**: NA.
- Peak 1 minutes
  Duration 1 minutes

Dosing:

- Refer to specific protocol(s) for dose(s).
- **Generalized dosing chart**:
Condition	Target SpO2
Anaphylaxis	100%
Anemia	100%
Toxin (i.e. Carbon Monoxide, Cyanide, Smoke Inhalation, etc.	100%
Cardiac Chest Pain	90% - 99%
Dyspnea	88% - 99%
ROSC	92% - 98%
Stroke	94% - 99%
Trauma	100%

Indications:

- Virtually all protocols where SpO2 is less than 88%. The overall goal of Oxygen therapy is to avoid tissue hypoxia.
- Arterial hypoxemia or a failure of the Oxygen-hemoglobin transport system.
    - **Arterial hypoxemia**: Oxygen saturation of less than 88% and may result from impaired gas exchange in the lung, inadequate alveolar ventilation or a shunt that allows venous blood into the arterial circulation
    - **Failure of the Oxygen-hemoglobin transport system**: Reduced Oxygen carrying capacity in blood (i.e. anemia, carbon monoxide poisoning) or reduced tissue perfusion (i.e. shock).

. .

Contraindications:

- Known Paraquat Poisoning unless SpO2 is less than 88%.

Preganancy Risk Factor:

No Category
FDA has not yet classified the drug into a specified pregnancy category.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- Humidify when providing high-flow rates over extended periods of time.
- Hyperoxia resulting from high FiO2 administration producing saturations higher than 94-96% can cause structural damage to the lungs and post reperfusion tissue damage.
- Use caution with patients who are chronically hypoxic (i.e. COPD, ALS, MS) have shifted their Oxygen dissociation curve and require lower Oxygen saturations. Prolonged Oxygen therapy may depress ventilator drive
- High blood Oxygen levels may disrupt the ventilation / perfusion balance and cause an increase in dead space to tidal volume ratio and increase PCO2.
- May cause drying of mucous membranes.

Antidote:

- NA.

Controlled Substance Information:

Not a scheduled drug
- The DEA and FDA have not identified this drug with a schedule classification.

- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

Medication 7-470 - Oxytocin (Pitocin)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

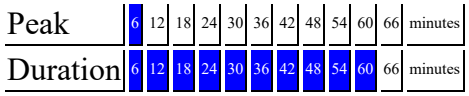
Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Hormone. (Causes uterine contraction. Causes lactation. Slows postpartum Vaginal Bleeding.)

Pharmacokinetics:

- **Half-life**: 3-5 minutes.
- **Onset time**: Immediate.
- **Peak action time**: Unknown.
- **Duration of action**: 1 hour.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-462 - Gynecologic Emergencies.

Contraindications:

- Any condition other than postpartum bleeding.
- Cesarean section.

Preganancy Risk Factor:

No Category
FDA has not yet classified the drug into a specified pregnancy category.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- It is essential to assure that the placenta has delivered and that there is not another fetus present before administering.
- Overdosage can cause uterine rupture.
- Use caution with Hypertension.
- May prolong QT interval. 12-lead is indicated after administration.
- May cause Anaphylaxis and/or cardiac arrhythmias.

Antidote:

- None.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-480 - Phenergan (Promethazine)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

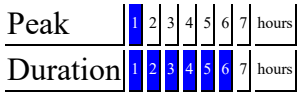
Route(s):

- IM/SQ, IO, IV,

Pharmacodynamics (class and mechanism of action):

- Anti-emetic. (Decreases Nausea and Vomiting by antagonizing H1 receptors.)

Pharmacokinetics:

- **Half-life**: 16-19 hours.
- **Onset time**:
  - **IM**: 20 minutes.
  - **IV**: 3-5 minutes.
- **Peak action time**: Unknown.
- **Duration of action**: Less than 12 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-990 - Vomiting.

Contraindications:

- ALOC.
- Jaundice.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- Medication 7-270 - Heparin.
- Medication 7-390 - Morphine.

Precautions and Adverse Effects:

- Use caution with Seizure Disorder.
- May prolong QT interval. 12-lead is indicated after administration.
- May cause Excitation.
- **Possible Extra-Pyramidal Symptoms (EPS) / dystonic reactions**:
  - EPS is a movement disorder such as the inability to move or restlessness.
  - Treat with Medication 7-090 - Benadryl.

Antidote:

- None.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-490 - Procainamide (Pronestyl)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Antiarrhythmic. (Slows conduction through myocardium. Elevates Ventricular Fibrillation threshold. Suppresses Ventricular Ectopy.)

Pharmacokinetics:

- **Half-life**: 2.5-4.5 hours.
- **Onset time**: Immediate.
- **Peak action time**: Immediate.
- **Duration of action**: Unknown.
- Peak 1 minutes
  Duration 1 minutes

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Not in current standing order protocols.

Contraindications:

- High degree heart blocks.
- PVCs in conjunction with Bradycardia.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- Dosage should not exceed 17 mg/kg.
- Monitor for CNS toxicity.
- May prolong QT interval. 12-lead is indicated after administration.
- May cause Anxiety, Nausea, Convulsions, and/or widening QRS.

Antidote:

- None.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-500 - Propofol (Diprivan)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

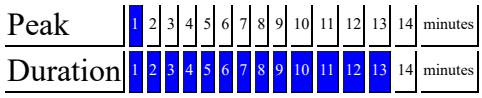
Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Anesthetic. (Produces rapid and brief state of general anesthesia.)

Pharmacokinetics:

- **Half-life**:
  - **Initial phase (distribution)**: 2-10 minutes.
  - **Second phase (redistribution)**: 21-70 minutes.
  - **Terminal phase (elimination)**: 1.5-31 hours.
- **Onset time**: Less than 40 seconds.
- **Peak action time**: Unknown.
- **Duration of action**: 10-15 minutes.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Not in current standing order protocols.

Contraindications:

- Hypovolemia.
- Sensitivity to soybean oil or eggs.

Preganancy Risk Factor:

Category B

No risk in other studies: Animal reproduction studies have failed to demonstrate a risk to the fetus and there are no adequate and well-controlled studies in pregnant women, or animal studies have shown adverse effects, but adequate and well-controlled studies in pregnant women have failed to demonstrate a risk to the fetus in any trimester.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- May cause apnea, arrhythmias, Asystole, hypotension, and/or Hypertension.

Antidote:

- None.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-505 - Reglan (Metoclopramide)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

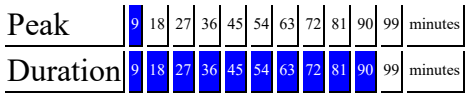
Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Gut motility stimulator. (Increases muscle contractions in the upper digestive tract. This speeds up the rate at which the stomach empties into the intestines. Also blocks dopamine receptors in the brain.)

Pharmacokinetics:

- **Half-life**: 4-6 hours.
- **Onset time**: 1-3 minutes.
- **Peak action time**: Unknown.
- **Duration of action**: 1-2 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Not in current standing order protocols.

Contraindications:

- Bleeding or blockage in stomach or intestines.
- Epilepsy or other Seizure disorder.
- Adrenal gland tumor (pheochromocytoma).

Preganancy Risk Factor:

Category B

No risk in other studies: Animal reproduction studies have failed to demonstrate a risk to the fetus and there are no adequate and well-controlled studies in pregnant women, or animal studies have shown adverse effects, but adequate and well-controlled studies in pregnant women have failed to demonstrate a risk to the fetus in any trimester.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- High doses or long-term use can cause serious movement disorders that may not be reversible.
- Causes increased aldosterone and fluid retention.
- Use with caution with renal impairment, Hypertension, CHF, and cirrhosis.
- May cause neuroleptic malignant syndrome, Hyperthermia, muscle rigidity, and/or akathisia (fidgeting).
- **Possible Extra-Pyramidal Symptoms (EPS) / dystonic reactions**:
  - EPS is a movement disorder such as the inability to move or restlessness.
  - Treat with Medication 7-090 - Benadryl.

Antidote:

- None.

Controlled Substance Information:

Not a scheduled drug
- The DEA and FDA have not identified this drug with a schedule classification.

- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-520 - Rocuronium (Zemuron)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

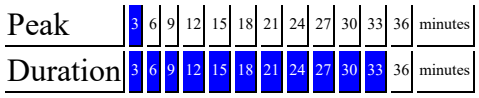
Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Non-depolarizing paralytic. (Neuromuscular blockade. Binds to post-synaptic muscle receptor sites. Antagonizes acetylcholine at the motor end plate, producing skeletal muscle paralysis.)

Pharmacokinetics:

- **Half-life**: 66-80 minutes.
- **Onset time**: 1 minute.
- **Peak action time**:
  - **Adults**: 1-3.7 minutes.
  - **Pediatrics**: 0.5-1 minute.
- **Duration of action**:
  - **Adults**: 31 minutes.
  - **Pediatrics**: 26-40 minutes.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-044 - Airway: RSI.

Contraindications:

- Unable to ventilate the patient.
- Sensitivity to bromides.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- Calculate dose based on ideal body weight.
- Patient will be paralyzed and apneic for up to 30 minutes.
- Use caution with heart disease and liver disease.
- May cause muscle paralysis, apnea, Dyspnea, respiratory depression, Tachycardia, and/or uticaria.

Antidote:

- None.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-530 - Sodium Bicarbonate (Soda)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Alkalinizing agent. (Combines with excessive acids to form a weak volatile acid. Increases pH.)

Pharmacokinetics:

- **Half-life**: Unknown.
- **Onset time**: Immediate.
- **Peak action time**: Immediate.
- **Duration of action**: Unknown
- Peak 1 minutes
  Duration 1 minutes

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-198 - Cardiac Arrest.
- Protocol 2-396 - Extremity Trauma.
- Protocol 2-638 - Overdose / Toxic Ingestion.

Contraindications:

- Alkalotic states.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- Medication 7-090 - Benadryl.
- Medication 7-100 - Calcium Chloride.

Precautions and Adverse Effects:

- Correct dosage is essential.
- Can deactivate catecholamines (i.e. Dopamine, Epinephrine, Norepinephrine).
- Delivers large Sodium load.
- Can worsen acidosis if not Intubated and adequately ventilated.
- May cause alkalosis, hypernatremia, fluid retention, and/or peripheral edema.

Antidote:

- None.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-540 - Solu-Medrol (Methylprednisolone)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

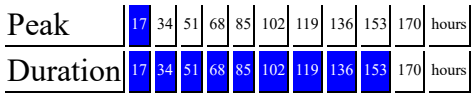
Route(s):

- IM/SQ, IO, IV,

Pharmacodynamics (class and mechanism of action):

- Corticosteroid. (Anti-inflammatory. Immune suppressant.)

Pharmacokinetics:

- **Half-life**: 18-36 hours.
- **Onset time**: 2-5 hours.
- **Peak action time**: Immediate.
- **Duration of action**: 1 week.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-066 - Allergic Reaction.
- Protocol 2-770 - Respiratory Distress.

Contraindications:

- None in emergency setting.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- Must be reconstituted and used properly.
- Use caution with Cushing's syndrome, fungal infection, measles, varicella, active Infections, renal disease, penetrating Spinal Cord Injury, Hypertension, Seizure, and CHF.
- May cause GI bleeding, prolonged wound healing, suppression of natural steroids, Depression, Euphoria, headache, restlessness, Hypertension, Bradycardia, Nausea, Vomiting, swelling, diarrhea, and/or weakness.

Antidote:

- None.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-550 - Succinylcholine (Anectine)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

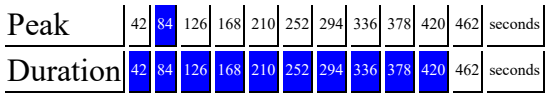
Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Depolarizing neuromuscular blocker. (Ultra-short acting. Competes with the acetylcholine receptor of the motor end plate on the muscle cell, resulting in muscle paralysis.)

Pharmacokinetics:

- **Half-life**: 24-70 seconds.
- **Onset time**: 30-60 seconds.
- **Peak action time**: 1-2 minutes.
- **Duration of action**: 4-10 minutes.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Not in current standing order protocols.

Contraindications:

- Family history of malignant Hyperthermia.
- Penetrating Eye Injuries.
- Narrow angle glaucoma.
- Severe Burns or Crush Injuries more than 48 hours old.
- CVA more than three days old.
- Rhabdomyolysis.
- Pseudo cholinesterase deficiency.
- Hyperkalemia.
- Neuromuscular disorder (i.e. muscular dystrophy).

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- Calculate dose based on ideal body weight.
- Use caution with electrolyte imbalances, renal, hepatic, pulmonary, metabolic, cardiovascular disorders, fractures, Spinal Cord Injuries, severe anemia, dehydration, collagen disorders, or porphyria.
- Causes initial transient contractions and fasciculations followed by sustained flaccid skeletal muscle paralysis.
- May increase Vagal Tone, especially in children.
- May cause Apnea, Hypertension, hypotension, dysrhythmias, Nausea, Vomiting, hiccups, snoring, and/or malignant Hyperthermia.

Antidote:

- Dantroline.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-560 - Tetracaine

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

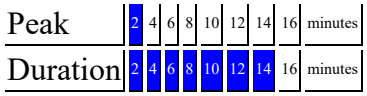
Route(s):

- Topical

Pharmacodynamics (class and mechanism of action):

- Anesthetic. (Local anesthesia.)

Pharmacokinetics:

- **Half-life**: 1.8 hours.
- **Onset time**: 15 seconds.
- **Peak action time**: Unknown.
- **Duration of action**: 10-20 minutes.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-418 - Eye Trauma.
- Equipment 8-576 - Morgan Lens.

Contraindications:

- Hypersensitivity.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- Patient will be unaware of objects touching their Eye. Be careful to protect the eye from foreign debris and from the patient rubbing eyes.
- May cause Burning, conjunctival redness, photophobia, and/or lacrimation.

Antidote:

- Dantroline.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-570 - Thiamine (Vitamin B1)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Route(s):

- IM/SQ, IO, IV,

Pharmacodynamics (class and mechanism of action):

- Vitamin. (Allows normal breakdown of Glucose. Thiamine combines with adenosine triphosphate to produce thiamine diphosphate, which acts as a coenzyme in carbohydrate metabolism. Used to prevent Wernicke's encephalopathy in patients with a history of alcohol dependence and Hypoglycemia.)

Pharmacokinetics:

- **Half-life**: NA.
- **Onset time**: NA.
- **Peak action time**: NA.
- **Duration of action**: NA.
- Peak 1 minutes
  Duration 1 minutes

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-572 - Hypoglycemia.
- Medication 7-150 - Dextrose.

Contraindications:

- Known sensitivity.

Preganancy Risk Factor:

Category A

No risk in controlled human studies: Adequate and well-controlled human studies have failed to demonstrate a risk to the fetus in the first trimester of pregnancy (and there is no evidence of risk in later trimesters).

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- May cause rare Anaphylactic Reactions, itching, and/or rash.

Antidote:

- Dantroline.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-575 - Toradol (Ketorolac)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

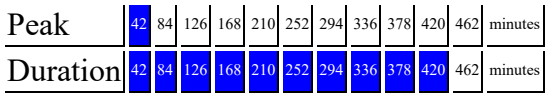
Route(s):

- IM/SQ, IO, IV,

Pharmacodynamics (class and mechanism of action):

- Non-Steroidal Anti-Inflamatory (NSAID). (Inhibit prostaglandin synthesis by decreasing the activity of the enzyme, cyclooxygenase, which results in decreased formation of prostaglandin precursors.)

Pharmacokinetics:

- **Half-life**: 4-6 hours.
- **Onset time**:
  - **IM**: 10 minutes.
  - **IV**: Immediate.
- **Peak action time**:
  - **IM**: 30-60 minutes.
  - **IV**: 1-3 minutes.
- **Duration of action**: 6-8 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-660 - Pain Control.

Contraindications:

- Pregnant or nursing women.
- Allergies to Aspirin, Motrin, or NSAIDs.
- Advanced renal impairment.
- Suspected CVA.
- GI bleeds.
- Peptic ulcers.
- Surgical candidates.

Preganancy Risk Factor:

Category D

Positive evidence of risk: There is positive evidence of human fetal risk based on adverse reaction data from investigational or marketing experience or studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- Toradol inhibits platelet function.
- Hypersensitivity reactions have occurred (Bronchospasm and Anaphylaxis).
- Avoid in patients currently taking anticoagulants such as Coumadin.
- Can cause peptic ulcers, gastrointestinal bleeding and/or perforation.
- May adversely affect fetal circulation and the uterus.

