EMR, EMT, EMT-IV, AEMT, PARAMEDIC

LINCOLN COUNTY EMS and TCC PROTOCOLS

C.O.P.S. INCLUDED

Lincoln County MPD- Dr. Ron Appel

Approved by Washington State DOH on 02/08/2021

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Approved Procedures and Skills for Certified EMS Providers

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EMS Scope of Practice Guidance - Authorized EMS certified provider (EMT, EMT, AEMT, Paramedic) scope of practice provisions in law include Medical Direction (18.71.205 RCW, 246-976-920 WAC), environment of practice (246-976-182 WAC) and training (18.73.081 RCW). In general, EMS certified providers are only authorized to provide care under the authority of the Medical Program Director (MPD) and in compliance with Department of Health. EMS certified providers are only authorized to provide are in the pre-hospital emergent environment unless practicing under programs authorized by RCW 35.21.930. EMS certified providers are authorized to perform skills and procedures listed in this guidance document if they have received training and a department approved MPD patient care protocol is in place. Other regulations may apply.

Legend

N- National indicates the skill is listed in the interpretive guidelines of the National EMS Scope of Practice Model which defines the practice of EMS certified providers as a floor or minimum national standard. (National scope of practice)

W- Washington Initial Training indicates the skill is not listed in the interpretive guidelines of the National EMS Scope of Practice Model. However, Washington State Department of Health approves the skill to be in Washington State scope of practice and training for the skill is mandatory for inclusion in approved initial training and continuing education. (Not in national scope, required in all initial and continuing education).

W* - Washington Specialized Training Required indicates the skill is approved for use by Department of Health certified EMS providers through specialized training as authorized by WAC 246-976-024. Certified EMS providers must have completed a department and MPD approved training course and demonstrated knowledge and skills competency to the level of satisfaction of the MPD. The MPD authorizes the skill through department approved MPD patient care protocols. (Not in national scope, MPD option to implement, and specialized training required).

W - Washington State Endorsement on a Certification is Required** indicates the skill is approved for use by Department of Health certified EMS providers through specialized training as authorized by WAC 246-976-024. Certified EMS providers must have completed a department and MPD approved training course and demonstrated knowledge and skills competency to the level of satisfaction of the MPD. The MPD authorizes the skill through department approved MPD patient care protocols. The department requires a course application and approval for these skills and issues an endorsement to the provider's certification. The only authorized endorsements are EMT-IV and EMT-SGA. (Not in national scope, MPD option to implement, specialized training required, course application must be submitted and approved by the department, an endorsement added to the credential by department).

Blank space - If the space is blank, the skill is not authorized

Airway / Ventilation / Oxygenation	EMR	EMT	AEMT	PARA
Airway – Nasal		N	N	N
Airway Obstruction – dislodgement by direct laryngoscopy				N
Airway Obstruction – Manual dislodgement techniques	N	N	N	N
Airway – Oral	N	N	N	N
Airways not intended for insertion into the trachea (Esophageal / Tracheal Multi-Lumen airway such as CombiTube, King LT, i-Gel)		W/W**	N	N
Bag Valve Mask (BVM) Positive Pressure Ventilation	N	N	N	N
Bi-Level Positive Airway Pressure (BiPAP)				N
Capnography (End Tidal CO2 waveform and/or		W*	N	N

numerical continuous monitoring)				
Capnometry (End Tidal CO2 colorimetric device)		W*	N	N
Chest Tube – Monitor and management				N
Chest Tube placement – Assist Only				N
Continuous Positive Airway Pressure (CPAP)		N	N	N
Cricothyrotomy – Percutaneous (needle)/ Surgical				N
Endotracheal Intubation (Nasal and Oral)				N
Head Tilt/ Chin Lift	N	N	N	N
Jaw Thrust	N	N	N	N
Mouth-to-barrier	N	N	N	N
Mouth-to-mask	N	N	N	N
Mouth-to-mouth	N	N	N	N
Mouth-to-nose	N	N	N	N
Mouth-to-stoma	N	N	N	N
NG Tube Placement				N
OG Tube Placement				N
Oxygen therapy – High Flow Nasal Cannula				N
Oxygen therapy – Humidifiers		N	N	N
Oxygen therapy – Nasal Cannula	N	N	N	N
Oxygen therapy – Non-Re-breather Mask	N	N	N	N
Oxygen therapy – Partial Re-Breather Mask		N	N	N
Oxygen therapy – Simple face mask		N	N	N
Oxygen therapy – Venturi Mask		N	N	N
Pharmacological facilitation of Intubation				N
Pleural Chest Decompression (Finger thoracostomy)				W*
Pleural Chest Decompression (needle)				N
Pulse Oximetry	W	N	N	N
Suctioning–tracheal bronchial suctioning of an already intubated patient		W*	N	N
Suctioning – upper airway	N	N	N	N
Suctioning of tracheostomy requiring modified technique		W*	W*	N
Ventilation – Positive Pressure Ventilation – Automatic Transport Ventilator (i.e. Auto Vent, CAREvent, Uni-Vent, Pneupac VR1). EMT & AEMT are limited to the initiation during resuscitative efforts of ventilators that only adjust rate and tidal volume.		W*	N	N
Ventilation – Positive Pressure Ventilation – Transport ventilator with adjustments beyond rate and tidal volume				N
Cardiovascular Care	**EMR**	**EMT**	**AEMT**	**PARA**
Automated and Semi-Automated External Defibrillation (AED/SAED)	N	N	N	N

Cardiopulmonary Resuscitation – Mechanical CPR device		N	N	N
Cardiopulmonary Resuscitation (CPR)	N	N	N	N
Cardioversion electrical				N
Defibrillation – Manual				N
Pericardiocentesis				W*
Semi-Automated External Defibrillation (SAED)	N	N	N	N
Transcutaneous Pacing				N
Transvenous Cardiac Pacing, monitor and maintenance				W*
Patient Assessment & Diagnostic Procedure	**EMR**	**EMT**	**AEMT**	**PARA**
Assess Pulse	N	N	N	N
Assess Respirations	N	N	N	N
Blood Pressure – Manual & Automated	W	N	N	N
Blood chemistry analysis – Glucagon (capillary puncture)	W*	N	N	N
Blood chemistry analysis – Cardiac Enzymes (i.e. iStat devices)				N
Cardiac Monitoring – 12 Lead ECG-lead placement, ECG acquisition, computerized analysis, and transmission		N	N	N
Cardiac Monitoring – 12 Lead ECG-lead placement, ECG acquisition, computerized analysis or interpretation by EMS provider, and transmission				N
Telemetric Monitoring		N	N	N
Ultrasound				W*
Splinting, Spinal Motion Restriction (SMR), Patient Restraint, Trauma Care	**EMR**	**EMT**	**AEMT**	**PARA**
Cervical Collar	N	N	N	N
Emergency moves for endangered patients	N	N	N	N
Extremity splinting	N	N	N	N
Extremity stabilization – Manual	N	N	N	N
Eye Irrigation	N	N	N	N
Eye Irrigation with Morgan Lens				N
Hemorrhage Control – Direct Pressure	N	N	N	N
Hemorrhage Control–Use of Hemostatic Gauze/ Agent/Wound Packing	N	N	N	N
Hemorrhage Control – Use of Tourniquet	N	N	N	N
Manual Cervical Spine Protection / Restricted Spinal Motion	N	N	N	N
Mechanical patient restraint		N	N	N

Spinal Motion Restriction/ Immobilization (from standing, seated, or supine position) including Long Spine board and KED	**W**	**N**	**N**	**N**
Splint traction	**W***	**N**	**N**	**N**
Medical Care	**EMR**	**EMT**	**AEMT**	**PARA**
OB – Assist Complicated Delivery		**N**	**N**	**N**
OB - Assisted Normal Delivery	**N**	**N**	**N**	**N**
Ventricular Assist Devices (VAD) – May transport patients with VAD in place		**W***	**W***	**N**
Vascular Access, Infusion, and Monitoring of Lines	**EMR**	**EMT**	**AEMT**	**PARA**
Central Venous Line – Access Existing Line / Port of Infusion				**N**
Central Venous Line Insertion and Infusion – Subclavian				**W***
External Jugular Insertion and Infusion – Adult				**W***
Intraosseous Insertion and Infusion – Adult and Pediatric		**W****	**N**	**N**
Operation and Management of a Controlled Delivery Device for IV Infusion (IV Pump)				**N**
Peripheral IV Insertion and Infusion – Adult and Pediatric		**W****	**N**	**N**
Venipuncture to obtain venous blood sample		**W****	**N**	**N**
Technique of Medication Administration	**EMR**	**EMT**	**AEMT**	**PARA**
Access indwelling catheters and implanted central IV ports				**N**
Buccal / Mucosal / Sublingual	**W***	**N**	**N**	**N**
Endotracheal				**N**
Inhalation – Aerosolized/Nebulized – EMT, limited to anticholinergic and beta agonist/bronchodilator		**N**	**N**	**N**
Inhalation – Nitrous Oxide		**W***	**N**	**N**
Inhalation – Unit-dosed, premeasured – EMR, limited to assisting patients with own prescribed medications such as bronchodilator for chronic respiratory condition.	**W***	**N**	**N**	**N**
Intradermal				**N**
Intramuscular – Auto Injector	**N**	**N**	**N**	**N**
Intramuscular – Syringe and needle – Draw medication using a needle from a vial into a syringe.		**W***	**N**	**N**
Intranasal			**N**	**N**
Intranasal – Mucosal atomization device	**N**	**N**	**N**	**N**
Intranasal – Unit-dosed, premeasured	**N**	**N**	**N**	**N**
Intraosseous		**W****	**N**	**N**
Intravenous		**W****	**N**	**N**
Nasogastric				**N**

Oral – per os (PO)- EMT (limited to aspirin, glucose, assist with patients nitroglycerine, ondansetron and OTC analgesics (ibuprofen and acetaminophen) for pain or fever	**W***	**N**	**N**	**N**
Oral – per os (PO) – EMR (limited to aspirin and glucose)	**W***	**N**	**N**	**N**
Oral – per os (PO) – AEMT (limited to aspirin, glucose, nitroglycerine, ondansetron, and OTC analgesics ibuprofen and acetaminophen for pain or fever)	**W***	**N**	**N**	**N**
Rectal (EMT and AEMT limited to acetaminophen)		**W***	**W***	**N**
Subcutaneous				**N**
Topical				**N**
Transdermal				**N**
Medications – General Guidance	**EMR**	**EMT**	**AEMT**	**PARA**
Administration of Controlled substances (FDA Scheduled				**N**
Analgesic OTC for pain or fever		**N**	**N**	**N**
Antidotes for chemical / hazardous material / nerve agent exposures (auto-injector)	**N**	**N**	**N**	**N**
Aspirin – Oral	**W***	**N**	**N**	**N**
Assisting a patient with his/her own prescribed medications (aerosolized/nebulized)	**W***	**N**	**N**	**N**
Benzodiazepines for Sedation				**N**
Benzodiazepines for Seizures				**N**
Blood or Blood products – Initiation / administration				**W***
Blood or Blood Products – Maintenance of pre-existing infusion				**N**
Bronchodilator / Beta Agonist – Metered dose inhaler	**W***	**N**	**N**	**N**
Bronchodilator / Beta Agonist Nebulizer (EMT limited to anticholinergic and beta agonist/bronchodilator		**N**	**N**	**N**
Depolarizing Agents for Pharmacological Facilitation of Intubation				**N**
Diphenhydramine (AEMT limited to IV, PO, IM with specialized training)			**W***	**N**
Diphenhydramine (EMT limited to PO with specialized training)		**W***	**W***	**N**
Emergency Cardiac Medications (AEMT limited to Epinephrine for cardiac arrest)			**W***	**N**
Epinephrine (auto-injector) for anaphylaxis (supplied and carried by EMS agency or patient).	**W**	**N**	**N**	**N**
Epinephrine for Anaphylaxis Intramuscular – Syringe and needle		**W***	**N**	**N**
Expanded use of OTC medications – oral / topical				**N**
Glucose for hypoglycemia – Oral	**W***	**N**	**N**	**N**
Hypoglycemic Medications (EMT with IV Endorsement – D10		**W***	**N**	**N**

Hypoglycemic Medications (Glucagon)		**W***	**N**	**N**
Hypoglycemic Medications (i.e. Glucagon, D50)			**N**	**N**
Naloxone for Suspected Opiate / Narcotic Overdose – Intranasal – Mucosal Atomization Device or Auto-injector	**N**	**N**	**N**	**N**
Naloxone for Suspected Opiate / Narcotic Overdose Intramuscular – Syringe and Needle		**W***	**N**	**N**
Naloxone for Suspected Opiate/ Narcotic Overdose Intravenous			**N**	**N**
Nitroglycerine – Intravenous				**N**
Nitroglycerine – Sublingual (EMT limited to assist with patients prescribed nitroglycerine)		**N**	**N**	**N**
Nitroglycerine – Transdermal			**N**	**N**
Nitrous Oxide		**W***	**N**	**N**
Non – Depolarizing Agents for Pharmacological Facilitation of Intubation				**N**
Ondansetron (AEMT IV, IM, PO)			**N**	**N**
Ondansetron (EMT limited to PO)		**W***	**N**	**N**
Opioid antagonist for suspected opioid overdose (auto-injector)	**N**	**N**	**N**	**N**
Other medications to facilitate sedation (i.e. Ketamine, Etomidate)				**N**
Oxygen Therapy	**N**	**N**	**N**	**N**
Oxymetazoline		**W***	**W***	**N**
Thrombolytic (Initiation and Maintenance)				**N**

General Guidance

Authorized medications and routes for administration by EMR, EMT, and AEMT are identified in this document. All medication administration requires a protocol to be established by the MPD and approved by the department for the level of certification indicated.

Authorized medications and routes used commonly by Paramedic personnel are identified in this document. Additional medications may be approved for Paramedic personnel if a department approved MPD protocol is in place and providers have completed department-approved MPD supplementary training on the medication and protocol.