Antidote:

- None.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-577 - tPA (Tissue Plasminogen Activator)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Pending.

Pharmacokinetics:

- **Half-life**: Pending.
- **Onset time**: Pending.
- **Peak action time**: Pending.
- **Duration of action**: Pending.
- Peak 1 minutes
  Duration 1 minutes

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-880 - Suspected Stroke.

Contraindications:

- Pending.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- Pending.

Precautions and Adverse Effects:

- Pending.

Antidote:

- Pending.

Controlled Substance Information:

Not a scheduled drug
- The DEA and FDA have not identified this drug with a schedule classification.

- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-578 - TXA (Tranexamic Acid)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

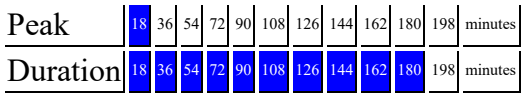
Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Antifibrinolytic. (Synthetic derivative of the amino acid lysine that inhibits fibrinolysis by blocking the lysine binding sites on plasminogen.)

Pharmacokinetics:

- **Half-life**: 2 hours.
- **Onset time**: 5-15 minutes.
- **Peak action time**: Unknown.
- **Duration of action**: 3 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-924 - Universal Patient Care.

Contraindications:

- Age less than 16 years.
- Renal failure.
- Hypersensitivity.
- History of thromboembolism.
- Known subarachnoid aneurysm.
- Injury greater than three (3) hours old.
- Isolated Head Injury.
- Colorblindness.

Preganancy Risk Factor:

Category B

No risk in other studies: Animal reproduction studies have failed to demonstrate a risk to the fetus and there are no adequate and well-controlled studies in pregnant women, or animal studies have shown adverse effects, but adequate and well-controlled studies in pregnant women have failed to demonstrate a risk to the fetus in any trimester.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- Rapid infusion may cause hypotension. If hypotension occurs, slow down infusion rate.
- If TXA is administered, transport destination must be a level I, level II, or level III trauma center.
- Avoid concurrent use with coagulation factors.
- Use caution in patients with DIC.
- Use caution in patients with renal impairment.
- May cause visual defects, Seizures, Nausea, Vomiting, and/or diarrhea.

Antidote:

- None.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.

- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-580 - Valium (Diazepam)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

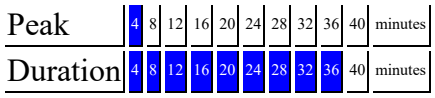
Route(s):

- IM/SQ, IN, IO, IV,

Pharmacodynamics (class and mechanism of action):

- Tranquilizer. Anticonvulsant. Skeletal muscle relaxant. Sedative. (Binds to benzodiazepine receptor and enhances effects of GABA.)

Pharmacokinetics:

- **Half-life**: 1-12 days.
- **Onset time**: 1-5 minutes.
- **Peak action time**:
  - **IM**: 2 hours.
  - **IV**: 1-5 minutes.
- **Duration of action**: 15-60 minutes.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Not in current standing order protocols.

Contraindications:

- Pregnancy.
- Age less than six months.
- Acute-angle glaucoma.
- CNS depression.
- Alcohol intoxication.

Preganancy Risk Factor:

Category D

Positive evidence of risk: There is positive evidence of human fetal risk based on adverse reaction data from investigational or marketing experience or studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks.

Potential Incompatibilities:

- May precipitate with other drugs.

Precautions and Adverse Effects:

- Short duration of effect.
- May cause local venous irritation, drowsiness, hypotension, respiratory depression, fatigue, headache, confusion, Nausea, and sedation.

Antidote:

- Romazicon.

Controlled Substance Information:

Schedule IV

- Moderate potential for abuse. Abusing the drug may lead to moderate mental or physical addiction.

- **DEA number**: 2765.
- **Narcotic**: No.
- **Street names**: Benzos, Blue Vs, Dead Flower, Downers, Drunk Pills, FooFoo, Howards, Ludes, Old Joes, Powers, Sleep Away, Tranks, Vs, Yellow Vs.

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Medication 7-590 - Vecuronium (Norcuron)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

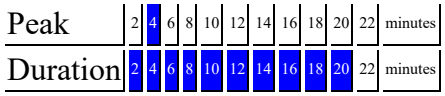
Route(s):

- IO, IV,

Pharmacodynamics (class and mechanism of action):

- Paralytic (Non-depolarizing neuromuscular blocker).

Pharmacokinetics:

- **Half-life**: 51-80 minutes.
- **Onset time**: 1 minute.
- **Peak action time**: 3-5 minutes.
- **Duration of action**: 15-25 minutes.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Not in current standing order protocols.

Contraindications:

- Unable to ventilate.
- Sensitivity to bromides.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- Does not have any analgesic or sedative effects. Sedation must accompany paralysis.
- Calculate dose based on ideal body weight.
- Use caution with impaired liver function, severe obesity, and impaired respiratory function.
- May cause arrhythmias, Bronchospasm, Hypertension, hypotension, apnea, Dyspnea, Tachycardia, and Uticaria.

Antidote:

- None.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-600 - Versed (Midazolam)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

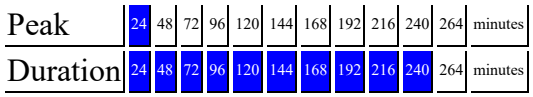
Route(s):

- IM/SQ, IN, IO, IV,

Pharmacodynamics (class and mechanism of action):

- Benzodiazepine (Sedative, anxiolytic, amnesic (2-3x more potent than Valium). Binds to benzodiazepine receptor and enhances effects of GABA).

Pharmacokinetics:

- **Half-life**: 1.8-6.4 hours.
- **Onset time**: 1.5-5 minutes.
- **Peak action time**: Rapid.
- **Duration of action**: 2-6 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-044 - Airway: RSI.
- Protocol 2-638 - Overdose / Toxic Ingestion.
- Protocol 2-660 - Pain Control.
- Protocol 2-792 - Seizure.
- Equipment 8-198 - Continuous Positive Airway Pressure.
- Equipment 8-288 - Endotracheal Tube.
- Equipment 8-486 - King Airway.
- Equipment 8-108 - Cardiac Monitor.

Contraindications:

- Pregnancy.
- Hypotension.
- Acute-angle glaucoma.

Preganancy Risk Factor:

Category D

Positive evidence of risk: There is positive evidence of human fetal risk based on adverse reaction data from investigational or marketing experience or studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks.

Potential Incompatibilities:

- Medication 7-270 - Heparin.

Precautions and Adverse Effects:

- Use caution with COPD, acute alcohol intoxication, narcotics, barbiturates, elderly, and neonates.
- May cause hypoventilation, respiratory depression, respiratory arrest, hypotension, laryngospasm, Nausea, Vomiting, headache, hiccups, and/or Cardiac Arrest.

Antidote:

- Romazicon.

Controlled Substance Information:

Schedule IV

- Moderate potential for abuse. Abusing the drug may lead to moderate mental or physical addiction.

- **DEA number**: 2884.
- **Narcotic**: No.
- **Street names**: Dazzle.

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Medication 7-610 - Xopenex (Levalbuterol)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

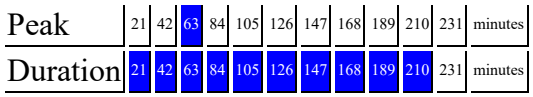
Route(s):

- Neb,

Pharmacodynamics (class and mechanism of action):

- β2 (Beta-2) Agonist (β2 Beta-2 receptor agonist with some β1 Beta-1 activity).

Pharmacokinetics:

- **Half-life**: 3.25-4 hours.
- **Onset time**: 5-15 minutes.
- **Peak action time**: 1 hour.
- **Duration of action**: 3-4 hours.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-770 - Respiratory Distress.

Contraindications:

- Hypersensitivity to Levalbuterol or Racemic Albuterol.

Preganancy Risk Factor:

- Category C
- **Risk not ruled out**: Animal reproduction studies have shown an adverse effect on the fetus and there are no adequate and well-controlled studies in humans, but potential benefits may warrant use of the drug in pregnant women despite potential risks. FDA requires a relatively large amount of high-quality data on a pharmaceutical for it to be defined as Pregnancy Category A. As a result of this, many drugs that would be considered Pregnancy Category A in other countries are allocated to Category C by the FDA.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- Use caution with arrhythmias, Hypertension, paradoxical Bronchospasm.
- May cause rhinitis, headache, tremor, sinusitis, Tachycardia, nervousness, edema, Hyperglycemia, and/or hypokalemia.

Antidote:

- Romazicon.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.
- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Medication 7-620 - Zofran (Ondansetron)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

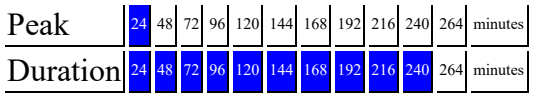
Route(s):

- IM/SQ, IN, Neb, PO, SL,

Pharmacodynamics (class and mechanism of action):

- Antiemetic (Selective Serotonin 5-HT receptor antagonist).

Pharmacokinetics:

- **Half-life**: 4 hours.
- **Onset time**: Immediate.
- **Peak action time**:
  - **IM**: 41 minutes.
  - **IV**: 10 minutes.
- **Duration of action**: Unknown.
- 

Dosing:

- Refer to specific protocol(s) below for dose(s).

Indications:

- Protocol 2-990 - Vomiting.

Contraindications:

- Hypersensitivity.

Preganancy Risk Factor:

Category B

No risk in other studies: Animal reproduction studies have failed to demonstrate a risk to the fetus and there are no adequate and well-controlled studies in pregnant women, or animal studies have shown adverse effects, but adequate and well-controlled studies in pregnant women have failed to demonstrate a risk to the fetus in any trimester.

Potential Incompatibilities:

- None.

Precautions and Adverse Effects:

- May prolong QT interval. 12-lead is indicated after administration.

Antidote:

- None.

Controlled Substance Information:

Not a scheduled drug
  - The DEA and FDA have not identified this drug with a schedule classification.

- **DEA number**: NA.
- **Narcotic**: No.
- **Street names**: NA.

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Part 8-000 - Equipment

Polk, Hickory, Cedar, & St Clair EMS Protocols

Contents:

- 8-720 - Radio (pending)
- 8-738 - Respirator (pending)
- 8-756 - Splint Backboard
- 8-774 - Splint C-Collar
- 8-792 - Splint General
- 8-810 - Splint Traction
- 8-828 - Stair Chair (pending)
- 8-846 - Suction
- 8-864 - Thermometer
- 8-882 - Tourniquet
- 8-900 - Ultrasound (pending)
- 8-918 - Vehicle Tracker (pending)
- 8-936 - Ventilator
- 8-954 - Warming Blanket (pending)

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Equipment 8-001 - Equipment on Response Vehicles

Polk, Hickory, Cedar, & St Clair EMS Protocols

19 CSR 30-40.303(2)(C) states "the medical director, in cooperation with the ambulance service administrator, shall develop, implement, and annually review medications and medical equipment to be utilized." This section fulfils that requirement for equipment.

Refer to Medication 7-001 - Medication on Response Vehicles for medications.

Non-medication supplies that are still within a sealed package and do not appear damaged or aged may still be used up to five (5) years after the package expiration date. Packaging must be unopened, intact, and no discoloration. Exceptions (must dispose after expiration) include the following items:

- All medications.
- Electrode patches and combination pads.
- Hemostatic gauze.
- Irrigation fluid such as saline and sterile water.
- KY Jelly.

ALS Ambulance:

Location	Equipment	Quantity
Bag, Airway	ET Holder	2
	ETCO2 adapter	2
	King Airway size 3	1
	King Airway size 4	1
	King Airway size 5	1
	NPA 6.0	1
	NPA 6.5	1
	NPA 7.0	1
	NPA 7.5	1
	NPA 8.0	1
	NPA 8.5	1
	OPA 100mm	1
	OPA 60mm	1
	OPA 70mm	1
	OPA 80mm	1
	OPA 90mm	1
	Suction catheter 14fr	1
	Suction OG 14fr	1
Bag, Big	BAMM	1
	Bandage Coban	2
	Bandage Kerlex	2

Bandage Kling 4"	2
Bandage Triangular	2
Blood Pressure Cuff	1
Bougie	1
BVM Adult	1
Chest Seal	1 set
Decompression Needle	1
Dressing 4X4 non sterile	
Dressing ABD pad	2
Dressing Hemostatic	1
Dressing Multi Trauma	1
Emesis Bag	1
ET 6.0 Endotrol	1
ET 6.5	1
ET 7.0 Endotrol	1
ET 7.5	1
ET 8.0 Endotrol	1
ET 8.5	1
ET Stylet 12fr	1
ET Stylet 14fr	1
FaceShields	2
IO Flush FUTURE REVISION: Need to move this to 7-001.	1
IO Needle 45mm Yellow	1
IO Needle 15mm Red	1
IO Needle 25mm Blue	1
IV Cath 14g	2
IV Cath 16g	2
IV Cath 18g	2
IV Cath 20g	2
IV Cath 22g	2
IV Cath 24g	2
IV Flush FUTURE REVISION: Need to move this to 7-001.	1
IV Primary Tubing	1
IV Start Kit	1
Laryngoscope Handle	1
Laryngoscope Mac 2	1
Laryngoscope Mac 3	1
Laryngoscope Mac 4	1
Laryngoscope Miller 2	1
Laryngoscope Miller 3	1
Laryngoscope Miller 4	1

	Magill Forceps Adult	1
	Pressure Infuser Bag	1
	Sam Splint	1
	Surgi-lube	4
	Survival Blanket	1
	Syringe 10ml	1
	Tape 1"	1 roll
	Torpedo Sharp Container	1
	Tourniquet	1
Bag, Medication	Alcohol prep pads	10
	IV Saline Lock	2
	Needle 18ga	2
	Needle 22g	1
	Needle 25g	1
	Needle Filter Straw	2
	Needle Smart Tip	2
	Syringe 1ml	1
	Syringe 3ml	1
	Syringe 5ml	1
Bag, Oxygen	Adult Nasal Cannula	1
	Adult NRB	1
	EtCO2 Nasal Cannula	1
	Emesis bag	1
	Nebulizer Handheld	1
	Nebulizer Mask	1
	Pediatric NRB	1
Bag, Pediatric	Broslow Tape	1
	BVM Child	1
	BVM Infant	1
	Chlorascrub swab	6
	ET Holder Child	1
	EtCO2 Adapter Child	1
	G-Tubes 10 Fr	1
	G-Tubes 12 Fr	1
	G-Tubes 14 Fr	1
	G-Tubes 18Fr	1
	G-Tubes 8 Fr	1
	IV Cath 14g	2
	IV Cath 16g	2
	IV Cath 18g	2
	IV Cath 20g	2
	IV Cath 22g	2

	IV Cath 24g	2
	IV Flush FUTURE REVISION: Need to move this to 7-001.	1
	IV Primary Tubing	1
	IV Start Kit	1
	Laryngoscope handle	1
	Laryngoscope Mac Blade 0	1
	Laryngoscope Mac Blade 1	1
	Laryngoscope Mac Blade 2	1
	Laryngoscope Miller Blade 00	1
	Laryngoscope Miller Blade 0	1
	Laryngoscope Miller Blade 1	1
	Laryngoscope Miller Blade 2	1
	LMA Size 1 & 5ml syringe	1
	LMA Size 2 & 10ml syringe	1
	Magill Forceps Child	1
	Normal Saline 1000ml FUTURE REVISION: Need to move this to 7-001.	1
	OPA 40mm	1
	OPA 60mm	1
	OPA 70mm	1
	OPA 80mm	1
	Suction Bulb Syringe	1
	Suction Cath 6 Fr	1
	Suction Cath 8 Fr	1
	Suction Cath 10 Fr	1
	Suction Cath 12 Fr	1
Bag, Pediatric (Red/Pink Pouch)	4X4 Sterile single	1
	ET 2.5 uncuffed	1
	ET 3.0 uncuffed	1
	ET 3.5 uncuffed	1
	Stylet 6 Fr	1
	Surgi-lube	1
Bag, Pediatric (Purple Pouch)	4X4 Sterile single	1
	ET 4.0 uncuffed	1
	Stylet 6 Fr	1
	Surgi-lube	1
Bag, Pediatric (Yellow Pouch)	4X4 Sterile single	1
	ET 4.5 uncuffed	1
	Stylet 10 Fr	1
	Surgi-lube	1
Bag, Pediatric (White Pouch)	4X4 Sterile single	1
	ET 5.0 uncuffed	1