Administration of Purified Protein Derivative (PPD) - Persons who have taken a PPD administration course administered by a local health jurisdiction may administer PPD if: the person is doing so in accordance with a formal TB program through the local health jurisdiction; is under the medical oversight of the local jurisdiction health officer, and is not doing so while performing as an EMS provider.

Administration of vaccine - AEMT's and paramedics may administer immunizations in a declared emergency only when all of the following exist: there is a local or state declaration of an emergency under the provisions of RCW 38.52; a local declaration must be declared by the local executive; an emergency incident mission number has been issued; the EMS providers are registered as emergency workers under state law (RCW 38.52); the EMS providers are acting under the direction of a county medical program director or the local health officer and the director of local or state emergency management or the appointed incident commander. Please contact the department for further guidance on how to use EMS personnel to provide emergency vaccines.

EMT personnel may use manual cardiac defibrillators in place of an AED for cardiopulmonary resuscitation provided the equipment is in AED mode.

Inter-Facility Specific Devices and Procedures
Inter-facility transport of patients must occur with a level of care recommended by the sending physician. Clarification on common devices and procedures not routinely seen by certified EMS personnel in the pre-hospital setting is provided below.
EMT and higher level providers may transport medical devices and equipment that can be managed by the patient or patient's caregiver while in transport, and require no medical intervention or monitoring from the EMS provider if authorized by the MPD. Examples include but are not limited to: Peg tubes, J tubes, CSF shunts, ileostomy bags, insulin pumps, and feeding tubes that are not running during transport.
EMT personnel may transport patients with a pre-established saline lock or peripheral IV gravity fed infusion of normal saline, dextrose or Lactated Ringers or a combination of these solutions when: it has been determined by the sending physician to be a BLS level. Transport of this equipment is limited to monitoring only and is optional for the MPD to implement.
EMT personnel may transport patients with a pre-established long term vascular access devices such as central line, PICC line, subcutaneous infusion, epidural with a patient controlled analgesia device when: it has been determined by the sending physician to be BLS level transport and the EMT has successfully completed a department approved MPD specialized training course, and a department approved MPD protocol is in place. Transport of this equipment is limited to monitoring only and is optional for the MPD to implement.
Paramedic personnel may transport patients with medications infusing if a department approved MPD protocol is in place and providers have completed department approved MPD supplementary training on the medication and protocol. MPDs may establish a generic protocol to address uncommon medications presented in urgent cases where a specific protocol does not exist. The generic protocol must include just in time training requirements, information the paramedic must have about the medication prior to transport, any additional transport considerations, any required contact with Medical Control, and any CQI requirements for uncommon medications.
Paramedic personnel may transport patients determined by the sending physician as requiring care of a specially trained paramedic and/or nurse as long as the provider has successfully completed a department approved MPD specialized training course, and department approved MPD inter-facility protocols within scope addressing the skills, procedures, and medications are in place.

DOH 530-173 November 2020

EMS Certification

(1) Certification is effective on the date the department issues the certificate. Certifications must be renewed every three years. The expiration date is indicated on the certification card.

(2) The secretary may extend the certification period to accommodate the efficient processing of recertification applications. The expiration date will be indicated on the certification card issued by the department.

(3) Certification of AEMTs and paramedics is valid only:

(a) In the county or counties where recommended by the MPD and approved by the secretary;

(b) In other counties where formal EMS medical control agreements are in place; or

(c) In other counties when accompanying a patient in transit.

(d) While responding to other counties for mutual aid purposes, mass care, or other incidents. In these situations, EMS provider will provide patient care following the prehospital patient care protocols of their supervising MPD.

(4) A certified AEMT or paramedic may function at a lower certification level in counties other than those described in subsection (3)(a) through (c) of this section, with approval of that county's MPD.

(5) EMTs who have successfully completed IV therapy or supraglottic airway training may use those skills only when following approved county MPD protocols that permit EMTs with such training to perform those skills and when endorsements have been added to EMT Certification.

(6) When EMS personnel change or add membership with an EMS agency, or their contact information changes, they must notify the department within thirty days of the change. Changes submitted must be made on forms provided by the department.

[Statutory Authority: Chapters 18.71, 18.73, and 70.168 RCW. WSR 11-07-078, § 246-976-144, filed 3/22/11, effective 5/15/11.]

Physician on the Scene

Verify the identity and specialty of the position by looking at their license.

The physician may participate in patient care management.

The physician may give orders if:

- The base hospital physician concurs, and…
- Physician accompanies the patient to the hospital, and
- Orders are within the scope of practice for paramedics.

If there are any conflicts or questions, contact Medical Control

MPD Delegates

- PURPOSE
  - To define the individuals in Lincoln County who may be medical control, instructors, and Senior EMT Instructors.

- MPD DELEGATES
  - The Lincoln County MPD delegates the authority for Medical Control to the receiving hospital emergency department on-call physician at any time. Otherwise, protocols are off-line.

  - The Lincoln County MPD delegates authority for instruction work to individuals who have completed the State qualifications such as a SEI or have been approved to instruct by the County MPD.

- QUALITY ASSURANCE
  - Individuals operating in any capacity under the authority or supervision of the MPD will be directly responsible to answer to the MPD for any questions which may arise.

Medical Control

--- KEY POINTS / CONSIDERATIONS----------

- Lincoln County MPD provides protocols for off-line medical control.

- If protocols and regional patient care procedures do not provide off-line direction for the situation, the certified person in charge of the patient must consult with their on-line medical control as soon as possible. Medical control can only authorize a certified person to perform within their scope of practice.

- Online Medical Control is provided by the Emergency Department Positions at the receiving hospital as approved by the Lincoln County Medical Program Director.

- Medical Control communication must be via cell phone or radio.

Medication

--- KEY POINTS / CONSIDERATIONS----------

- Only medications listed may be carried by EMS Providers in Lincoln County. Medications not listed may not be carried without approval from the MPD.
- EMS providers can only give medications that they are authorized to dispense through MPD protocols.
- Local variations in concentration and volume they exist because of restocking necessity which is out of our control.
- Medications should be protected from extremes of temperature at all times.
- If you have administered any medications and the patient wishes to RMA (Refusal of Medical Aid) you must contact medical control prior to completing the RMA, the only exclusion is D50.
- Use of micro-drip administration for Norepinephrine, Lidocaine and Amiodarone infusions.
- Specific concentrations and total quantities of controlled substances (Fentanyl, Midazolam, ketamine, etomidate) should be in accordance with the Agencies Controlled Substance Plan.
- Medications are only to be carried in Washington EMS licensed vehicles and cannot be carried in a private/personally owned vehicle at any time.
- The patient's own controlled substances will not be transported by EMS from the patient's residence.