	Stylet 10 Fr	1
	Surgi-lube	1
Bag, Pediatric (Blue Pouch)	4X4 Sterile single	1
	ET 5.5 uncuffed	1
	Stylet 10 Fr	1
	Surgi-lube	1
Bag, Pediatric (Orange Pouch)	4X4 Sterile single	1
	ET 6.0 cuffed	1
	Stylet 10 Fr	1
	Surgi-lube	1
	Syringe 10 ml	1
Bag, Pediatric (Green Pouch)	4X4 Sterile single	1
	ET 6.5 cuffed	1
	Stylet 10 Fr	1
	Surgi-lube	1
	Syringe 10 ml	1
Bag, Small	Bandage Kerlex	2
	Bandage Kling 4"	2
	Bandage Triangular	2
	Blood Pressure Cuff	1
	BVM Adult	1
	Dressing 4X4 non sterile	1
	Dressing ABD pad	2
	Emesis Bag	1
	Glucometer	space for it
	IV Cath 14g	2
	IV Cath 16g	2
	IV Cath 18g	2
	IV Cath 20g	2
	IV Cath 22g	2
	IV Cath 24g	2
	IV Flush FUTURE REVISION: Need to move this to 7-001.	1
	IV Primary Tubing	1
	IV Start Kit	1
	Normal Saline 1000ml FUTURE REVISION: Need to move this to 7-001.	1
	NPA 6.5	1
	NPA 7.5	1
	OPA 100mm	1
	OPA 90mm	1
	Splint Sam	1
	Surgi-lube	4

	Survival Blanket	1
	Tape 1"	1
	Torpedo Sharp Container	1
Bag, SMR	C-Collar Infant	1
	C-Collar Multi Size	4
	C-Collar Pediatric	1
	Spider Straps	1
	Stable Block	2
	Tape 2"	1
	Towels	2
Box, Glucometer	Alcohol pads	10+
	Band aids	6+
	Control solutions	2
	Glucometer	1
	Glucometer Check Strips	6+
	Lancets	6+
Cab	Garage Door Remotes	varies
	Emergency Response Guidebook	1
	Flash Light	1
	Gloves box Large	1
	Gloves box Medium	1
	Gloves box Small	1
	Gloves box X Large	1
	GPS with Charger	1
	Hand Sanitizer	1
	High-Viz Vest Spares	2
	Maps	varies
	Triage Kit	2
	Fuel Cards	varies
Cabinets	15mm x 22mm adapter	1
	Bag, Medication	1
	Bag, Pediatric	1
	Bag, SMR	currently 0 - future 1
	Bandage Ace Wrap 4"	2
	Bandage Coban	4
	Bandage Kerlix	4
	Bandage Kling 4"	4
	Bandage Triangular	2
	Battery 9V	1
	Battery AA	4
	Battery C	2
	Bed Pans	2

Blankets	6
Blankets, Ready Heat	2
Blankets Survival	2
Blankets Thermal	2
Bougie	1
BP Cuff Kit	1
Burn Sheets	2
Burn Towels	2
BVM Infant	1
BVM, Adult	1
BVM, Ped	1
Chest Seal	1 set
Chux	4
Cold Pack	4
Combo Pads, Adult	1
Combo Pads, Ped	1
Cot Battery	1
Cot belt extensions	5
Cot Belts: Extra	1 set
CPAP 50 PSI adapter	1
CPAP Kit with Large mask	2
CPAP mask medium	1
CPAP mask small	1
CPAP variable adapter	1
Cricothyrotomy kit	1
Decompression Needle	1
Doppler	1 [Cedar Co ONLY]
Doppler Gel	1 [Cedar Co ONLY]
Dressing ABD Pads	4
Dressing Celox	1
Dressing Non sterile 4X4	?
Dressing Sterile 4X4	6
Dressing Sterile 4X4 tubs	4
Dressing Trauma	2
ECG Defib Tester	1
ECG Monitor Batteries	2
ECG Monitor Paper	1
ECG Patches	1 bag
Emesis Bag	6
EtCO2 intubation adapter	2
EtCO2/SpO2 monitor	1
EtCO2/SpO2 monitor charger	1

Fish Hook/Wire Cutter	1
Glucometer with supplies	1
Hand Sanitizer	1
Hot Pack	4
Irrigation Bottle NS	2
Irrigation Bottle Sterile Water	2
IV Blood Tubing	1
IV Pump	1
IV Pump Tubing	2
IV tubing	6
IV Tray	1
Lactated Ringers 1000ml FUTURE REVISION: Need to move this to 7-001.	2
Morgan Lens	1 set
Nasal Cannula CO2 Adult	4
Nasal Cannula CO2 Ped	2
Nasal Cannula, Adult	4
Nebulizer Handhelds	4
Nebulizer Mask, Adult	2
Nebulizer Mask, Ped	2
NPA set 6.0-8.5	1
NRB Mask, Adult	4
NRB Mask, Ped	2
OB Drape	1
OB Kit	1
OPA set 60-100mm	1
PediMate Plus	1
Pillow	2
Pillow Case	6
Port-A-Cath Kit	1
PPE Face Shields	4
PPE Gowns	4
PPE N95 Mask	4
Pt belonging bags	6
Pt Gowns	4
Razor	1)
Restraint (Blue) Wrist Set	1
Restraint (Red) Ankle Set	1
Ring Cutter	1
Sani Cloths Grey	1
Sani Cloths Yellow	1
Sharps Container	1
Sheets	6

	Splint Sam	2
	SPO2 finger wrap for Nelcor	1
	Suction Cath 14 Fr	1
	Suction Cath 16fr	1
	Suction NG 14fr	1
	Suction NG 18fr	1
	Suction Tip	2
	Suction Tubing & Canisters	2
	Suction Unit	1
	Suction unit battery	1
	Surgilube	6
	Syringe Toomey 60ml	1
	Tape 1"	4 rolls
	Tape 2"	2 rolls
	Tape 3"	2 rolls
	Thermometer	1
	Thermometer Covers Box	1
	Tourniquet	1
	Towels	6
	Trash Bag	6
	Urinal	2
Wash Cloth	6	
Compartments, Outside	Adult Traction Splint	1
	Backboard	2
	KED	1
	Lucas II	1 [Cedar County Only]
	Ped Traction Splint	1
	PFD	2
	Scoop Stretcher	1
	Scoop Stretcher Straps	3
	SMR Bag	currently 2 - future 1
	Stair Chair	1
	Surgi-Lift	1
Cot	Blanket	varies
	Pillow	varies
	Sheet	varies
IV Start Kit	4x4 Non-Sterile	1
	Chlorascrub swab	2
	Extension Set	1
	SorbaView Shield	1
	Tourniquet	1
IV Tray	3-Way Stop Cock	1

	Alcohol prep pads	10
	Band aid	10
	Chlorascrub swab	10
	Filter straw	2
	IV Cath 14 g	2
	IV Cath 16 g	4
	IV Cath 18 g	6
	IV Cath 20 g	6
	IV Cath 22 g	6
	IV Cath 24 g	6
	IV Saline Lock	2
	MAD Device	2
	Needle 18 g	4
	Needle 22 g	4
	Needle 25 g	2
	Needle Smart tip	10
	Non Sterile 4x4s	varies
	Razor	1
	Sharps Container	1
	Start Kits	6
	Syringe 1 ml	2
	Syringe 3 ml	6
	Syringe 5 ml	2
	Syringe 10 ml	2
	Syringe 20 ml	2
	Tape 1"	1
Monitor	BP Cuff (SM/RG/Long/XL)	1 each
	Cables 12 lead	1
	Cables 4 lead	1
	Combo Pads, Adult	2
	Combo Pads, Pediatric	1
	Download cable	1
	ECG Patches	1 bag
	Modem	1
	Monitor Paper	1 roll
	Razor	1
	Sgarbossa Card	1
	SPO2 Cable	1
OB Kit	4X4 Sterile Tubs	2
	Bulb Syringe 2oz	1
	Disposable ½ Drape	3
	Drape with fluid collection	1

	Infant Bunting Blanket	1
	Newborn Diaper	1
	O.B. Towelette	2
	Placenta Bucket with lid	1
	Plastic Placenta Bag	1
	Sterile Gloves Large Pair	2
	Sterile OB napkin	1
	Umbilical cord clamps	1 set
	Umbilical Cord Scissors	1
	Underpad 17"x24"	1
	Vinyl Twist Tie	2
	White Professional Towel	2
	Added supplies:	
	ET 3.0 uncuffed	2
	Meconium Aspirator 10	1
	Umbilical cord clamps	1 set
RSI Kit [CMH Only]	Needle Draw	3
	Syringe 10 ml	1
	Syringe 20ml	1
	Syringe 5 ml	1
Triage Kit	Decompression Needle	1
	Oral airways	6
	Pen	3
	Stickers Red	?
	Trauma Sheers	1
	Triage tags	25

BLS Ambulance:

Location	Equipment	Quantity
Bag, Airway	Same as ALS Ambulance	
Bag, Medication	Same as ALS Ambulance	
Bag, Small	Same as ALS Ambulance	
Bag, SMR	Same as ALS Ambulance	
Cab	Same as ALS Ambulance	
Cabinets	Bag, Airway	1
	Bag, IV	1
	Bag, Medication	1
	Bandage Ace Wrap 4"	1
	Bandage Coban	1
	Bandage Kerlix	2
	Bandage King	2
	Bandage Triangular	2
	Battery 9V	1
	Battery AA	4
	Battery AAA	4
	Battery C	2
	Bed Pans	1
	Blankets	6
	Blankets Survival	2
	Blankets Thermal	2
	BP Cuff Kit	
	BVM Infant	1
	BVM, Adult	1
	BVM, Ped	1
	Chest Seal	1 set
	Chux	4
	CO2 intubation adapter	1
	Cold Pack	2
	Combo Pads, Adult	1
	Combo Pads, Ped	1
	Cot Battery	1
	Cot belt extensions	5
	CPAP mask large	1
	CPAP mask medium	1
	CPAP mask small	1
	CPAP variable adapter	1
	Decompression Needle	1

Dressing ABD Pads	2
Dressing Celox	1
Dressing Non sterile 4X4	
Dressing Sterile 4X4	2
ECG Defib Tester	1
ECG Monitor Batteries	2
ECG Monitor Paper	1
ECG Patches	1 bag
Emesis Bag	4
Glucometer with supplies	
Hand Sanitizer	1
Hot Pack	2
Irrigation Bottle NS	1
Irrigation Bottle Sterile Water	1
Nasal Cannula CO2 Adult	1
Nasal Cannula CO2 Ped	1
Nasal Cannula, Adult	1
Nebulizer Mask, Adult	1
Nebulizer Mask, Ped	1
NRB Mask, Adult	1
NRB Mask, Ped	1
OB Kit	1
Pillow	2
Pillow Case	6
PPE Face Shields	2
PPE Gowns	2
PPE N95 Mask	2
Pt belonging bags	3
Restraint Blue Wrist Set	1
Restraint Red Ankle Set	1
Ring Cutter	1
Sani Cloths Grey	1
Sani Cloths Yellow	1
Sheets	12
Splint Sam	1
Suction Tip	1
Suction Tubing & Canisters	1
Suction Unit	1
Tape 1"	1 roll
Tape 2"	1 roll
Tape 3"	1 roll
Tourniquet	1

	Towels	6
	Urinal	1
	Wash Cloth	6
Compartments, Outside	Adult Traction Splint	1
	Backboard	1
	Ped Traction Splint	1
	PFD	2
	Scoop Stretcher	1
	Scoop Stretcher Straps	3
	SMR Bag	2
	Surgi-Lift	1
Cot	Adult Nasal Cannula	1
	Adult NRB	1
	Blanket	1
	CO2 Nasal Cannula	1
	Emesis bag	1
	Nebulizer Handheld	1
	Nebulizer Mask	1
	Ped NRB Pillow	1
	Sheet	1
Glucometer Kit	Same as ALS Ambulance	
IV Start Kit	Same as ALS Ambulance	
Monitor	Same as ALS Ambulance	
OB Kit	Same as ALS Ambulance	
Triage Kit	Same as ALS Ambulance	

EMS Supervisor Vehicle:

Location	Equipment	Quantity
Bag, Big	Same as ALS Ambulance	
Bag, Medication	Same as ALS Ambulance	
Bag, Oxygen	Same as ALS Ambulance	
Cab	Same as ALS Ambulance	
Glucometer Kit	Same as ALS Ambulance	
IV Start Kit	Same as ALS Ambulance	
Monitor	Same as ALS Ambulance	
RSI Kit [CMH Only]	Same as ALS Ambulance	
Triage Kit	Same as ALS Ambulance	

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Equipment 8-018 - Automated External Defibrillator (AED)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Community Responder
- Emergency Medical Dispatcher
- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- When using Cardiac Monitor in AED mode, use Equipment 8-108 - Cardiac Monitor.
- Protocol 2-198 - Cardiac Arrest.

Contraindications:

- Pulse.

Precautions:

- Wet skin or patients in water.
- Do not apply directly over internal pacemaker or medication patch.
- Manual Defibrillation is preferred to AED for children less than 8 yrs old. If manual Defibrillation is not available, pediatric dose attenuator is preferred. If neither is available, use AED as you would on an adult. Pads may be placed anterior/posterior if chest is too small to allow pads to be separated by at least 1 inch.

Procedure:

- Power on the device.
- Follow written or verbal instructions from the device.
- Refer to Equipment 8-018-01 - AED Agency Requirements for after use and maintenance procedures.

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Equipment 8-018-01 - Automated External Defibrillator (AED) - Agency Requirements

Polk, Hickory, Cedar, & St Clair EMS Protocols

Accessiblity:

- AED must be available for use any time the building is occupied.
- Location should be obvious and labeled to allow any person who is not familiar with its location to find it.
- Train as many community or staff members as possible in CPR and AED use.
- Contact CMH Pre-Hospital Services (417-328-6355) for assistance with training and to report the location of your AED.

Supplies to be kept with AED:

- Dry wash cloth.
- Safety razor.
- At least one set of compatible pads. Prefer to have two adult and two pediatric compatible pads.

Monthly Maintenance:

- Refer to manufacturer user manual.
- Check AED battery function according to manufacturer.
- Check supplies are usable and not expired.

After Using the AED:

- Contact CMH Pre-Hospital Services (417-328-6355) to download data and request assistance (if needed) for Critical Incident Stress Debriefing (CISD).
- Document event according to your agency guidelines.
- Replace equipment used.

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Equipment 8-036 - Blood Draw Kit

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Indications:

- Equipment 8-432 - Intravascular (IV) Needle.

Contraindications:

- Patient refusal.

Precautions:

- Avoid venipuncure in arms with dialysis shunts or injuries proximal to insertion site.

Procedure:

- After IV access but prior to Saline administration.
- Either directly draw blood from patient into blood tubes using Vacutainer Direct Draw Adapter or into syringe and transfer to tubes using Vacutainer Blood Transfer Device. To avoid needle sticks, do not use syringe and needle to fill blood tubes.
- Fill tubes in the following order:
  - Medical patient (5 tubes): BLUE, RED, GREEN (no gel), GREEN (gel), LAVENDER.
  - Trauma patient (4 tubes): BLUE, GREEN (no gel), GREEN (gel), LAVENDER.
- Label each tube with BLUE arm bands.
  - Place number sticker on each tube.
  - Write your initials and time blood was drawn in white area of wrist band.
  - Once at the destination, a patient identification sticker should be placed on the removable end of the wrist band. The patient sticker should contain your initials and time of blood draw.
  - Stickered blood tubes and the removable end with patient sticker will be sent to the lab.
- Refer to Equipment 8-036-01 - Blood Draw for Alcohol Analysis.

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Equipment 8-036-01 - Blood Draw Kit - Blood Draw for Alcohol Analysis

Polk, Hickory, Cedar, & St Clair EMS Protocols

RNs or Paramedics may draw blood in the field as requested by law enforcement officials on the scene where requested for medical assistance.

Do NOT respond to jail, police dept, etc. for the sole purpose of drawing blood or draw blood if an officer brings a non-patient to the crew for the sole purpose of drawing blood.

An IV must be required for medical purposes and the blood draw is secondary to that action.