Pre-hospital Patient Transport Guidelines

- All medical patients (adult or pediatric) with cardiopulmonary arrest or unmanageable airway shall be transported to the nearest facility with advanced life-support capabilities.
- Pre-Hospital EMS may consider bypassing the local hospital and going directly to a Stroke Center, a Trauma Center or a Level I Cardiac Center for patients presenting the following conditions:
  - Suspected Stroke/CVA
  - Suspected STEMI
  - Multiple symptom trauma
  - Severe head and/or spinal trauma
  - Penetrating trauma to chest and/or abdomen
  - Severe pediatric trauma or illness
  - Obstetrical/Neonatal problems
  - Major burns

- **When considering a bypass, the lead EMT will need to consider patient stability, available ALS rendezvous, and "gut feeling".**

- Patient (or family member) except those referenced above, will be consulted regarding hospital preference and transportation to that facility.

- If patient (or family member) has no preference, then EMS personnel on scene shall make facility decision.

- If a medical patient is acutely ill and unable to communicate preference, he/she will be transported to the nearest facility with advanced life-support capabilities.

- Request a Law Enforcement Officer to accompany their prisoners who require transport.

Transport Issues

When transport is refused against the EMS personnel advice, consider contacting medical control.

Competent Refusal

The EMS provider may obtain a competent refusal from a patient who is alert and oriented and understands the explained risks and benefits. Patient's signature required and refusal form must be attached to the PCR.

All documentation should be made on the PCR including the patient clearly understands the risks if not transported and a release signed by the patient refusing care and transportation.

For minors, refusal must be completed by the minor's parent or guardian.

Incompetent Refusal

An individual will be considered incompetent to refuse treatment by the assessing EMS provider when a medical condition/illness, injury, drugs, or alcohol has impaired the patient's judgment. The incompetent patient should be treated and transported if there is any potential serious threat to life or limb. Request help from Law Enforcement if needed.

Involuntary Transport

If involuntary transport cannot be done without law enforcement, EMS providers will request their response.

If Law Enforcement refuses or cannot assist, hospital contact should be made and patient left at scene with documentation of Law Enforcement refusal. At no time are field personnel to put themselves in danger by attempting to transport or treat combative or threatening patients who refuse.

Patient Left at Scene

After EMS provider evaluation and/or treatment, when in the EMS personnel's clinical judgment, the patient is stable, the patient may be left at the scene at the patient's request, without Medical Control contact. When in doubt, contact Medical Control.

Private Vehicle or Police Transport: The EMS provider may allow the patient to seek further medical care via other means of transportation (private vehicle or Police) if, in the EMS providers judgment, the patient is stable.

Physician Orders for Life Sustaining Treatment (POLST)

The Department of Health (DOH) in conjunction with the Washington State Medical Association (WSMA) has implemented a new form, which will allow individuals to summarize their wishes regarding end of life treatment.

The new Physician Orders for Life Sustaining Treatment (POLST) form is a "portable" physician order form that describes the patient's code directions.

- It is intended to go with the patient from one healthcare setting to another.
- It represents a way of summarizing wishes of an individual regarding life-sustaining treatment identified in an advanced directive such as Healthcare Directive or Durable Power of Attorney for Healthcare and includes the following:

    1. Patient wishes for resuscitation
    2. Medical Interventions
    3. Antibiotics
    4. Artificial feedings

The form is available from WSMA via the link below.

Previously completed and signed POLST forms will continue to be honored by prehospital EMS personnel. A copied form is acceptable if the original is not present.

More information on the POLST program and educational materials, including how to order the form, can be found at the WSMA website at http://www.wsma.org/polst

HIPAA PERMITS DISCLOSURE OF POLST TO OTHER HEALTH CARE PROVIDERS AS NECESSARY

Physician Orders for Life-Sustaining Treatment (POLST)

Last Name - First Name - Middle Name or Initial

Date of Birth ____ ____ ____

Last 4 #SSN (optional) ____ ____ ____ ____

FIRST follow these orders, **THEN** contact physician, nurse practitioner or PA-C. The POLST is a set of medical orders intended to guide medical treatment based on a person's current medical condition and goals. Any section not completed implies full treatment for that section. Completing a POLST form is always voluntary. Everyone shall be treated with dignity and respect.

Medical Conditions/Patient Goals:

Agency Info/Sticker

A Check One

CARDIOPULMONARY RESUSCITATION (CPR): Person has no pulse and is not breathing.

When not in cardiopulmonary arrest, go to part B.

- ☐ **Attempt Resuscitation/CPR**
- ☐ **Do Not Attempt Resuscitation/DNAR (Allow Natural Death)**
  Choosing DNAR will include appropriate comfort measures.

B Check One

MEDICAL INTERVENTIONS: Person has pulse and/or is breathing.

- ☐ **FULL TREATMENT - primary goal of prolonging life by all medically effective means.**
  Includes care described below. Use intubation, advanced airway interventions, mechanical ventilation and cardioversion as indicated. **Transfer** *to hospital if indicated. Includes intensive care.*
- ☐ **SELECTIVE TREATMENT - goal of treating medical conditions while avoiding burdensome measures.**
  Includes care described below. Use medical treatment, IV fluids and cardiac monitor as indicated. Do not intubate. May use less invasive airway support (e.g. CPAP, BiPAP). **Transfer** *to hospital if indicated. Avoid intensive care if possible.*
- ☐ **COMFORT-FOCUSED TREATMENT - primary goal of maximizing comfort.**
  Relieve pain and suffering with medication by any route as needed. Use oxygen, oral suction and manual treatment of airway obstruction as needed for comfort. **Patient prefers no hospital transfer:** *EMS consider contacting medical control to determine if transport is indicated to provide adequate comfort.*

Additional Orders: (e.g. dialysis, etc.) _____

C

SIGNATURES: The signatures below verify that these orders are consistent with the patient's medical condition, known preferences and best known information. If signed by a surrogate, the patient must be decisionally incapacitated and the person signing is the legal surrogate.

Discussed with: ☐ Patient ☐ Parent of Minor ☐ Guardian with Health Care Authority ☐ Spouse/Other as authorized by RCW 7.70.065 ☐ Health Care Agent (DPOAHC)	PRINT — Physician/ARNP/PA-C Name	Phone Number
	✗ Physician/ARNP/PA-C Signature ***(mandatory)***	Date ***(mandatory)***
PRINT — Patient or Legal Surrogate Name		Phone Number
✗ Patient or Legal Surrogate Signature ***(mandatory)***		Date ***(mandatory)***

Person has: ☐ Health Care Directive (living will) ☐ Durable Power of Attorney for Health Care

Encourage all advance care planning documents to accompany POLST

SEND ORIGINAL FORM WITH PERSON WHENEVER TRANSFERRED OR DISCHARGED

Revised 8/2017

Photocopies and faxes of signed POLST forms are legal and valid. May make copies for records.
For more information on POLST visit www.wsma.org/polst.

WASHINGTON

WSMA Washington State Medical Association
Physician Driven Patient Focused

Washington State Department of Health

See back of form for non-emergency preferences ▶

HIPAA PERMITS DISCLOSURE OF POLST TO OTHER HEALTH CARE PROVIDERS AS NECESSARY

Patient and Additional Contact Information (if any)

Patient Name (last, first, middle)	Date of Birth	Phone Number
Name of Guardian, Surrogate or other Contact Person	Relationship	Phone Number

D NON-EMERGENCY MEDICAL TREATMENT PREFERENCES

ANTIBIOTICS:

☐ Use antibiotics for prolongation of life.
☐ Do not use antibiotics except when needed for symptom management.