If patient is alert and oriented, his or her consent is necessary before the procedure is performed.

- If patient is unable to give consent (unresponsive, dead, etc.), consent is implied.

The requesting officer must be present, supply the blood tube, and witness the blood sample being taken.

The task will not distract attention away from the primary task of patient care.

Documentation shall include patient consent and name of requesting officer.

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Equipment 8-054 - Ballistic Gear

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- ?

Contraindications:

- ?

Precautions:

- ?

Procedure:

- ?

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Equipment 8-072 - Bougie

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Indications:

- Protocol 2-044 - Airway: RSI.
- Equipment 8-234 - Cricothyrotomy Kit.

Contraindications:

- Age less than 8 years.
- Use of a 6.0 or smaller ET tube.

Precautions:

- None.

Procedure:

- Lubricate Bougie.
- Using a Laryngoscope and standard ET intubation techniques, attempt to visualize the vocal cords. If vocal cords are not fully visible, pass Bougie behind the epiglottis, guiding the tip of the Bougie anteriorly towards the trachea.
    - Tracheal placement will yield the ability to feel cricoids rings and resistance at the carina.
    - Esophageal placement will yield the ability to advance Bougie completely without resistance.
- While maintaining the Laryngoscope and Bougie in position, an assistant threads an ET tube over the end of the Bougie. The assistant then holds the Bougie.
- Rotate ET tube one-quarter turn and advance through cords.
- Inflate ET cuff, remove Bougie and Laryngoscope.
- Confirm placement with auscultation and Capnography.

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Equipment 8-090 - Capnometer

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Indications:

- All ALS patients with cardiac or respiratory complaints.

Contraindications:

- None.

Precautions:

- None.

Procedure:

- Turn monitor on.
- Attach capnograph probe (nasal cannula or ET tube) to patient and capnograph.
- Observe readings. May need to instruct patient on nasal cannula to breathe out through their mouth.

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Equipment 8-108 - Cardiac Monitor

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Virtually all patient contacts.

Contraindications:

- If ALS is available, manual mode is preferred.
- Do not attempt blood pressures on injured extremities, side of previous mastectomies, or dialysis shunts.

Precautions:

- Exercise safety precautions.
- SpO2 accuracy is dependent upon adequate perfusion at probe site, bright ambient lighting, Poisoning, nail polish, and polycythemia.
- Cardiovert with extreme caution in patients on digitalis, beta-blockers, and calcium channel blockers.
- Do not place pacer electrodes directly over implanted pacemaker or AICD.

12-Lead and 15-Lead Acquisition Procedure:

- Attach limb leads.
  - Preferred locations for 12-lead acquisition are wrists and ankles.
  - Preferred locations for 4-lead monitoring are shoulders and abdomen.
- Attach precordial leads.
- Perform 12-lead.
- Perform 15-Lead on the following patients:
  - Non-diagnostic 12-lead OR
  - Evidence of acute inferior wall injury.
- Refer to Equipment 8-108-01 - ECG Interpretation Guide.
- Consider transmitting 12-lead to the receiving facility.

12-Lead Transmission procedure:

1. Ensure modem is plugged in the back.
2. Press "TRANSMIT" button.
3. Scroll to "REPORT" and select the correct 12-lead to send.
4. Scroll to "SITE" and select the correct destination.
5. Select "SEND" and wait for the confirmation print-out.
6. Call the receiving facility to discuss the transmission with medical control.

AED Procedure:

- Confirm patient is in Cardiac Arrest.
- Apply and connect combo-pads.
- Press "ANALYZE" or "CPR."
- Follow on-screen messages and voice prompts.

Manual Defibrillation Procedure:

- Verify patient is in Cardio-Pulmonary Arrest.
- Record baseline rhythm.
- Apply combo-pads (anterior-posterior is preferred).
- Select appropriate energy.
- Charge and clear patient.
- Call "CLEAR" and ensure patient is clear.
- Press "SHOCK."
- Reassess patient.

Synchronized Cardioversion Procedure:

- Explain procedure to patient.
- If time permits, consider Protocol 2-660 - Pain Control.
- Record baseline rhythm.
- Select lead with tallest R-wave.
- Apply combo-pads (anterior-posterior is preferred).
- Select appropriate energy.
- Synchronize ("SYNC") and observe markers on screen.
- Charge ("CHARGE") and clear patient. To cancel charge, press speed dial. If "SHOCK" is not pressed within 60 sec, charge is cancelled.
- Call "CLEAR" and ensure patient is clear.
- Press "SHOCK."
- Reassess patient.

Transcutaneous Pacing Procedure:

- Explain procedure to patient.
- Connect 4-leads and record rhythm strip prior to Pacing.
- Select lead with tallest R-wave.
- Apply combo-pads (anterior-posterior is preferred).
- Turn pacer on and set rate.
- Gradually increase energy until electrical capture is observed (usually wide, bizarre QRS).
- Check pulse for mechanical capture. If no mechanical capture, continue to increase energy until mechanical capture. If CPR is being conducted and no mechanical capture is detected at maximum energy, continue Pacing.
- Once mechanical capture is obtained, increase energy another 10%, assess blood pressure, and record rhythm strip.
- If CPR is being conducted, continue for another 2 minutes before discontinuing.
- If conscious, consider Protocol 2-660 - Pain Control.

Vitals Procedure:

- Choose and apply appropriately sized cuff. Auscultated blood pressure is required as a baseline to verify LifePak before medication administration.
- Attach pulse-ox probe.
- If patient is being transported ALS: Connect 4-lead cardiac monitor.

Refer to Equipment 8-108-66 - Cardiac Monitor Programming Standards.

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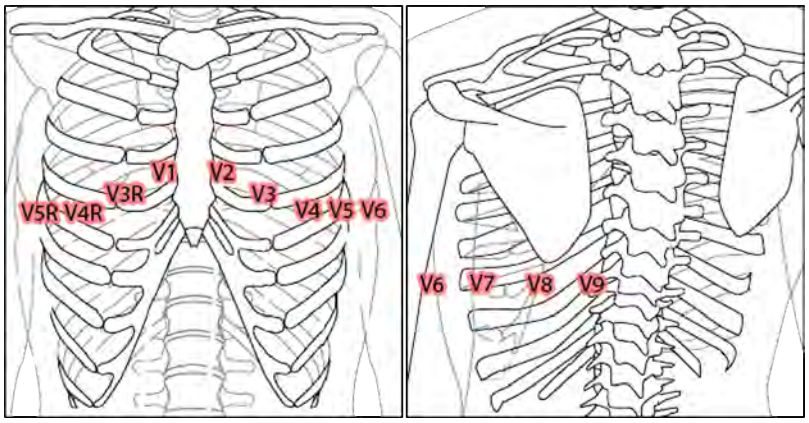
Equipment 8-108-01 - ECG Interpretation Guide

Polk, Hickory, Cedar, & St Clair EMS Protocols

Check lead placement.

- 

- **Lead I positive and aVR negative**: Good placement.

Interpret underlying rhythm.

- **Evaluate regularity**:
  - Regular, regularly irregular, or irregular?
- **Evaluate rate**:
  - Bradycardia, normal, or Tachycardia?
- **Evaluate P-waves**:
  - **Look for heart block**:
    - **PR greater than 200 ms**: First-degree.
    - **PR widening**: Second-degree, type I.
    - **Dropping P-waves**: Second-degree, type II.
    - **P-waves not associated**: Third-degree.
  - **Greater than 2.5 mm high**: Right atrial enlargment or PE.
  - **"M" shape**: Left atrial enlargment.
- **Evaluate QRS**:
Adult	Pediatric
Greater than 120 ms with P-waves: Bundle branch block. Evaluate first deflection in QRS going right-to-left in V1:	**Greater than 90 ms with P-waves**: Bundle branch block. Evaluate first deflection in QRS going right-to-left in V1:
    - **Upward**: RBBB.
    - **Downward**: LBBB (LBBB or ventricular pacing, go to Sgarbossa).
  - **QTc greater than 450**: Prolonged QT.
  - **Peaked T-waves**: Hyperkalemia.
  - **Q-wave greater than 1/3 of R-wave height or width**: Pathological Q-wave (previous MI or late development of current MI).
  - **Q-wave greater than 35 mm as measured by combining V1 and V5**: Left ventricular hypertrophy.
  - **Q-wave greater than 7 mm in V1**: Right ventricular hypertrophy.
  - **Delta-wave (sloped R-wave) with PR less than 120 ms**: Wolff-Parkinson-White.

- **Evaluate axis**:
  - **Between -30° and 90° (I+ and aVF+)**: Normal axis.
  - **Between 90° and 180° (I- and aVF+)**: Right axis deviation. Could be caused by left posterior hemiblock, RBBB, right ventricular hypertrophy, pulmonary disease, or slender build.
  - **Between -30° and -90° (I+ and aVF-)**: Left axis deviation. Could be caused by inferior MI, left anterior hemiblock, LBBB, left ventricular hypertrophy, obesity, or pregnancy.
  - **Between -90° and -180° (I- and aVF-)**: Extreme right axis deviation. Probably caused by a STEMI.

Determine if Cath Lab should be activated.

- **Cath Lab activations (Basic)**:
  - **ST elevation in all or most of the leads**: Pericarditis. Do not activate the Cath Lab.
  - **ST elevation of 1 mm or greater in the following leads**:
    - **V3 and V4**: Anterior STEMI. Activate the Cath Lab.
    - **Two or more in II, III, and/or aVF**: Inferior STEMI. Activate the Cath Lab.
    - **Two or more in I, aVL, V5, and/or V6**: Left Lateral STEMI. Activate the Cath Lab.
    - **V1 and V2**: Septal STEMI. Activate the Cath Lab.
- **Cath Lab activations (Intermediate)**:
  - **ST elevation of 0.5 mm or greater in the following leads**:
    - **V4R**: Right Lateral STEMI. Activate the Cath Lab.
    - **V8 and V9**: Posterior STEMI. Activate the Cath Lab.
  - **LBBB or ventricular pacing**:
    - **ST ELEVATION of 1 mm or greater CONCORDANT with QRS in any lead**: Sgarbossa A criteria STEMI. Activate the Cath Lab.
    - **ST DEPRESSION of 1 mm or greater in any leads V1, V2, or V3**: Sgarbossa B criteria STEMI. Activate the Cath Lab.
    - **ST ELEVATION of 5 mm or greater DISCORDANT with QRS in any lead**: Sgarbossa C criteria STEMI. Activate the Cath Lab.
- **Cath Lab activations (Advanced)**:
  - **Any amount of ST ELEVATION in both aVR and V1 with any amount of ST DEPRESSION in most other leads**:
    - **If found after a hypoxic episode**: Not cardiac-related. Do not activate the Cath Lab.
    - **If NO recent hypoxic episode**: Three Vessel Disease. Activate the Cath Lab.
  - **T-waves 10 mm or taller with any amount of ST DEPRESSION in one or more leads V1 through V4**: DeWinters Anterior STEMI. Activate the Cath Lab.
  - **T-waves that are downward and symmetric in one or more leads V1 through V6.**: Occurs between episodes of chest pain and goes away while pain is present. Wellens Syndrome. Activate the Cath Lab.

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Equipment 8-108-66 - Cardiac Monitor Programming Standards

Polk, Hickory, Cedar, & St Clair EMS Protocols

Programming shall only be done by qualified and authorized individuals.

General Settings	
Language	US English
Code summary	Long
Trend summary	Off
Site number	APPLETON, BOLIVAR, ELDORADO, HERMITAGE, OSCEOLA, or STOCKTON
Device ID	*match property ID tag*
Auto log	On
Line filter	60 Hz
Timeout speed	30 sec
Manual Mode Settings	
Sync after shock	On
Pads default	360
Energy protocol	Inactive
Internal default	10
Voice prompts	On
Shock tone	On
Manual access	Manual / Direct
No passcode required for manual mode	
AED Mode Settings	
Energy protocol	360 - 360 - 360
Auto analyze	Off
Motion detection	On
Pulse check	Never
CPR Settings	
CPR time 1	120 sec
CPR time 2	120 sec
Initial CPR	CPR first
Initial CPR time	120 sec
Preshock CPR	Off

CPR Metronome Settings	
Metronome	On
Adult - No Airway	30 : 2
Adult - Airway	100 : 0
Youth - No Airway	15 : 2
Youth - Airway	100 : 0
Pacing Settings	
Rate	70 ppm
Current	0 mA
Mode	Demand
Internal pacer	Detection on
Monitoring Channels Settings	
Default set	Set 1
Set 1	I, II, CO2
Set 2	II, SpO2, CO2
Set 3	I, II, III
Set 4	II, III, aVF
Set 5	aVL, V5, V6
Monitoring Settings	
Continuous Data	All Channels
SpO2 tone	Off
CO2 units	mmHg
CO2 BTPS	Off
Temperature Units	°F
NIBP initial pressure	160 mmHG
NIBP interval	10 min
Trends	On
12-Lead Settings	
Auto transmit	Off
Auto print	On
Print speed	25 mm/sec
Interpretation	Off
Format	3-channel standard
Events Pages Settings	
1	Generic
2	Medication - Albuterol
3	Medication - Aspirin
4	Medication - Atropine
5	Medication - Benadryl
6	Medication - Dextrose
7	Medication - Duoneb
8	Medication - Cardizem

9	Medication - Epinephrine 1:10,000
10	Medication - Fentanyl
11	Medication - Glucose
12	Medication - Morphine
13	Medication - Narcan
14	Medication - Nitroglycerin
15	Medication - Oxygen
16	Medication - Phenergan
17	Medication - Solu-Medrol
18	Medication - Versed
19	Medication - Xopenex
20	Medication - Zofran
21	
22	
23	Treatment - Airway insert
24	Treatment - CPAP
25	Treatment - Vascular access
Alarms Settings	
Volume	5
Alarms	Off
VF / VT alarm	Off
Auto Print Settings	
Defibrillation	On
Pacing	Off
Check patient	Off
SAS	Off
Patient alarms	Off
Events	Off
Initial rhythm	Off
Printer Settings	
ECG mode	Monitor
Monitor mode	1 - 30 Hz
Diagnostic mode	0.05 - 40 Hz
Alarm waveforms	On
Event waveforms	On
Vitals waveforms	On
Transmission Sites Settings	
Site 1	BLUETOOTH Bluetooth Wireless
Site 2	USB Direct Connect
Site 3	CMH BOLIVAR Direct Connect

Site 4	MERCY SGF Direct Connect
Site 5	COX SOUTH Direct Connect
Site 6	LAKE Direct Connect
Site 7	ESO Direct Connect
Transmission Settings	
Default Site	ESO
Default Report	All
Wireless	On
Search Filter	Off
Clock Settings	
Clock Mode	Real Time
Time Zone	UTC -06:00

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Equipment 8-126 - Chest Compressor

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Protocol 2-198 - Cardiac Arrest.

Contraindications:

- Patient is too large for the device to be secured.

Precautions:

- None.

Procedure:

- Open bag.
- Turn device on.
- Place back plate under the patient below the armpits.
- Remove device from bag and attach over the patient to the back plate.
- Position suction cup to touch the patient's lower sternum.
- Press "PAUSE" to lock the suction cup into place.
- Press "ACTIVATE CONTINUOUS" OR "ACTIVATE 30:2" to begin compressions.
- Attach stabilization strap under patient's neck.

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Equipment 8-144 - Chest Seal

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- ?

Contraindications:

- ?

Precautions:

- ?

Procedure:

- ?

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Equipment 8-162 - Cold Pack

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- ?

Contraindications:

- ?

Precautions:

- ?

Procedure:

- ?

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Equipment 8-180 - Computer

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- ?

Contraindications:

- ?

Precautions:

- ?

Procedure:

- ?

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Equipment 8-198 - Continuous Positive Airway Pressure (CPAP)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Indications:

- Protocol 2-198-01 - Cardiac Arrest - Peri-Arrest Comfort Measures.
- Protocol 2-220 - Chest Pain / Suspected Cardiac Event.
- Protocol 2-286 - Drowning / Near Drowning.
- Protocol 2-726 - Pulmonary Edema.
- Protocol 2-770 - Respiratory Distress.
- Equipment 8-936 - Ventilator.

Contraindications:

- Less than 18 yrs old.
- Patient unable to protect airway.
- Need for immediate Intubation.
- Ventilatory failure.
- Gastric distention (GI bleeding).
- Trauma (pneumothorax).
- Tracheostomy.
- Altered LOC.
- Do not secure straps if Nausea or Vomiting.
- Increasing ETCO2.

Precautions:

- CPAP is not mechanical ventilation.
- Blood pressure may drop due to increased intrathoracic pressure.
- Patients may not improve (must reassess).
- Patients may not accept mask (claustrophobia).
- Risk of pneumothorax.
- Risk of corneal drying.
- Large Oxygen demand.

Procedure:

- Inform and calm patient.
- Connect and turn on Oxygen to "flush." Set PEEP to 10 cm H2O (may titrate to 15 as needed).
- Flip head-strap forward.
- Hand to or place mask on patient. Hold mask firmly against face to eliminate air leaks
- Flip head-strap over head after patient is comfortable. Remove straps if Nausea develops
- Clip bottom straps.
- Adjust fit.
- Monitor patient. May raise intrathoracic pressures, reducing preload, therefore reducing blood pressure.
- **Anxiety**:
  - Consider Versed 2.5 mg IV/IO/IM.
- An in-line bronchodilator Nebulizer may be placed in circuit, if needed.

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Equipment 8-216 - Cot

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Need to move a non-ambulatory patient.

Contraindications:

- None.

Precautions:

- Always secure the patient using all restraint straps and keep side rails up.
- Utilize a minimum of 2 lifting persons when a patient is on the cot.
- Utilize four or more lifting persons, if possible, over rough terrain or overweight patients.
- Do not allow the x-frame to drop unassisted.

Generic Procedure:

- Consider Stair Chair.
- Utilize all provided safety restraint systems on every patient.
- To raise or lower cot, both ends must be lifted prior to squeezing handle.
- Use the appropriate number of people to lift based on the patient weight:
  - If patient 0-200 pounds, use two or more people to lift.
  - If patient 200-400 pounds, use four or more people to lift.
  - If patient 400-600 pounds, use eight or more people to lift.
  - If patient greater than 600 pounds, special lifting and transport should be considered.

X-Frame Procedure:

- **Loading with a patient**:
  - Place loading wheels in ambulance and safety bar past the safety hook.
  - Operator at foot lifts cot and squeezes and holds handle.
  - Assistant at side raises undercarriage.
  - Push cot into ambulance and secure it.
- **Unloading with a patient**:
  - Disengage cot from fastener.
  - Pull cot out of ambulance.
  - Assistant grasps the undercarriage and lifts slightly.
  - Operator at foot squeezes handle.
  - Assistant lowers undercarriage to the ground.
  - Operator at foot releases handle to lock undercarriage down.
  - Assistant releases safety bar from safety hook.
- **Loading empty cot (one operator)**:
  - Place loading wheels in ambulance and safety bar past the safety hook.
  - Lift bumper to raised position.
  - Operator at foot lifts cot and squeezes and holds handle.
  - Operator lowers foot end of cot to the floor to collapse undercarriage.
  - Release handle to lock in lowered position.
  - Raise, push into ambulance, and secure cot.
- **Unloading empty cot (one operator)**:
  - Disengage cot from fastener.
  - Pull cot out of ambulance.
  - Lower cot to the ground, squeeze handle, raise cot, and release handle.
  - Release safety bar from safety hook.

H-Frame Procedure:

- **Loading with a patient**:
  - Place cot in loading position
  - Place both loading wheels are on the patient compartment floor.
  - Assistant unlocks frame.
  - Operator lifts foot end of cot and squeezes control handle.
  - Assistant lifts undercarriage.
  - Operator pushes cot into patient compartment, releases handle, and secures it.
- **Unloading with a patient**:
  - Disengage cot from fastener.
  - Pull cot out of ambulance.
  - Assistant lowers undercarriage to the ground and ensures it locks down.
  - Place cot in rolling position.
- **Loading empty cot (one operator)**:
  - Place cot in loading position.
  - Place both loading wheels on the patient compartment floor.
  - Unlock frame.
  - Operator lifts foot end of cot and squeezes control handle.
  - Operator pushes cot into patient compartment, releases handle, and secures it.
- **Unloading empty cot (one operator)**:
  - Disengage cot from fastener.
  - Pull cot out of ambulance.
  - Place cot in rolling position.

Pedi-Mate Procedure:

- Use for all patients smaller than 40 lbs.
- Raise cot backrest to full upright position.
- Wrap Pedi-

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Equipment 8-234 - Cricothyrotomy Kit

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Indications:

- This procedure is a last resort when all attempts at ventilating the patient have failed.
- Protocol 2-044 - Airway: RSI

Contraindications:

- None in an emergency setting and all other airway options have been exhausted.

Precautions:

- Complications include hemorrhage from great vessel lacerations and damage to surrounding structures.
- Constantly check ventilation by standard techniques.

Quick Trach II Procedure:

- Prepare the device: Remove valve opener and completely evacuate the cuff with the included 10 ml syringe. Remove and fill syringe for inflating the cuff with 10 ml of air.
- Prepare the patient: Hyperextend the Head of the patient. Locate the cricothyroid membrane by palpation of the depression between the thyroid and cricoids cartilage. Stabilize this point with forefinger and thumb for puncture.
- Puncture the cricothyroid membrane and insert QuickTrach II until red stopper touches skin. An incision is not necessary.
- Aspirate syringe to determine position of cannula. Aspiration of air indicates proper placement in trachea. If no air is aspirated, remove red stopper and advance slowly until air can be aspirated.
- Remove red stopper.
- Push cannula forward into the trachea and remove metal needle.
- Inflate cuff with 10 ml of air.
- Secure with foam neck tape.
- Attach BVM with connector and verify placement with auscultation and Capnography.

Surgical Procedure:

If possible, call for MEDICAL CONTROL prior to attempting surgical cric.

- Have Suction equipment ready.
- Clean neck with antiseptic solution.
- Stabilize larynx with thumb and index finger of one hand.
- Palpate cricothyroid membrane.
- Pull skin taut.
- Make 2 cm VERTICAL incision at the cricothyroid membrane.
- Puncture through the cricothyroid membrane horizontally.
- Place Bougie with coude tip into trachea with a back-and-forth motion to feel tracheal clicking or carina.
- Place ET tube or Shiley over Bougie just enough for cuff to be inside trachea.
- Inflate cuff and secure tube.
- Ventilate at 100% Oxygen.
- Observe and auscultate for correct placement.
- Confirm with Capnography.
- Cover incision site with Occlusive dressing.

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Equipment 8-252 - Decompression Needle

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Indications:

- Policy 1-850 - Rescue Task Force
- Protocol 2-220 - Chest Pain / Suspected Cardiac Event

Contraindications:

- None in presence of tension pneumothorax.

Precautions:

- Complications may include laceration of intercostals vessels, creation of pneumothorax, laceration of lung tissue, and risk of infection.

ARS / SPEAR Procedure:

- Select site:
  - Fifth intercostal space on anterior axillary line OR
  - Second intercostal space on mid-clavicular line.
- Cleanse site.
- Remove red cap from case with twisting motion and remove needle from case.
- Insert needle through skin targeting the rib below the level of intended insertion site.
  - Direct needle superiorly over rib and into thoracic cavity ensuring perpendicular position relative to thoracic cavity.
  - Ensure needle entry is not medial to nipple line and not directed toward heart.
- Release catheter from needle by 1/4 turn and advance catheter. Remove needle only when catheter has been fully inserted.
- If tension pneumothorax returns, repeat procedure.

Turkel Procedure:

- Select site:
  - Fifth intercostal space on anterior axillary line OR
  - Second intercostal space on mid-clavicular line.
- Clean area with antiseptic.
- Insert Turkel into skin over just over superior border of third rib.
- Insert catheter through paretal pleura until air escapes.
- During insertion, the color band will show RED until through paretal pleura, and then it turns GREEN.
- Advance catheter off device.
- Air should exit under pressure.
- Close 3-way valve.
- Reassess frequently for redevelopment of pneumothorax.
- If tension pneumothorax returns, open 3-way valve to release pressure.

Gelco Procedure:

- Select site:
  - Fifth intercostal space on anterior axillary line OR
  - Second intercostal space on mid-clavicular line.
- Clean area with antiseptic.
- Insert Jelco into skin over just over superior border of third rib.
- Insert catheter through paretal pleura until air escapes.
- Air should exit under pressure.
- Remove needle and leave plastic catheter in place.
- Reassess frequently for redevelopment of pneumothorax.
- If tension pneumothorax returns, repeat procedure.

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Equipment 8-270 - Doppler

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- ?

Contraindications:

- ?

Precautions:

- ?

Procedure:

- ?

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Equipment 8-288 - Endotracheal Tube (ET)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Indications:

- Guideline 1-850 - Rescue Task Force
- Protocol 2-044 - Airway: RSI
- Protocol 2-198 - Cardiac Arrest
- Protocol 2-704 - Post Resuscitation

Contraindications:

- None.

Precautions:

- Can induce Hypertension and increase ICP in Head injured patients.
- Can induce Vagal response and Bradycardia.
- Can induce hypoxia-related arrhythmias.
- Cuffed ET tubes are preferred over un-cuffed for all tube sizes and patient ages.
- Routine use of cricoid pressure is not recommended for pediatric patients.

Procedure:

- Hyperventilate with BVM and basic adjunct.
- Assemble, check, and prepare equipment.
- Consider Neo-Synephrine (2-3 sprays in each nare) for nasal intubation.
- Consider King or LMA for backup airway.
- Place head in sniffing position (maintain c-spine in trauma).
- Insert Laryngoscope blade.
- Sweep tongue to the left.
- Lift forward to displace jaw.
- Advance tube past vocal cords until the cuff disappears.
- Inflate cuff with 7-10 ml of air. If able, check inflation pressure between 20-25 cm H2O.
- Ventilate and confirm placement with auscultation and Capnography.
- Secure tube, noting marking on tube.
- Consider: Insert OPA as a bite block.
- Ventilate with 100% Oxygen.
- Reassess tube placement often.
- Continued sedation:
    - Consider Versed 2.5-5 mg every 5 min. Repeat as needed maintaining SBP greater than 100.
    - Consider Fentanyl 50-100 mcg. Max 300 mcg.
- Consider Gastric Tube.

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Equipment 8-306 - Gastric Tube

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Indications:

- Protocol 2-044 - Airway: RSI
- Equipment 8-288 - Endotracheal Tube (ET)
- Equipment 8-486 - King Airway
- Equipment 8-522 - Laryngeal Mask Airway (LMA)

Contraindications:

- Epiglottitis or Croup.
- Use orogastric route when facial trauma or basilar skull fracture.

Precautions:

- None.

Procedure:

- Assemble equipment.
- Explain procedure to patient.
- If possible, have patient sitting up.
- Use towel to protect patient's clothing.
- Measure tube from nose, around ear, and down to xiphoid process.
- Mark point at xiphoid process with tape.
- Lubricate distal end of tube 6-8 in with water-soluble lubricant.
- Insert tube in nostril and gently advance it towards posterior nasopharynx along nasal floor.
- When you feel tube at nasopharyngeal junction, rotate inward towards the other nostril.
- As tube enters oropharynx, instruct patient to swallow.
- Pass tube to pre-measured point.
- If resistance is met, back tube up and try again. Do not force tube.
- Check placement of tube by aspirating Gastric contents or auscultating air over epigastric region while injecting 20-30 ml of air.
- Tape tube in place and connect to low Suction if needed.

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Equipment 8-324 - Glucometer

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Protocol 2-198 - Cardiac Arrest
- Protocol 2-506 - Hyperglycemia
- Protocol 2-572 - Hypoglycemia
- Protocol 2-638 - Overdose / Toxic Ingestion
- Protocol 2-792 - Seizure
- Protocol 2-880 - Suspected Stroke

Contraindications:

- None.

Precautions:

- Do not rely on readings of other entities or patient's own Glucometer.

Procedure:

- Turn on and log into Glucometer.
- Obtain blood sample from IV start or finger stick.
  - Avoid "milking" finger.
  - Ensure skin is dry of alcohol wipe.
- Follow on-screen instructions.
- Dispose of sharp.

Blood Sugar Ranges:

Patient	Critical low	Low	Normal	High	Critical high
Adult female	0 - 40	41 - 64	65 - 105	106 - 349	350 +
Adult male	0 - 40	41 -74	75 - 110	111 - 349	350 +
1 mo - 15 yr old	0 - 40	41 - 74	75 - 110	111 - 124	125 +
7 day - 30 day old	0 - 40	41 - 59	60 -105	106 - 124	125 +
1 day - 6 day old	0 - 29	30 - 49	50 -80	81 - 125	125 +
Less than 24 hrs old	0 - 29	30 - 39	40 - 60	61 - 125	125 +

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Equipment 8-342 - Hemostatic Agent

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Guideline 1-850 - Rescue Task Force
- Protocol 2-924 - Universal Patient Care

Contraindications:

- None.

Precautions:

- None.

Procedure:

- Apply gauze to open wound. Fill and tightly pack whole wound.
- Use direct pressure on gauze and wound for approximately three (3) minutes to help form clot.
- If bleeding continues, hold pressure for an additional three (3) minutes.
- Wrap over gauze for transport.

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Equipment 8-360 - Hot Pack

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- ?

Contraindications:

- ?

Precautions:

- ?

Procedure:

- ?

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Equipment 8-378 - I-Gel Airway

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Patients who are unable to maintain their own airway (i.e. GCS less than 8).

Contraindications:

- Conscious/semi-conscious patient.
- Trismus, limited mouth opening, pharyngo-perilaryngeal abscess, trauma, or mass.
- Do not use the gastric channel if:
  - There is an excessive air leak through the gastric channel.
  - There are osophageal varices or evidence of upper gastro-intestinal bleed.
  - In cases of osophageal trauma.
  - There is a history of upper gastro-intestinal surgery.
  - The patient has bleeding/clotting abnormalities.
  - Nasogastric tube insertion in the presence of inadequate levels of anaesthesia can lead to coughing, bucking, excessive salivation, retching, laryngospasm or breath holding.

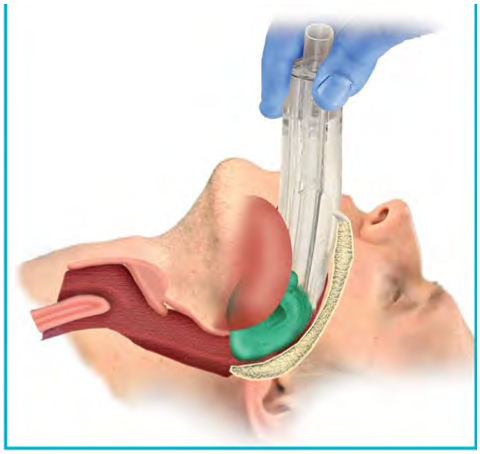
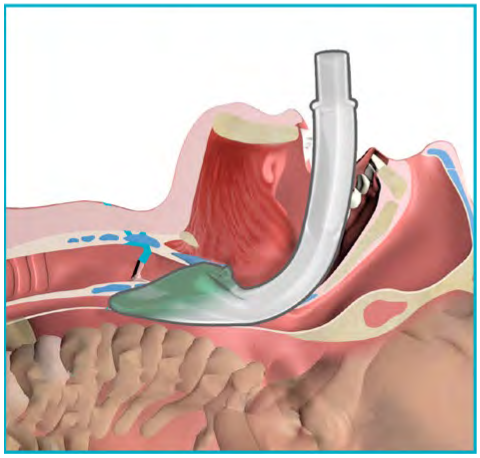
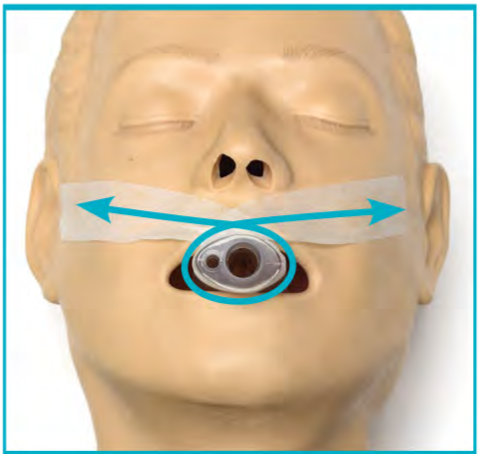
Precautions:

- Do not allow peak airway pressure of ventilation to exceed 40cm H2O.
- Do not use excessive force to insert the device or nasogastric tube.
- Must be lubricated according to the instructions for use.
- The patient should always be in the ‘sniffing the morning air’ position prior to insertion with the assistant helping to open the patient’s mouth, unless head/neck movements are considered inadvisable or are contraindicated.
- The leading edge of the i-gel’s tip must follow the curvature of the patient’s hard palate upon insertion.
- If there is a failure to achieve complete insertion after utilising the standard insertion technique and a jaw thrust, deep rotation or triple manoeuvre has also failed, then the device should be inserted under direct vision by laryngoscopy or one size smaller device should be used.
- After insertion, i-gel should be taped down from maxilla-to-maxilla.
- Excessive air leak during manual ventilation is primarily due to either sub-optimal depth of anaesthesia or sub-optimal depth of i-gel insertion.
- Particular care should be taken with patients who have an ASA or Mallampati score of III and above, or who have fragile and vulnerable dental work, in accordance with recognised airway management practices and techniques.
- As with all supraglottic airways, it is important to ensure the correct size of device is used, lubrication is optimal, the device is inserted and positioned correctly and regularly checked intraoperatively in order to reduce the potential for nerve damage, tongue numbness, cyanosis and other potential complications.
- No attempt should be made to use i-gel as a conduit for intubation without fibre optic guidance.
- The i-gel is supplied in a protective cradle or cage pack to ensure the device is retained in the correct flexion prior to use and also acts as a base for lubrication. The i-gel must always be separated from the cradle or cage pack prior to insertion. The cradle and cage pack are not introducers and must never be inserted into the patient’s mouth.
- : Do not apply excessive force on the device during insertion. It is not necessary to insert fingers or thumbs into the patient’s mouth during the process of inserting the device. If there is early resistance during insertion, a ‘jaw thrust’, ‘Insertion with deep rotation’ (Figure 24) or triple maneouvre is recommended.
- In order to avoid the possibility of the device moving up out of position prior to being secured in place, it is essential that as soon as insertion has been successfully completed, the i-gel is held in the correct position until and whilst the device is secured in place.