MEDICALLY ASSISTED NUTRITION:

Always offer food and liquids by mouth if feasible.

☐ No medically assisted nutrition by tube.
☐ Trial period of medically assisted nutrition by tube. (Goal: _____)
☐ Long-term medically assisted nutrition by tube.

ADDITIONAL ORDERS: (e.g. dialysis, blood products, implanted cardiac devices, etc. Attach additional orders if necessary.)

✘ Physician/ARNP/PA-C Signature	Date
✘ Patient or Legal Surrogate Signature	Date

DIRECTIONS FOR HEALTH CARE PROFESSIONALS

NOTE: A person with capacity may always consent to or refuse medical care or inverventions, regardless of information represented on any document, including this one.

Completing POLST

- Completing a POLST form is always voluntary.
- Treatment choices documented on this form should be the result of shared decision-making by an individual or their surrogate and medical provider based on the person's preferences and medical condition.
- POLST must be signed by a physician/ARNP/PA-C and patient, or their surrogate, to be valid. Verbal orders are acceptable with follow-up signature by physician/ARNP/PA-C in accordance with facility/community policy.

Using POLST

Any incomplete section of POLST implies full treatment for that section.

This POLST is valid in all care settings including hospitals until replaced by new physician's orders.

The POLST is a set of medical orders. The most recent POLST replaces all previous orders.

The POLST does not replace an advance directive. An advance directive is encouraged for all competent adults regardless of their health status. An advance directive allows a person to document in detail his/her future health care instructions and/or name a surrogate decision maker to speak on his/her behalf. When available, all documents should be reviewed to ensure consistency, and the forms updated appropriately to resolve any conflicts.

SECTIONS A AND B:

- No defibrillator should be used on a person who has chosen "Do Not Attempt Resuscitation."
- When comfort cannot be achieved in the current setting, the person should be transferred to a setting able to provide comfort (e.g., treatment of a hip fracture).
- An IV medication to enhance comfort may be appropriate for a person who has chosen "Comfort-Focused Treatment."
- Treatment of dehydration is a measure which may prolong life. A person who desires IV fluids should indicate "Selective" or "Full Treatment."

SECTION D:

- Oral fluids and nutrition must always be offered if medically feasible.

Reviewing POLST

This POLST should be reviewed periodically whenever:

(1) The person is transferred from one care setting or care level to another, or
(2) There is a substantial change in the person's health status, or
(3) The person's treatment preferences change.

To void this form, draw line through "Physician Orders" and write "VOID" in large letters. Any changes require a new POLST.

Review of this POLST Form

Review Date	Reviewer	Location of Review	Review Outcome
			☐ No Change ☐ Form Voided ☐ New form completed
			☐ No Change ☐ Form Voided ☐ New form completed

SEND ORIGINAL FORM WITH PERSON WHENEVER TRANSFERRED OR DISCHARGED

Photocopies and faxes of signed POLST forms are legal and valid. May make copies for records.
For more information on POLST visit www.wsma.org/polst.

OVER ▶

Inter-Hospital Transport

--- EMR ----------

- An EMR may be utilized as an ambulance driver.
- An EMR may be utilized as tertiary responder.

EMR STOP

--- EMT ----------

- EMT personnel may transport patients with a pre-established saline lock or peripheral IV gravity fed infusion of normal saline, dextrose or Lactated Ringers or a combination of these solutions when: it has been determined by the sending physician to be a BLS level.

EMT STOP

---EMT IV TECH----------

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- All Paramedics doing inter-hospital transports must have online Medical Control approval from sending hospital on any non-protocol medications with just in time training.
  - Pleuravac
  - Heparin
- Monitor patient for signs of bleeding around IV sites, hemoptysis, hematuria, and/or epistaxis
- Discontinue if any signs or symptoms of bleeding complications
  - Nitroglycerin
    - Monitor blood pressure every 5 minutes
    - Discontinue if systolic blood pressure falls below 90 mm Hg, or if diminishing mental status occurs with diminishing blood pressure. If systolic blood pressure returns to above 100 mm Hg prior to MD contact, follow the Suspected Chest Pain Protocol.
  - If blood products are started by a hospital, paramedics may continue running the blood products per the transferring hospitals and recording vital signs every 15 minutes during the infusion if trained to do so by the MPD.

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Requests for inter-hospital transfer must be screened by appropriately trained personnel to determine the transport requirements.
- After assessing the patient and reviewing the patient's records and transfer orders, determine if the patient's current condition is appropriate for the provider's scope of practice and available equipment.

- Evaluate the patient's airway status prior to departing the transferring facility. Secure the airway as indicated.
- Prior to or during the transport, contact the agency's medical director, the transferring/sending physician or the receiving physician for clarification, or to discuss any concerns.
- If there are any changes in the patient's condition that are not covered by the prescribed orders or agency protocols contact Medical Control. If a total failure of communications occurs and the patient is unstable and decompensating, follow standing orders and go to the closest hospital emergency department.
- Specialty Care Transports are a subset of Inter-Hospital Transports, and can only be done by Paramedics.
- Each Inter-hospital transport must be reviewed by the agency as part of the QI program.

Cardiac: Cardiogenic Shock

--- EMR ----------

- ABC and vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration
- Place patient supine unless dyspnea is present

--- EMT ----------

- 12-lead EKG if available, otherwise, Cardiac Monitor

EMR, EMT STOP

---EMT IV TECH----------

- Vascular access
- Normal Saline 250 ml IV bolus; reassess lung sounds and repeat if unchanged

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- If UNSTABLE, **Norepinephrine** (Levophed) 0.05 mcg/kg/min, titrate to effect, not to exceed 2 mcg/kg/min or 30 mcg/kg/min
- Additional normal saline bolus

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- For patients with chest pain/STEMI and signs of hypoperfusion
- UNSTABLE is defined as systolic BP less than 90 mmHg and/or decreased level of consciousness
- Refer to Dysrhythmia protocols as needed

Cardiac: Chest Pain

--- EMR ----------

- ABC and vital signs
- Airway management with high concentration **oxygen**
- Consider AED Placement
- **Aspirin** 324 mg (4 x 81 mg tablets)

EMR STOP

--- EMT ----------

- Assist patient with their own prescribed **Nitroglycerin**, up to 3 doses, 5 minutes apart, provided the patient's systolic BP is above 100 mmHg.
- 12-lead EKG if available, otherwise, Cardiac Monitor

EMT STOP

---EMT IV TECH----------

- Vascular access
- If systolic BP drops below 100 mmHg: Normal Saline 250 ml IV bolus

EMT-IV STOP

--- AEMT ----------

- Administer **Nitroglycerin,** up to 3 doses, 5 minutes apart, if not already administered, provided the patient's systolic BP is above 100 mmHg

AEMT STOP

--- PARAMEDIC ----------

- For ST Elevation MI, with ½ mm or more of elevation in 2 contiguous leads, or machine computer notes "Acute MI", do not delay transport.
- **Fentanyl Citrate** 1mcg/kg IV/IO to a maximum of 100 micrograms if no relief with nitroglycerin.