Procedure:

- Pre-use check and preparation:
  - Select the appropriate size i-gel by assessing the patient's anatomy.
  - Inspect the packaging and ensure it is not damaged prior to opening.
  - Inspect the device carefully, check the airway is patent and confirm there are no foreign bodies or a BOLUS of lubricant obstructing the distal opening of the airway or gastric channel.
  - Open the i-gel package and on a flat surface take out the protective cradle containing the device.
  - Place a small bolus of a water-based lubricant, such as K-Y Jelly, onto the middle of the smooth surface of the cradle in preparation for lubrication. Do not use silicone based lubricants.
  - Grasp the i-gel along the integral bite block and lubricate the back, sides and front of the cuff with a thin layer of lubricant.
  - Place the i-gel back into the cradle in preparation for insertion.
- Insertion:
  - A proficient user can achieve insertion of the i-gel in less than five seconds.
  - Grasp the lubricated i-gel firmly along the integral bite block. Position the device so that the i-gel cuff outlet is facing towards the chin of the patient.
  - The patient should be in the 'sniffing the morning air' position with head extended and neck flexed. The chin should be gently pressed down before proceeding to insert the i-gel.
  - Introduce the leading soft tip into the mouth of the patient in a direction towards the hard palate.
  - Glide the device downwards and backwards along the hard palate with a continuous but gentle push until a definitive resistance is felt.
  - At this point the tip of the airway should be located into the upper osophageal opening and the cuff should be located against the laryngeal framework. The incisors should be resting on the integral bite-block.
  - I-gel should be taped down from 'maxilla to maxilla'.
  - If required, an appropriate size nasogastric tube may be passed down the gastric channel.
- Gastric channel use:
  - Select the appropriate size of nasogastric (NG) tube.
- If regurgitation is anticipated, then it is recommended that a nasogastric tube is passed through the gastric channel of the i-gel into the patient's stomach and the stomach emptied. The nasogastric tube can be left in situ.
- Removal:
  - Once consciousness is regained and protective reflexes such as coughing and swallowing have returned, gently suction around the airway device in the pharynx and hypopharynx.
  - Once the patient is awake or easily arousable with vocal commands, the i-gel can safely be removed by asking the patient to open his/her mouth wide, and replaced with an MC (medium concentration oxygen) mask.
  - DO NOT attempt to forcibly remove the device if the patient is biting on it. Wait until the patient, on vocal command, has fully opened their mouth or opens their mouth spontaneously.




Size selection:

I-gel Size	Patient Size	Patient Weight	NG Tube Max Size
1	Neonate	2-5 kg	N/A
1.5	Infant	5-12 kg	10
2	Small pediatric	10-25 kg	12
2.5	Large pediatric	25-35 kg	12
3	Small adult	30-60 kg	12
4	Medium adult	50-90 kg	12
5	Large adult	90+ kg	14

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Equipment 8-396 - Intranasal (IN) Device

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic
- Note: EMR, EMT, and AEMT may only use IN device for Narcan administration for suspected narcotic overdose causing respiratory depression when they are unable to ventilate.

Indications:

- Medication 7-230 - Fentanyl (Sublimaze)
- Medication 7-400 - Narcan (Naloxone)
- Medication 7-600 - Versed (Midazolam)
- Medication 7-620 - Zofran - (Ondansetron)

Contraindications:

- If IV access can be obtained, IV is preferred medication route.

Precautions:

- Mucous, blood, and vasoconstrictors reduce absorption.
- Minimize volume, maximum concentration:
  - 1/3 ml per nostril is ideal, 1 ml is max.
  - Use both nostrils to double surface area.

Procedure:

- Select correct medication at a high of a concentration as possible. Divide the dose between the two nares.
- Confirm orders, dosage, and expiration.
- Check patient allergies.
- Remove and discard the green vial adapter cap.
- Pierce the medication vial with the syringe vial adapter.
- Aspirate the proper volume of medication required to treat the patient (an extra 0.1 ml of medication should be drawn up to account for the dead space in the device).
- Remove (twist off) the syringe from the vial adapter.
- Attach the Mucosal Atomization Device (MAD) to the syringe via the luer-lock connector.
- Using the free hand to hold the crown of the Head stable, place the tip of the MAD snugly against the nostril aiming slightly up and outward (toward the top of the ear).
- Briskly compress the syringe plunger to deliver half of the medication into the nostril.
- Move the device over to the opposite nostril and administer the remaining medication into that nostril.
- Observe patient for effects.

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Equipment 8-414 - Intraosseous (IO) Needle

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Indications:

- Any patient who needs IV access where IV attempts have failed or suspected to be unsuccessful. IV access is preferred over IO in all situations.

Contraindications:

- Fracture of target bone.
- Previous orthopedic procedure near the insertion site.
- Infection at insertion site.
- Inability to locate landmark due to edema or obesity.

Precautions:

- IV access is preferred over IO in all situations.
- Shelf life for the EZ-IO G3 Power Driver is ten years.

Procedure:

- Prepare equipment.
- Identify site:
  - Proximal humerus,
  - Proximal tibia,
  - Distal tibia, or
  - Distal femur (infants only).
- Cleanse site.
- Stabilize site.
- Insert needle at 90 degree angle.
  - Insert needle without drilling until against bone.
  - If at least one black mark is visible on needle above skin, drill to appropriate depth.
  - If no black mark is visible on needle above skin, remove needle and re-attempt with longer needle. Re-attempts may be made at the same site only if bone was not drilled.
- Conscious: 2% Lidocaine 20-50 mg slow over 1-2 min. May repeat half dose after 30 min if Pain returns.
- Flush with NS or LR 5-10 ml bolus.
- Connect tubing and apply pressure bag.
- Apply dressing.

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Equipment 8-432 - Intravascular (IV) Needle

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Any patient requiring IV medications.

Contraindications:

- None.

Precautions:

- Avoid venipuncuture in arms with dialysis shunts or distal to injuries.

Procedure:

- Inform patient of procedure.
- Apply Tourniquet.
- Select and clean site. Preferred needle size is 18 to 20. Preferred site is left AC or (secondary) right AC. The following patients should have at least an 18 ga at the AC level or more proximal:
  - Calf pain, tenderness, or swelling,
  - Chest pain,
  - Hypotension,
  - Shortness of breath,
  - Syncope,
  - Tachycardia, or
  - Tachypnea.
- Stabilize vein.
- Pass needle into vein with bevel up, noting blood "flash."
- Advance needle 2 mm more.
- Slide catheter over needle into vein.
- Remove needle.
- Hold pressure over distal tip of catheter to prevent blood loss.
- Perform Blood Draw if indicated.
- Remove Tourniquet.
- Flush with NS to ensure placement. Use pigtail extension.
- Secure with dressing.

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Equipment 8-450 - IV Pump

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Indications:

- Patient requiring drip medications.

Contraindications:

- None.

Precautions:

- None.

Procedure:

- Cassette priming and loading:
  - Make sure flow regulator is closed (white screw pushed in).
  - Insert piercing pin with a twisting motion into medication.
  - Fill drip chamber.
  - Invert cassette.
  - Turn flow regulator counterclockwise until a drop of fluid is seen in pumping chamber.
  - Turn cassette upright and prime remainder of administration set.
  - Push flow regulator closed.
  - Make sure proximal clamp (above cassette) is open.
  - Open cassette door and insert cassette.
  - Close door.
- Infusion:
  - Turn knob to "SET RATE."
  - Use up, down, and/or "QUICKSET" buttons to select infusion rate.
  - Turn knob to "SET VTBI."
  - Use up, down, and/or "QUICKSET" buttons to select volume to be infused.
  - Turn knob to "RUN."

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Equipment 8-468 - Kendrick Extrication Device (KED)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Protocol 2-836 - Spinal Immobilization Clearance.
- Equipment 8-792 - General Splint.

Contraindications:

- Patients with easy access requiring rapid extrication.

Precautions:

- None.

Procedure:

- Maintain c-spine.
- Assess distal pulses, motor function, and sensation.
- Apply C-collar.
- Position device behind patient.
- Pull device up until it fits snugly in armpits.
- Apply chest straps and tighten. Avoid restricting breathing.
- Apply leg straps and tighten. Avoid pinching or injuring genitals.
- Apply padding behind head.
- Secure head to device.
- Remove patient from entrapment (if applicable) and lay down on Backboard.
- Release leg straps and secure patient and device to Backboard.
- KED chest straps may be loosened for comfort.
- Reassess distal pulses, motor function, and sensation.

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Equipment 8-486 - King Airway

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Protocol 2-044 - Airway: RSI.
- Protocol 2-198 - Cardiac Arrest.
- Equipment 8-288 - Endotracheal Tube (ET).

Contraindications:

- Airway burns.
- Responsive patient with intact gag reflex.
- Known esophageal disease.
- Caustic substance ingestion.

Precautions:

- None.

Procedure:

- Choose size (see table below).
- Test cuff inflation by injecting maximum recommended volume of air into cuffs. Remove all air from cuffs.
- Apply lubricant to beveled distal tip and posterior aspect of tube.
- Pre-Oxygenate.
- Position Head in "sniffing position" or neutral position.
- Hold King in dominant hand. Hold open mouth and lift chin with non-dominant hand.
- Rotate King 45-90 degrees to touch the corner of the mouth with the blue orientation line.
- Advance King behind base of tongue. Never force into position.
- As tip passes under tongue, rotate back to midline (blue orientation line faces chin).
- Advance King until base of connector aligns with teeth or gums.
- Inflate cuffs with minimum volume necessary to seal the Airway at peak ventilatory pressure.
- Attach resuscitation bag. While bagging, withdraw King until ventilation is easy and free flowing.
- Confirm proper position by auscultation, Chest movement, and ETCO2.
- Secure King with tape or other device.
- Advanced Life Support:
    - Continued sedation: Consider Versed 2.5-5 mg every 5 min and/or Fentanyl 50-100 mcg (max 300 mcg).
    - **MANDATORY AFTER INSERTION TO CONFIRM PLACEMENT**:
        - Place up to 18 fr Gastric Tube into the drain tube of the King and advance into the stomach. The gastric tube should be well lubricated and passed slowly and carefully. Suction should not be performed until the gastric tube has reached the stomach.

Sizing Table:

Size	Connector color	Patient criteria	Cuff volume
2	Green	35-45 inches, 2.9-3.8 feet, 12-25 kg	25-35 ml
2.5	Orange	41-51 inches, 3.8-4.3 feet, 25-35 kg	30-40 ml
3	Yellow	4-5 feet	40-60 ml
4	Red	5-6 feet	50-80 ml
5	Purple	Greater than 6 feet	60-90 ml

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Equipment 8-504 - Lactate Meter

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- ?

Contraindications:

- ?

Precautions:

- ?

Procedure:

- ?

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Equipment 8-522 - Laryngeal Mask Airway (LMA)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Protocol 2-044 - Airway: RSI.
- Protocol 2-198 - Cardiac Arrest.
- Equipment 8-288 - Endotracheal Tube (ET).

Contraindications:

- Swallow or gag reflex.

Precautions:

- None.

Procedure:

- Examine LMA for damage, leaks, and blockages.
- Inflate cuff with 150% that listed. Fully deflate by compressing the distal tip of the mask with thumb and index finger. Apply slight tension to the inflation line while removing all air until a vacuum is felt. Disconnect the syringe.
- Generously lubricate posterior surface of cuff and airway tube.
- Place the patient's head in a neutral or slight "sniffing" position. Hold the LMA at the proximal end with the connector pointing downward to the chest and the tip of the distal end pointing toward the palate.
- Press the tip of the mask against the hard palate. Maintaining pressure against the palate, continue to rotate the mask inwards in a circular motion following the curvature of the hard and soft palate.
- Continue until resistance is felt. The distal end of the mask should now be in contact with the upper esophageal sphincter. The device is now fully inserted.
- Maintaining inward pressure, secure the mask into position by taping cheek to cheek across the fixation tab. This should be done prior to inflation. Inflate with the minimum amount of air needed to achieve an effective seal.
- **Advanced Life Support**:
  - Continued sedation:
    - Consider Versed 2.5-5 mg every 5 min. Repeat as needed maintaining SBP greater than 100.
    - Consider Fentanyl 50-100 mcg. Max 300 mcg.
  - MANDATORY AFTER INSERTION TO CONFIRM PLACEMENT:
    - Place Gastric Tube into the drain tube of the LMA and advance into the stomach. The gastric tube should be well lubricated and passed slowly and carefully. Suction should not be performed until the gastric tube has reached the stomach.

Sizing Table:

Mask size	Patient size	Max cuff inflation volume	Largest gastric tube size
1	Neonates/infants up to 5 kg	5 ml	6 Fr
1.5	Infants 5 - 10 kg	8 ml	6 Fr
2	Infants 10 - 20 kg	12 ml	10 Fr
2.5	Children 20 - 30 kg	20 ml	10 Fr
3	Children 30 - 50 kg	30 ml	14 Fr
4	Adults 50 - 70 kg	45 ml	14 Fr
5	Adults 70 - 100 kg	45 ml	14 Fr

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Equipment 8-540 - Laryngoscope

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Indications:

- ?

Contraindications:

- ?

Precautions:

- ?

Procedure:

- ?

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Equipment 8-558 - Meconium Aspirator

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Indications:

- ?

Contraindications:

- ?

Precautions:

- ?

Procedure:

- ?

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Equipment 8-576 - Morgan Lens

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Indications:

- Protocol 2-418 - Eye Trauma.

Contraindications:

- Penetrating eye injury.

Precautions:

- None.

Procedure:

- Pain: Consider topical anesthetic (Tetracaine 1-2 drops
- Attach LR to IV set.
- Begin flow.
- Have patient look down. Insert lens under upper lid.
- Have patient look up, retract lower lid. Drop lens into place.
- Deliver at least 500 ml per eye.
- If chemical is unknown or an alkali (base), flush for at least 20 min.
- To remove, have patient look up, retract lower lid, and slide lens out.

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Equipment 8-594 - Naso-Pharyngeal Airway (NPA)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Patients unable to control their airway.

Contraindications:

- None.

Precautions:

- None.

Procedure:

- Pre-Oxygenate, if possible.
- Measure tube from tip of nose to the earlobe.
- Lube airway with water-soluble jelly.
- Insert tube (right nare first) with bevel towards the septum.
- Reassess airway.