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Focus on maintaining ABC, pain relief, rapid identification, rapid notification and rapid transport to an appropriate facility
- Vitals, including 12 Lead EKG, should be monitored frequently during transport

- The first dose of Nitroglycerin may be administered while preparing to establish vascular access
- A total of 3 doses of **Nitroglycerin** may be administered by pre-hospital providers, prior to contacting Medical Control.
- Do not give nitroglycerin if the patient has had avanafil (Stendra), sildenafil (Viagra), tadalafil (Cialis), or vardenafil (Levitra, Staxyn) in the last 24 hours.

Cardiac: Asystole/PEA

--- EMR ----------

- CAB, AED and CPR, per AHA Guidelines

EMR STOP

--- EMT ----------

- SGA airway intervention as necessary, if have SGA endorsement
- Cardiac monitor/defibrillator or 12 lead EKG, if available

EMT STOP

---EMT IV TECH----------

- Vascular access, IV/IO (IO may be considered for Adult AND Pediatrics)

EMT-IV STOP

--- AEMT ----------

- Insert SGA airway intervention as necessary
- **Epinephrine** 1:10,000 concentration (1 mg/10 mL) 1 mg IV/IO; repeat every 3 to 5 minutes

AEMT STOP

--- PARAMEDIC ----------

- Secure airway with ET and confirm with quantitative waveform capnography, if available, use non-wave form exhaled CO^2 monitor
- Treat reversible causes
- Consider termination of resuscitation and contact online medical Control

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Check asystole in 2 leads
- Minimize interruptions in compressions and rotate compressor every 2 minutes
- Refer to the Termination of Resuscitation Protocol as needed
- This protocol reflects current ACLS guidelines at time of publication.

Cardiac: CPR

- Push hard (≥ 2 inches) and fast (100-120/min.)
- Minimize interruptions in compressions, no pauses greater than 10 seconds
- Allow full chest recoil
- One cycle CPR: 30 compressions and two breaths; 5 cycles = 2 minutes
- Avoid excessive ventilation
- Secure airway and confirm placement
- After an advanced airway is placed, rescuers no longer deliver "cycles" of CPR. Give continuous just compressions without pauses for breaths. Give 8 to 10 breaths per minute. Check rhythm every two minutes.
- Quantitative waveform capnography
- Rotate compressor every two minutes with rhythm checks
- Search for entry possible contributing factors:
    - Hypovolemia
    - Hypoxia
    - Hydrogen Ion (acidosis)
    - Hypo-hyperkalemia
    - Hypothermia
    - Toxins
    - Tamponade, cardiac
    - Tension Pneumothorax
    - Thrombosis (coronary or pulmonary)

Mechanically Assisted CPR

Indication for use:

- Mechanically assisted CPR is intended to be used as an adjunct to manual CPR, on adult patients only, in cases of clinical death as defined by a lack of spontaneous breathing and pulse.

Warning:

- Mechanically assisted CPR is NOT intended for patients with traumatic injury (wounds resulting from sudden physical injury or violence).
- When cardiopulmonary resuscitation (CPR) is indicated, it should start immediately and should not be postponed.
- Mechanically assisted CPR must be used ONLY in cases that manual CPR would normally be initiated

Cardiac: Ventricular Fibrillation / Pulseless V-Tach

--- EMR ----------

- CAB, AED and CPR per AHA Guidelines

EMR STOP

--- EMT ----------

- SGA airway intervention as necessary, if have SGA endorsement
- Cardiac Monitor/Defibrillator or 12 lead EKG, if available

EMT STOP

---EMT IV TECH----------

- Vascular access, IV/IO (IO may be considered for Adult AND Pediatrics)

EMT-IV STOP

--- AEMT ----------

- SGA airway intervention as necessary
- Perform 2 minutes of CPR give Epinephrine 1:10,000 concentration (1 mg/10 mL) 1 mg IV/IO; repeat every 3 to 5 minutes, then reassess cardiac rhythm and pulse

AEMT STOP

--- PARAMEDIC ----------

- Deliver one shock (120-200 J) as per manufactures recommendation
- Perform 2 minutes of CPR, then reassess cardiac rhythm and pulse
- Deliver one shock (120-200 J) as per manufactures recommendation
- Administer **Epinephrine** 1:10,000 concentration (1mg/10 mL) 1 mg IV/IO; repeat every 3 to 5 minutes, then reassess cardiac rhythm and pulse
- Secure airway with ET and confirm with Quantitative waveform capnography, if not available use non-wave form exhaled CO^2 monitor
- Deliver one shock (120-200 J) as per manufactures recommendation
- Consider ONE of the following during next two minutes of CPR:
  - **Amiodarone** 300 mg IV/IO diluted in 20mL of NS. Repeat 150 mg in 3 – 5 minutes
  - **Lidocaine** 1 to 1.5 mg/kg IV/IO. Repeat every 3 – 5 minutes IV/IO, max 3 doses or 3 mg/kg
  - **Magnesium** 2 grams diluted in 10 mls NS IV/IO for torsades de pointes
- Deliver one shock, perform 2 minutes of CPR and continue to rotate between **Epinephrine** and **Antiarrhythmic** until max doses are reached.
- Consider treatable cause of cardiac arrest

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Minimize interruptions in compressions and rotate compressor every 2 minutes
- Transport patient to the closest hospital
- Maximize dose of each antiarrhythmic before considering using another
- Refer to the Termination of Resuscitation Protocol as needed
- This protocol reflects current ACLS guidelines at time of publication.

Cardiac: Symptomatic Bradycardia / Heart Blocks

--- EMR ----------

- ABC and vital signs
- Airway management with oxygen therapy maintaining a SaO2 of 94-98% through titration
- Have AED available

EMR STOP

--- EMT ----------

- 12 lead EKG, if available, otherwise use Cardiac Monitor

EMT STOP

---EMT IV TECH----------

- Vascular access

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Cardiac Monitor - prepare for pacing
- **Atropine** 0.5 mg IV
- Repeat **Atropine** 0.5 mg IV, every 3 min, up to a max of 3 mg
- **Norepinephrine** (Levophed) 0.05 mcg/kg/min, titrate to effect, not to exceed 2 mcg/kg/min or 30 mcg/min
- **Epinephrine** infuse 1 mcg/min then titrate upwards by 1mL for effect as alternate to **Norepinephrine**. See **Procedural: Epinephrine Drip**
- Consider transcutaneous pacing, See **Procedural: Transcutaneous Pacing**

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Only treat bradycardia if patient is symptomatic
- Symptomatic presentation includes chest pain, dyspnea, altered mental status, pulmonary edema, or hypotension (systolic BP <100 mmHg)

Prepare for Transcutaneous Pacing

Use without delay for high degree block (type 2 second degree block or third-degree AV block)

- **Atropine** 0.5 mg IV while awaiting pacer. May repeat total of 3 mg. If ineffective, begin pacing.
- Consider **Norepinephrine** infusion while awaiting pacer, or if pacer ineffective.