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Equipment 8-612 - Nebulizer

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Protocol 2-066 - Allergic Reaction.
- Protocol 2-726 - Pulmonary Edema.
- Protocol 2-770 - Respiratory Distress.
- Medication 7-040 - Albuterol (Proventil, Ventolin).
- Medication 7-180 - Duoneb (Ipratropium and Albuterol, Combivent).
- Medication 7-210 - Epinephrine Racemic (Micronefrin).
- Medication 7-610 - Xopenex (Levalbuterol).

Contraindications:

- None.

Precautions:

- None.

Procedure:

- Select correct medication.
- Confirm orders, dosage, and expiration.
- Check patient allergies.
- Add medication to reservoir of Nebulized. Add Saline if necessary to equal 3 ml total volume.
- Connect Oxygen tubing and set flow rate to 6-8 lpm.
- Have patient take deep breaths, holding for a second, and exhale through tube.
- If patient is unable to hold nebulizer, attach to mask.
- Medication is delivered in 5-10 min.
- Observe patient for effects.

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Equipment 8-630 - Oro-Pharyngeal Airway (OPA)

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Unconscious or unresponsive.

Contraindications:

- Gag reflex.

Precautions:

- None.

Procedure:

- Pre-Oxygenate, if possible.
- Measure airway from corner of mouth to earlobe.
- Grasp tongue and jaw, lifting anterior.
- Insert airway inverted and rotate 180 degrees into place.
- Reassess airway.

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Equipment 8-648 - Pelvic Binder

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- ?

Contraindications:

- ?

Precautions:

- ?

Procedure:

- ?

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Equipment 8-666 - Physical Restraint

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Indications:

- Protocol 2-110 - Behavioral.

Contraindications:

- None.

Precautions:

- If restrained by law enforcement (i.e. hand-cuffs), an officer from the arresting agency must be physically present with the patient throughout EMS transport.

Procedure:

MEDICAL CONTROL must be contacted prior to or immediately following patient restraint.

- Maintain scene, crew, and personal safety.
- Attempt verbal de-escalation.
- Utilize family and friends to calm patient if they are helpful.
- Utilize law enforcement presence to calm patient.
- Managing the patient's Pain may assist in calming patient.
- Utilize the least restrictive device that achieves desired result.
- Monitor patient for physical response, extremity circulation, respiratory compromise, and aspiration risk.
- Proper body alignment and patient comfort must be addressed.

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Equipment 8-684 - PICC and Central Line Access Kit

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Indications:

- Express request by the patient to utilize established access instead of starting an IV.
- Any patient who needs IV access, two attempts at IV access have failed, IO contraindicated or conscious patient, and at least one of the following:
  - ALOC or GCS less than 8,
  - Hemodynamic instability,
  - Extreme respiratory compromise, OR
  - Full Arrest.

Contraindications:

- Inability to obtain/maintain sterile field.

Precautions:

- Sterile technique must be utilized.

Procedure:

- Cleanse the needless infusion cap. May use any catheter present.
- Aseptically attach flush.
- Open clamp on catheter lumen.
- Aspirate fluid from catheter slowly until blood return. If unable to aspirate blood, catheter is clotted and will need to be declotted in a hospital setting.
- Flush with NS/LR. Use at least a 10 ml syringe using a push-pause method. Remove flush while maintain pressure on syringe plunger.
- Attach appropriate IV fluids.

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Equipment 8-702 - Port Access Kit

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Indications:

- Express request by the patient to utilize established access instead of starting an IV.
- Any patient who needs IV access, two attempts at IV access have failed, IO contraindicated or conscious patient, and at least one of the following:
  - ALOC or GCS less than 8,
  - Hemodynamic instability,
  - Extreme respiratory compromise, OR
  - Full Arrest.

Contraindications:

- Inability to obtain/maintain sterile field.

Precautions:

- Sterile technique must be utilized.

Procedure:

- Gather equipment and don mask.
- Palpate subcutaneous tissue to determine borders of the access device. Palpate the implanted infusion port borders and locate the septum and center of the septum. Determine if the patient has a single or double lumen implanted infusion port. Choose the smallest gauge non-coring needle that accommodates the therapy. Select a length that allows the length of the needle to sit flush to the skin and securely within the port.
- Assess the site for symptoms of infection.
- Open the implanted infusion port access kit using the sterile inner surface to create sterile field.
- Using sterile technique, remove wrapper from 10 ml syringe and place on sterile field. Remove packaging and place the needle with extension tubing, needleless injection cap, adhesive skin closures, and dressing on sterile field.
- Using sterile technique, prime tubing with NS syringe. Attach needleless injection cap to extension to needle.
- Cleanse insertion site with antiseptic for 30 seconds and allow to air dry.
- Stabilize borders of implanted port and insert needle firmly into center of port septum using 90 degree angle perpendicular to the skin. Advance needle until reaching base of portal reservoir.
- Aspirate blood and then flush with NS/LR. Use at least a 10 ml syringe using a push-pause method.
- Stabilize needle with dressing, occlusive dressing, and/or tape. Document date, time, and your initials on external dressing.

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Equipment 8-720 - Radio

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- ?

Contraindications:

- ?

Precautions:

- ?

Procedure:

- ?

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Equipment 8-738 - Respirator

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- ?

Contraindications:

- ?

Precautions:

- ?

Procedure:

- ?

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Equipment 8-756 - Splint Backboard

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Protocol 2-836 - Spinal Immobilization Clearance.

Contraindications:

- Protocol 2-836 - Spinal Immobilization Clearance.

Precautions:

- Appropriate amount of padding is needed to provide correct stabilization.
- Unless it is necessary to change a patient's position to maintain an open airway or there is some other compelling reason, it is best to splint the neck and back in the original position of the deformity.

Procedure:

- Assess distal pulse, motor, and sensation.
- Maintain manual stabilization, measure, size, and secure cervical collar.
- Seated patient: Consider KED.
- If no posterior injuries suspected: Eight-person lift a few inches and slide board underneath or use scoop stretcher.
    - OR Log-roll patient onto his/her side. Assess posterior and position backboard.
- Secure thorax and legs to backboard. Pad. Ensure breathing is not restricted.
- Secure head and C-collar to backboard. Pad as needed. Tape should stick to all areas of forehead, eyebrows, collar, etc.
- Reassess distal pulse, motor, and sensation.

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Equipment 8-774 - Splint C-Collar

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Protocol 2-836 - Spinal Immobilization Clearance.

Contraindications:

- Protocol 2-836 - Spinal Immobilization Clearance.

Precautions:

- If used, C-collar **MUST** be properly sized.
- Unless it is necessary to change a patient's position to maintain an open airway or there is some other compelling reason, it is best to splint the neck and back in the original position of the deformity.

Procedure:

- Assess distal pulse, motor, and sensation.
- Maintain manual stabilization, measure, size, and secure cervical collar.
- Reassess distal pulse, motor, and sensation.

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Equipment 8-792 - Splint General

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Protocol 2-132 - Bites and Envenomations.
- Protocol 2-396 - Extremity Trauma.
- Protocol 2-660 - Pain Control.
- Protocol 2-924 - Universal Patient Care.

Contraindications:

- None.

Precautions:

- May be time consuming, should not take priority over life threatening conditions.
- Bone fracture splints should immobilize joints above and below. Joint fractures should immobilize bones above and below.

General Procedure:

- Following splints are recommended for the following situations. Every situation is different, so splints may have to be improvised to achieve the desired effect of immobilization:
  - Clavicle: Sling and swath.
  - Radius/ulna: Ladder, board, or SAM.
  - Tibia/fibula: Ladder, board, or SAM.
  - Ankle: Pillow.
  - Joints: In position found.
  - Pelvis: Scoop, pillow, inverted KED, LSB, MAST.
  - Hand: In position of function.
- Assess distal pulse, motor, and senses before and after splinting.

Evac-U-Splint Procedure:

- Preparation:
  - Lay mattress on flat surface near patient. Head and Shoulder logo indicates the Head end.
  - Remove valve cap. Release vacuum by pushing red valve stem. Keep valve pushed in until mattress is pliable.
  - Disconnect strap from patient side of mattress and position top strap at level of armpit.
  - Smooth out beads to form level surface.
  - Connect pump to mattress at either foot or head end. Foot end is preferred. Pediatric mattress only has valve on foot end.
- Application:
  - Assess patient's respiratory and neurovascular status.
  - Log roll patient onto mattress with manual c-spine control.
  - Secure patient using straps. Remove excess strap slack working head to feet.
  - Repeat strap tightening if needed working head to feet.
  - Shape mattress and fill voids.
  - Evacuate air from mattress. Pump may require up to 35 strokes to achieve rigid immobilization.
  - Disconnect pump. Replace cap on valve.
  - Secure head using adhesive tape.
  - Assess patient's respiratory and neurovascular status.

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Equipment 8-810 - Splint Traction

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Protocol 2-396 - Extremity Trauma.

Contraindications:

- Proximal femur fracture.
- Pelvic fracture.
- Tibia/fibula fracture.

Precautions:

- In the case of open fracture with obvious contamination, loose debris should be brushed away and flushed with Saline prior to reduction.

Procedure:

- Assess distal pulse, motor, and sensation. If pulses are absent, apply manual, inline Traction. Pulseoximetry can help with distal pulse monitoring.
  Consider MEDICAL CONTROL for angulated or pulseless fractures.
- Stabilize limb manually.
- **Advanced Life Support**: Consider sedation or analgesia prior to moving extremity.
- In general, if distal pulses and sensation are present, field reduction should not be attempted.
- Reassess distal pulse, motor, and sensation.
- Patient destination should be a trauma center.
- In the event of bilateral femur fractures, consider MAST pants.

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Equipment 8-828 - Stair Chair

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- ?

Contraindications:

- ?

Precautions:

- ?

Procedure:

- ?

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Equipment 8-846 - Suction

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Any patient with liquid airway obstruction.

Contraindications:

- None.

Precautions:

- Avoid or use caution in patients with a gag reflex.
- Be sure to switch off as soon as possible to avoid draining batteries.

Procedure:

- EMR and EMT: Only suction the upper airway.
- AEMT: Only suction the upper airway, unless the patient is already intubated, then tracheobronchial suctioning is permitted.
- Place two fully charged batteries.
- Attach patient connecting tube to patient port on the canister.
- Turn switch on.
- Occlude end of patient connecting tube and keep it occluded for 10sec. Release occlusion and check for negative pressure. If no negative pressure, check to ensure canister lid is tight and connections are secure.
- Dispose of canister after use.

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Equipment 8-864 - Thermometer

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Protocol 2-924 - Universal Patient Care.

Contraindications:

- None.

Precautions:

- Prehospital thermometers should only be used to measure a patient's temperature in the oral, axillary, or rectal body sites unless specifically designed for other locations by the manufacturer.
- Do not take a patient's temperature without using a Welch Allyn disposable probe cover. Doing so can cause patient discomfort, patient cross contamination, and erroneous temperature readings.

Oral Temperature Procedure:

- Using Probe with Blue Ejection Button and Blue Probe Well.
- When used correctly, the SureTemp Plus thermometer accurately measures an oral temperature in approximately 4–6 seconds. The ability of the SureTemp Plus thermometer to take an accurate oral temperature requires correct user technique.
- Holding the probe handle with your thumb and two fingers on the indentations of the probe handle, withdraw the probe from the probe well.
- Verify that the oral model icon is selected by observing the flashing head icon on the instrument's display. If this icon is not flashing, press the Mode Selection button until the head icon appears.

- Load a probe cover by inserting the probe into a probe cover and pressing the probe handle down firmly. The probe handle will move slightly to engage the probe cover. Use only Welch Allyn probe covers. The use of other manufacturer's probe covers or no probe cover may produce temperature measurement errors and/or inaccuracy.
- With the Oral Mode indicator flashing, quickly place the probe tip under the patient's tongue on either side of the mouth to reach the rear sublingual pocket. Have the patient close his/her lips around the probe. Hold the probe in place, keeping the tip of the probe in contact with the oral tissue throughout the measurement process. Rotating "walking" segments appear on the display, indicating that measurement is in progress.

- The unit will beep three times when the final temperature is reached. The measurement site, temperature scale, and patient temperature will display on the LCD. Final temperature will remain on the display for 30 seconds.
- If you cannot correctly measure the patient's temperature in Normal Mode, the unit will automatically enter Monitor Mode. In this mode, measurement time is extended. Either repeat the temperature measurement in Normal Mode in the opposite sublingual pocket or keep the probe in place for three minutes in Monitor Mode. The thermometer will not beep to indicate a final temperature. Record the temperature before removing the probe from the site, as the temperature reading is not maintained in memory.

- Long-term continuous monitoring beyond three minutes is not recommended in the Oral Mode.
- After the temperature measurement is complete, remove the probe from the patient's mouth. Eject the probe cover by firmly pressing the ejection button on the top of the probe.
- Return the probe to the probe well. The LCD display will go blank.
- Patient actions may interfere with accurate oral temperature readings. Ingesting hot or cold liquids, eating food, chewing gum or mints, brushing teeth, smoking, or performing strenuous activity may affect temperature readings for up to 20 minutes after activity has ended.

Axillary Temperature Procedure:

- Using Probe with Blue Ejection Button and Blue Probe Well.
- When used correctly, the SureTemp Plus thermometer accurately measures an axillary temperature for pediatric patients (ages 17 and younger) in approximately 10–13 seconds and for adult patients (ages 18 and older) in approximately 12–15 seconds.
- Ensure that the axillary probe (blue ejection button) and the blue probe well are installed.
- Holding the probe handle with your thumb and two fingers on the indentations of the probe handle, withdraw the probe from the probe well.
- Verify that the axillary mode is selected by observing the correct flashing axillary icon on the instrument's display. If this icon is not flashing, press the Mode Selection button to select the Adult Axillary or Pediatric Axillary icon is displayed.

- To ensure optimal accuracy, always confirm that the correct axillary mode is selected.
- After a temperature is taken and the probe is returned to the probe well, the instrument reverts to the original measurement site mode.
- Do not take an axillary temperature through patient's clothing. Direct contact between patient's skin and the probe is required.
- Load a probe cover by inserting the probe into a probe cover and pressing the probe handle down firmly. The probe handle will move slightly to engage the probe cover.
- Use only Welch Allyn probe covers. The use of other manufacturer's probe covers or no probe cover may produce temperature measurement errors and/or inaccuracy.
- With the correct axillary mode indicator flashing, lift the patient's arm so that the entire axilla is easily seen. Place the probe as high as possible in the axilla. Do not allow the probe tip to come into contact with the patient until the probe is placed in the measurement site. Before this, any contact between the probe tip and the tissue or other material may cause inaccurate readings.
- Verify that the probe tip is completely surrounded by axillary tissue and place the arm snugly at the patient's side. Hold the patient's arm in this position and do not allow movement of the arm or probe during the measurement cycle. Rotating "walking" segments appear on the display, indicating that measurement is in progress.
- The unit will beep three times when the final temperature is reached. The measurement site, temperature scale, and patient temperature will display on the LCD. The final temperature will remain on the display for 30 seconds.
- If you cannot correctly measure the patient's temperature in Normal Mode, the unit will automatically enter Monitor Mode. In this mode, measurement time is extended. Either repeat the temperature measurement in Normal Mode in the opposite sublingual pocket or keep the probe in place for three minutes in Monitor Mode. The thermometer will not beep to indicate a final temperature. Record the temperature before removing the probe from the site, as the temperature reading is not maintained in memory.

- Long-term continuous monitoring beyond five minutes is not recommended in the Axillary Mode.
- After the temperature measurement is complete, remove the probe from the patient's axilla. Eject the probe cover by firmly pressing the ejection button on the top of the probe.
- Return the probe to the probe well. The LCD display will go blank.
- Probe contact with electrodes, bandages, etc., poor tissue contact, taking a temperature over clothing, or prolonged exposure of axilla to ambient air can cause inaccurate temperature readings.

Rectal Temperature Procedure:

- Using Probe with Red Ejection Button and Red Probe Well.
- When used correctly, the SureTemp Plus thermometer accurately measures rectal temperature in approximately 10–13 seconds.
- Ensure that the rectal probe (red ejection button) and the red probe well are installed. The instrument will only operate in Rectal Mode when the red rectal probe and probe well are installed.
- Holding the probe handle with your thumb and two fingers on the indentations of the probe handle, withdraw the probe from the probe well.
- Observe the flashing lower-body icon on the unit's display. Load a probe cover by inserting the probe into a probe cover and pressing the probe handle down firmly. The probe handle will move slightly to engage the probe cover.