Reminders

If pulseless arrest develops, go to Pulseless Arrest Algorithm. Search for entry possible contributing factors:

- Hypovolemia
- Hypoxia
- Hydrogen Ion (acidosis)
- Hypo-hyperkalemia
- Hypothermia
- Toxins
- Tamponade, cardiac
- Tension Pneumothorax
- Thrombosis (coronary or pulmonary)

Cardiac: Narrow Complex Tachycardia with Rate > 150

--- EMR ----------

- ABC and vital signs
- Airway management with oxygen therapy maintaining a SaO2 of 94-98% through titration
- Have AED available

EMR STOP

--- EMT ----------

- 12 lead EKG, if available, otherwise use Cardiac Monitor

EMT STOP

---EMT IV TECH----------

- Vascular access

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Vagal Maneuver
- If STABLE: **Adenosine** 6 mg IV, if not, conversion. May repeat **Adenosine** 12 mg IV up to two times.
- If UNSTABLE, consider sedation with **Midazolam (Versed)** 2-4mg IV/IO, 0.3-0.5 mg/kg IN to a max of 10 mg.
    - Synchronized cardioversion at 120 Joules for biphasic setting (max energy).

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Do NOT use carotid sinus massage as vagal maneuver
- UNSTABLE is defined as ventricular rate > 150 bpm with symptoms of chest pain, dyspnea, altered mental status, pulmonary edema, or hypotension (systolic bp < 100 mmHg)

Cardiac: Wide Complex tachycardia with a Pulse

--- EMR ----------

- ABC and vital signs
- Airway management with oxygen therapy maintaining a SaO2 of 94-98% through titration
- Have AED available

EMR STOP

--- EMT ----------

- 12 lead EKG, if available, otherwise use Cardiac Monitor

EMT STOP

---EMT IV TECH----------

- Vascular access

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- If STABLE, may consider **Adenosine** 6mg rapid IV push ***only if regular and monomorphic***, may repeat second dose at 12mg rapid IV push. Consider **Amiodarone** 150 mg in 100 ml Normal Saline, infused over 10 minutes, repeat as needed if VT recurs.
- If UNSTABLE, consider sedation **Midazolam (Versed**) 2-4 mg IV/IO, 0.3-0.5 mg/kg IN to a max of 10 mg. Synchronized cardioversion at 120 joules for biphasic. If regular narrow complex, consider **Adenosine**
- Synchronized cardioversion at 120 Joules for biphasic setting (max energy)

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- If no pulse, treat as V-Fib
- UNSTABLE is defined as ventricular rate > 150 bpm with symptoms of chest pain, dyspnea, altered mental status, signs of shock, pulmonary edema or hypotension (systolic BP < 100 mmHg)
- Wide Complex is defined as a QRS complex greater than .12 seconds
- Recommended settings for cardio version are narrow regular 120 J, narrow irregular 120 J, wide regular 120 J. All doses are for biphasic defibrillators
- This protocol reflects current ACLS guidelines at time of publication.

Termination of Resuscitation

--- EMR ----------

- Resuscitative efforts for patients in cardiac arrest should not be initiated if:
  - The patient presents with significant dependent lividity, rigor mortis, decomposition, decapitation, incineration and/or obvious traumatic death
  - The patient, family or healthcare facility can present a signed POLST form or a signed DNR form from another state.
- For all other patients in respiratory or cardiac arrest, in whom appropriateness of resuscitation is questionable, the EMS provider MUST start BLS care, including defibrillation, and contact Medical Control for direction.
- If resuscitative efforts are required, refer to appropriate protocol.

--- EMT ----------

---EMT-IV----------

--- AEMT ----------

--- PARAMEDIC ----------

EMR, EMT, EMT-IV, AEMT, PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Resuscitative efforts must be initiated while attempting to contact a Physician. If there is an extended time required to contact a Physician, transport must be initiated.
- Healthcare Facilities must have POLST forms.
- If a patient presents in respiratory or cardiopulmonary arrest and there is any other form of advanced directive on the scene, other than the POLST form contact Medical Control. Other forms of advanced directives include: Living Wills, Health Care Proxies, and In- Hospital Do Not Resuscitate orders.
- Any certified EMS provider may contact Medical Control to request termination of resuscitation.

Medical: Abdominal Pain

--- EMR ----------

- ABC's and vital signs
- Airway management with **oxygen** maintaining a SaO2 of 94-98% through titration

EMR STOP

--- EMT ----------

- Consider 12-lead EKG if available or Cardiac monitor

EMT STOP

---EMT IV TECH----------

- IV access
- If signs of hypovolemia, refer to **Trauma: Hypoperfusion/Hypovolemia** protocol

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- **Fentanyl Citrate** 1mcg/kg IV, IO to a maximum of 100 mcg. 2.0 mcg/kg IN (Pediatric) 1mcg/kg IV, IO
- If nauseated, refer to **Medical: Nausea/Vomiting** protocol

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Abdominal pain in women of childbearing age should be considered as an ectopic pregnancy until proven otherwise.
- The diagnosis of abdominal aneurysm should be considered with abdominal pain in patients over 50.
- Appendicitis presents with vague, peri-umbilical pain which migrates to the RLQ over time.

Medical: Active Seizures

--- EMR ----------

- ABC and vital signs
- Airway management with **oxygen** maintaining a SaO2 of 94-98% through titration
- Check blood glucose level, if equipped. If level is abnormal refer to **Medical: Diabetic Emergencies** protocol

EMR STOP

--- EMT ----------

- Consider 12-lead EKG, if available, or Cardiac Monitor

EMT STOP

---EMT IV TECH----------

- Vascular access

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- For an actively seizing pregnant patient, consult the Eclampsia protocol
- **Midazolam (Versed)** 5-10 mg IM, or 2-4 mg IV for status epilepticus
  or **Midazolam (Versed)** 0.3-0.5 mg/kg IN to max of 10 mg

PARAMEDIC STOP

--- PHYSICIAN OPTIONS FOR PARAMEDICS ----------

- Additional **Midazolam (Versed)** IM or IV
- **Magnesium** dilute 2 grams in 10 mls NS IV/IM over 2 minutes, or 2 mg IM undiluted in the buttock, if patient is pregnant

--- KEY POINTS / CONSIDERATIONS----------

- Protect the patient and EMS crew from injury during the seizure
- If patient is pregnant, Refer to the **OB/GYN Eclampsia** protocol

Medical: Altered Level of Consciousness

--- EMR ----------

- ABC and vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration
- Determine blood sugar

EMR STOP

--- EMT ----------

- Consider 12-lead EKG, if available, or Cardiac monitor
- If blood sugar is <60, refer to **Medical:Diabetic Emergencies** protocol
- If suspected overdose, refer to **Medical: Overdose or Toxic Exposure** protocol

EMT STOP

---EMT IV TECH----------

- Vascular access

--- AEMT ----------

--- PARAMEDIC ----------

EMT-IV, AEMT, PARAMEDIC STOP

Medical: Anaphylaxis and Allergic Reactions

--- EMR ----------

- ABC and vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration.
- Determine if patient has utilized his/her own **Epi-Pen.**
- If patient has not used their own Epi-Pen, administer **Epi-Pen** Adult, infant/child **Epi Pen Jr**, if patient has hypotension and/or respiratory distress w/airway swelling, hoarseness, stridor or wheezing

EMR STOP

--- EMT ----------

- Administer diphenhydramine (Benadryl) 50 mg PO
- If EMT has had MPD approved training, **Epinephrine** 1:1,000 concentration (1 mg/mL) 0.3 mg IM (or 0.15 mg for pediatrics), if patient has hypotension and/or respiratory distress w/airway swelling, hoarseness, stridor or wheezing and has not already had an epinephrine dose.
- Record time of injection & reassess in two minutes
- Cardiac Monitor or 12 lead EKG, if available
- **Albuterol** 2.5 mg in 3 ml (unit dose) via nebulizer

EMT STOP

---EMT IV TECH----------

- Vascular Access
- If patient has hypotension, refer to **Trauma: Hypoperfusion/Hypovolemia** protocol

EMT-IV STOP

--- AEMT ----------

- **Diphenhydramine (Benadryl)** 50 mg IV or IM or PO if not already given.