- With the Rectal Mode indicator flashing, separate the patient's buttocks with one hand. Using the other hand, gently insert the probe only 1.5 cm (5/8 in.) inside the rectum (less for infants and children). The use of a lubricant is optional.
- Incorrect insertion of probe can cause bowel perforation.
- Tilt the probe so that the tip of the probe is in contact with tissue. Keep the hand separating the buttocks in place, and hold the probe in place throughout the measurement process. Rotating "walking" segments appear on the display, indicating that measurement is in progress.
- The unit will beep three times when the final temperature is reached. The measurement site, temperature scale, and patient temperature will display on the LCD. The final temperature will remain on the display for 30 seconds.
- If you cannot correctly measure the patient's temperature in Normal Mode, the unit will automatically enter Monitor Mode. In this mode, measurement time is extended. Either repeat the temperature measurement in Normal Mode in the opposite sublingual pocket or keep the probe in place for three minutes in Monitor Mode. The thermometer will not beep to indicate a final temperature. Record the temperature before removing the probe from the site, as the temperature reading is not maintained in memory.

- Long-term continuous monitoring beyond three minutes is not recommended in Rectal Mode.
- After the temperature measurement is complete, remove the probe from the patient's rectum. Eject the probe cover by firmly pressing the ejection button on the top of the probe.
- Return the probe to the probe well. The LCD display will go blank.
- Wash your hands. Washing hands greatly reduces the risk of cross-contamination and Nosocomial Infection.

Normal Temperature Ranges

Age	Oral	Rectal	Axillary	Ear	Core
0 - 2 yr	NA	97.9 - 100.4 °F	94.5 - 99.1 °F	97.5 - 100.4 °F	97.5 - 100.0 °F
3 - 10 yr	95.9 - 99.5 °F	97.9 - 100.4 °F	96.6 - 98.1 °F	97.0 - 100.0 °F	97.5 - 100.0 °F
11 - 65 yr	97.5 - 99.5 °F	98.6 - 100.6 °F	95.4 - 98.4 °F	96.6 - 99.7 °F	98.2 - 100.2 °F
Over 65 yr	96.4 - 98.6 °F	97.0 - 99.1 °F	95.9 - 97.3 °F	96.4 - 99.5 °F	96.6 - 98.8 °F

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Equipment 8-882 - Tourniquet

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Dispatcher
- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Protocol 1-850 - Rescue Task Force.
- Protocol 2-396 - Extremity Trauma.
- Protocol 2-924 - Universal Patient Care.

Contraindications:

- None.

Precautions:

- Prolonged Tourniquet application may result in nerve damage, rhabdomyolysis, compartment syndrome, ischemia, and re-profusion injury.
- Time of Tourniquet application MUST be reported to accepting ER.
- Do not apply Tourniquet over a joint.

Procedure:

- May use cloth, blood pressure cuff, or commercial device. Constricting band should be at least 1 inch wide.
- Apply Tourniquet proximal to bleeding site.
  - HIGHLY preferred to place tourniquets on the upper arms or leg to compress one bone instead of two in distal limbs.
- Tighten Tourniquet until bright red bleeding has stopped.
- Secure Tourniquet from loosening.
- Note the time of Tourniquet application.
- **Advanced Life Support**:
  - Application of Tourniquets typically results in severe Pain. Consider referring to Protocol 2-660 - Pain Control after bleeding control, fluid administration, and TXA administration (if given).
  - If prolonged transport time, consider Tourniquet removal if ALL of the following are met:
    - Not in circulatory shock,
    - Stable vitals,
    - Enough personnel and resources, AND
    - Not an amputated Extremity.

    Contact MEDICAL CONTROL to request orders to loosen tourniquet, if applicable:
    - Apply pressure dressing and loosen Tourniquet (leave in place).
    - Re-tighten Tourniquet if significant bleeding returns.

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Equipment 8-900 - Ultrasound

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- Identify causes of cardiac arrest.
- Detect ROSC.

Contraindications:

- Do not use POCUS to determine resuscitation termination.

Precautions:

- Only use POCUS in an arrest if an experienced sonographer is present and use does not interfere with care.

Procedure:

- ?

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Equipment 8-918 - Vehicle Tracker

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Emergency Medical Responder
- Emergency Medical Technician
- Advanced Emergency Medical Technician
- Registered Nurse
- Paramedic

Indications:

- ?

Contraindications:

- ?

Precautions:

- ?

Procedure:

- ?

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Equipment 8-936 - Ventilator

Polk, Hickory, Cedar, & St Clair EMS Protocols

Scope of Practice:

- Registered Nurse
- Paramedic

Indications:

- Need for ventilation of an intubated patient.
- Equipment 8-198 - Continuous Positive Airway Pressure (CPAP).

Contraindications:

- None.

Precautions:

- Demand setting requires constant patient monitoring.
- If patient condition deteriorates, consider extubation and BVM.

Definitions and Terminology:

ParaPAC Ventilator Procedures

Ventilation

- Adjust settings (may be based on existing Ventilator settings or anticipated patient needs).
  - Relief pressure is maximum delivered pressure.
  - Air mix is set at either "No Air Mix (100% Oxygen)" or "Air Mix (45% Oxygen).
  - Frequency is the breaths per minute.
  - Tidal volume is the volume of air per breath.
- Connect supply hose to Oxygen, turn on Oxygen, and check visual alarm.
- Connect patient hose and patient valve to ETT.
- Confirm ventilation with auscultation and Capnography. Confirm oxygenation with pulsoximeter.
- Constant patient monitoring is made more critical if Ventilator is in demand mode.
- Consider NG/OG Suction.

O-Two Ventilator Procedures

Circuit Layout

Ventilator	Elbow	Filter	Optional	EtCO2	Patient
			see optional below		

Optional		
Nebulizer	Spacer	Adapter (Jesus Piece)
		

Modes of Operation

<table>
<tr><th>Patient Description</th><th>Procedure</th></tr>
<tr><td>Cardiac Arrest</td><td>
<table>
<tr><td>Mode</td><td>CPR</td></tr>
<tr><td>Set PEEP</td><td>0 cm H2O</td></tr>
<tr><td>Set Trigger</td><td>- (none)</td></tr>
<tr><td>Set PMax</td><td>60 cm H2O</td></tr>
<tr><td>ROSC</td><td>After ROSC, refer to RSI settings below.</td></tr>
</table>
</td></tr>
<tr><td>Pulmonary Edema
(CPAP/BiPAP)</td><td>
<table>
<tr><td>Mode</td><td>CPAP or
CPAP with PSV (same as BiPAP, do not use BiLVL)</td></tr>
<tr><td>Adjust CPAP (expiratory support)</td><td>5-15 cm H2O</td></tr>
<tr><td>Adjust PSV (inspiratory support)</td><td>0-15 cm H2O</td></tr>
<tr><td>Adjust Trigger</td><td>P (patient)</td></tr>
</table>
</td></tr>
<tr><td>Pulmonary Edema
(intubated)</td><td>
<table>
<tr><td>Mode</td><td>A/CV</td></tr>
<tr><td>Set Vt (tidal volume)</td><td>See tables below</td></tr>
<tr><td>Set BPM (rate)</td><td>Titrate to EtCO2 and patient comfort:
Infant: 20-40 BPM
Child: 12-25 BPM
Adult: 10-20 BPM</td></tr>
<tr><td>Set PEEP</td><td>10-24 cm H2O</td></tr>
<tr><td>Adjust Waveform</td><td>Use FLOW waveform to see if breath stacking or spontanious breathing.</td></tr>
<tr><td>Sedation and Paralysis</td><td>Refer to Protocol 2-044 - Airway: RSI for continued sedation and paralysis during the transport.</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Patient Description</th><th>Procedure</th></tr>
<tr><td>RSI or DSI</td><td>
<table>
<tr><td>Mode</td><td>A/CV</td></tr>
<tr><td>Set Vt (tidal volume)</td><td>See tables below</td></tr>
<tr><td>Set BPM (rate)</td><td>Titrate to EtCO2:
Infant: 20-40 BPM
Child: 12-25 BPM
Adult: 10-20 BPM</td></tr>
<tr><td>Set PEEP</td><td>5-15 cm H2O (refer to Pulmonary Edema above, if applicable)</td></tr>
<tr><td>Adjust I:E ratio</td><td>Longer exhalation to prevent air-trapping (i.e. Asthma patients) (1:2 = normal) (1:4 = long exhalation)</td></tr>
<tr><td>Adjust Ti (inspiration time)</td><td>0.8-1.0 seconds</td></tr>
<tr><td>Adjust Waveform</td><td>Use FLOW waveform to see if breath stacking or spontanious breathing.</td></tr>
</table>
</td></tr>
<tr><td>Transfer (COVID)</td><td>
<table>
<tr><td>Mode</td><td>A/CV</td></tr>
<tr><td>Set Vt (tidal volume)</td><td>See tables below</td></tr>
<tr><td>Set BPM (rate)</td><td>Copy from RT ventilator OR
Titrate to EtCO2 and patient comfort:
Infant: 20-40 BPM
Child: 12-25 BPM
Adult: 10-20 BPM</td></tr>
<tr><td>Set PEEP</td><td>Adjust PEEP to match FiO2 and PEEP goals:
<table>
<tr><th>PEEP goal</th><th>60% FiO2</th><th>100% FiO2</th></tr>
<tr><td>lower PEEP</td><td>10 cm H2O</td><td>18-24 cm H2O</td></tr>
<tr><td>higher PEEP</td><td>20 cm H2O</td><td>22-24 cm H2O</td></tr>
</table>
</td></tr>
<tr><td>Adjust Ti (inspiration time)</td><td>0.8-1.0 seconds</td></tr>
<tr><td>Adjust Waveform</td><td>Use FLOW waveform to see if breath stacking or spontanious breathing.</td></tr>
<tr><td>Sedation</td><td>Ensure patient is fully sedated prior to movement to ambulance cot. Refer to Protocol 2-924 - Universal Patient Care for Ketamine dosage.
#sedatewhatyouintubate</td></tr>
<tr><td>Paralysis</td><td>Refer to Protocol 2-044 - Airway: RSI for continued sedation and paralysis during the transport.</td></tr>
</table>
</td></tr>
</table>

Patient Description	Procedure	
Transfer (non-COVID)	**Copy settings**	From RT ventilator
	Sedation	Ensure patient is fully sedated prior to movement to ambulance cot. Refer to Protocol 2-924 - Universal Patient Care for Ketamine dosage. #sedatewhatyouintubate
	Paralysis	Refer to Protocol 2-044 - Airway: RSI for continued sedation and paralysis during the transport.

Tidal Volume Based on Ulnar Length

Start with the middle tidal volume (in **Bold**) and adjust up or down within the range indicated.

Ulnar Length	Female (less than 65 yr old)	Female (greater than 65 yr old)	Male (less than 65 yr old)	Male (greater than 65 yr old)
19 cm	**290** (240-330) ml	**250** (210-290) ml	**320** (270-370) ml	**300** (250-350) ml
20 cm	**300** (250-350) ml	**270** (230-310) ml	**350** (300-400) ml	**330** (280-390) ml
21 cm	**320** (270-370) ml	**290** (240-330) ml	**350** (300-400) ml	**350** (300-400) ml
22 cm	**340** (280-390) ml	**320** (270-370) ml	**400** (300-450) ml	**350** (300-450) ml
23 cm	**350** (300-450) ml	**350** (250-400) ml	**400** (350-500) ml	**340** (280-390) ml
24 cm	**400** (300-450) ml	**350** (300-450) ml	**450** (350-500) ml	**400** (350-500) ml
25 cm	**400** (300-500) ml	**350** (300-450) ml	**450** (350-550) ml	**450** (350-500) ml
26 cm	**400** (350-500) ml	**400** (300-500) ml	**500** (400-550) ml	**450** (350-550) ml
27 cm	**450** (350-500) ml	**400** (350-500) ml	**500** (400-600) ml	**450** (350-550) ml
28 cm	**450** (350-550) ml	**450** (350-500) ml	**550** (450-650) ml	**500** (400-600) ml
29 cm	**450** (350-550) ml	**450** (350-550) ml	**550** (450-650) ml	**500** (400-600) ml
30 cm	**500** (400-550) ml	**500** (400-550) ml	**600** (450-700) ml	**550** (450-650) ml
31 cm	**500** (400-600) ml	**500** (400-600) ml	**600** (500-700) ml	**550** (450-650) ml
32 cm	**500** (400-600) ml	**500** (400-600) ml	**600** (500-700) ml	**600** (450-700) ml

Tidal Volume Based on IDEAL Body Weight (7 ml/kg)

Start with the middle tidal volume (in **Bold**) and adjust up or down within the range indicated.

Height	Pediatric		Adult Female		Adult Male	
	Weight	Tidal Volume	Weight	Tidal Volume	Weight	Tidal Volume
Preemie (Broslow: Grey)	2 kg	**15** (10-20) ml				
Newborn (Broslow: Grey)	4 kg	**30** (20-35) ml				
4 mo old (Broslow: Pink)	6 kg	**40** (30-50) ml				
6 mo old (Broslow: Red)	8 kg	**60** (40-70) ml				
1 yr old (Broslow: Purple)	10 kg	**70** (60-80) ml				
2 yr old (Broslow: Yellow)	12 kg	**80** (70-100) ml				
3 yr old (Broslow: White)	14 kg	**100** (80-120) ml				
4 yr old (Broslow: White)	16 kg	**110** (90-130) ml				
4 yr old (Broslow: White)	18 kg	**130** (100-150) ml				
5 yr old (Broslow: Blue)	20 kg	**140** (120-160) ml				
6 yr old (Broslow: Blue)	22 kg	**150** (130-180) ml				
7 yr old< (Broslow: Orange)	24 kg	**170** (140-200) ml				
7 yr old< (Broslow: Orange)	26 kg	**180** (150-210) ml				
8 yr old (Broslow: Orange)	28 kg	**200** (160-230) ml				
9 yr old (Broslow: Green)	30 kg	**210** (180-240) ml				
9 yr old (Broslow: Green)	32 kg	**220** (190-260) ml				
10 yr old (Broslow: Green)	34 kg	**240** (200-280) ml				
10 yr old< (Broslow: Green)	36 kg	**250** (210-290) ml				
11 yr old (Broslow: Green)	38 kg	**270** (220-310) ml				
11 yr old (Broslow: Green)	40 kg	**280** (240-320) ml				
11 yr old (Broslow: Green)	42 kg	**290** (250-340) ml				
4'-8"			36 kg	**250** (210-290) ml		
4'-10"			41 kg	**290** (240-330) ml	45 kg	**320** (270-370) ml
5'-0"			46 kg	**320** (270-370) ml	50 kg	**350** (300-400) ml
5'-2"			50 kg	**350** (300-450) ml	55 kg	**400** (300-450) ml
5'-4"			55 kg	**400** (300-450) ml	59 kg	**400** (350-500) ml
5'-6"			59 kg	**400** (350-500) ml	64 kg	**450** (350-550) ml
5'-8"			64 kg	**450** (350-550) ml	68 kg	**500** (400-550) ml
5'-10"			69 kg	**500** (400-550) ml	73 kg	**500** (400-600) ml
6'-0"			73 kg	**500** (400-600) ml	78 kg	**550** (450-650) ml
6'-2"			78 kg	**550** (450-650) ml	82 kg	**600** (450-700) ml
6'-4"			82 kg	**600** (450-700) ml	87 kg	**600** (500-700) ml
6'-6"			87 kg	**600** (500-700) ml	91 kg	**650** (500-750) ml
6'-8"			92 kg	**650** (500-750) ml	96 kg	**650** (550-800) ml
6'-10"					101 kg	**700** (600-850) ml

Troubleshooting

General Guidelines:

- Remember to click twice when changing settings. #dontgettrickedjustclick
- Use 60% FiO2 whenever the patient condition allows.
- Ventilator takes approximately 8-10 breaths or 30 seconds to meet settings entered.
- Set P-Max 10 cm H20 above Paw (peak airway pressure).

P-Max alarm above 35 cm H2O: Stiff lung.

Dislodged: Check EtCO2, lung sounds, epigastium, SpO2.

Obstructed: Check suction need, kinked tubing, SpO2, EtCO2.

Pneumothorax: Check lung sounds, blood pressure, SpO2.

Equipment: Check cuff inflation, circuit connections.

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