--- PARAMEDIC ----------

AEMT, PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- If the patient has been administered epinephrine (either their own or via EMS crew) contact Medical Control prior to administering additional epinephrine IM.

Medical: Animal and Human Bites

--- EMR ----------

- Scene Safety
- ABCs and Vital Signs
- Airway management with **oxygen** maintaining a SaO2 of 94-98% through titration
- Control any serious bleeding
- Wash area gently
- Remove jewelry from the affected limb before swelling begins, if possible
- Apply an Ice pack to the affected area to slow swelling, (do not apply directly to skin)

--- EMT ----------

EMR, EMT STOP

---EMT IV TECH----------

- Venous access

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Administer **Fentanyl Citrate** 1mcg/kg IV/IO to a maximum of 100 mcg, 2 mcg/kg IN. (Pediatric) 1mcg/kg IV/IO

PARAMEDIC STOP

Medical: Behavioral Emergencies

--- EMR ----------

- Be aware of dangers to patient or medical personnel/summon law enforcement
- Request mental health professional as needed
- Never stay alone with a violent patient and have enough help to restrain him/her if needed.
- Consider the armed patient potentially homicidal as well as suicidal.

  For severe or dangerous agitation/combativeness that represents an acute danger to the patient or EMS personnel consider physical restraint. Refer to **Procedural: Restraints for Aggressive or Violent Patients**

--- EMT ----------

EMT STOP

---EMT IV TECH----------

- Vascular access as needed

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- For severe or dangerous agitation/combativeness consider chemical restraint.
- **Midazolam (Versed)** 2-4mg IV or IM every 3-5 minutes to a max of 10 mg, 0.3-0.5 mg/kg IN to a max of 10 mg.

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- For severe or dangerous agitation/combativeness that represents an acute danger to the patient or EMS personnel, consider physical restraint:
  - 4 point soft restraints -- secure patient safely in supine position to gurney or backboard.
  - Spitting or biting patients may be secured with a surgical mask or an oxygen mask at 15 l/min.
- Law enforcement personnel may assume responsibility for patient restraint, but must personally accompany patient to the emergency department.

Medical: Bites and Stings

--- EMR ----------

- ABCs and Vital signs
- Airway Management with **Oxygen** maintaining a SaO2 of 94-98% through titration.
- If stinger is present scrape to remove
- **Do not attempt to pull the stinger.**
- Gently wash the area
- Remove jewelry from the affected limb before swelling begins, if possible
- Keep limb immobilized and below the level of the heart and keep patient at rest
- Do not apply cold to a snakebite
- Check for signs and symptoms of an allergic reaction (**Medical: Anaphylaxis and Allergic Reaction** protocol)
- Mark area of swelling with time and line around the area

--- EMT ----------

EMR, EMT STOP

---EMT IV TECH----------

- Venous Access

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Administer **Fentanyl Citrate** 1mcg/kg IV/IO to a maximum of 100 mcg, 2 mcg/kg IN. (Pediatric) 1mcg/kg IV/IO

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- If snake is dead:
  1. Take a picture, or
  2. Consider bringing it to the hospital examination in a sealed container.

Medical: Carbon Monoxide (CO) Poisoning

--- EMR ----------

- Remove from CO environment
- ABC and vital signs, monitoring CO level, if equipped
- Airway management with high concentration **oxygen** using NRB @ 15 LPM
- Treat other associated signs/symptoms per protocol

EMR STOP

--- EMT ----------

- 12-lead EKG, if available, or Cardiac monitor
- **Albuterol** 2.5 mg in 3 ml (unit dose), if wheezes are present

EMT STOP

---EMT IV TECH----------

- Vascular access

--- AEMT ----------

AEMT STOP

--- PARAMEDIC ----------

- Consider intubation if patients have severe burns and soot to the face and upper airway stridor.

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Mild CO 15 – 20%. May present as headache, nausea, vomiting, dizziness, blurred vision.
- Moderate 20-40%. May present as confusion, syncope, chest pain, dyspnea, tachycardia, tachypnea, weakness.
- Severe 40-60%. May present as dysrhythmias, hypotension, cardiac ischemia, palpitations, respiratory arrest, pulmonary edema, seizures, coma, cardiac arrest.

Medical: Cold Injuries / Frostbite

--- EMR ----------

- Remove from environment and protect from further exposure
- ABC and vital signs monitoring core temperature
- Airway management with oxygen therapy maintaining a SaO2 of 94-98% through titration.
- Remove frozen, wet, or restrictive clothing without damaging skin and start gradual warming process at room temperature provided refreezing will not occur.
- Remove jewelry from affected areas before swelling begins if possible.
- Protect damaged areas with loose, dry, sterile dressings and be prepared to splint.
- Elevate affected extremities and do not allow patient to use affected areas.
- Treat other associated signs/symptoms per protocol.

--- EMT ----------

EMR, EMT STOP

---EMT IV TECH----------

- Vascular access

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- **Fentanyl** for severe pain 1 mcg/kg IV/IO to a maximum of 100 mcg, 2 mcg/kg IN.
- Consider cardiac monitor

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Treat gently, do not rub or manipulate the extremities.

Medical: Cyanide (CN) Poisoning

--- EMR ----------

- Remove from environment
- ABC and vital signs, monitor CO level, if equipped
- Airway management with high concentration oxygen using NRB @ 15 LPM
- Refer to **Trauma: Hypoperfusion/Hypovolemia** protocol
- Treat other associated signs/symptoms per protocol

EMR STOP

--- EMT ----------

- Cardiac monitor or 12 lead EKG, if available

EMT STOP

---EMT IV TECH----------

- Vascular access

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- For serious signs and symptoms administer approved cyanide poisoning antidote (CYANOKIT® hydroxocobalamin for injection) 5 g IV, infused over 15 minutes, if available.

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- May result from inhalation, ingestion, or dermal exposure.
- Serious signs and symptoms include: altered LOC, confusion, disorientation, excessive pupil dilation, seizure, coma and cardiovascular collapse.
- Assess for soot around mouth, nose, or oropharynx, and altered mental status.
- May present as cardiovascular collapse, hypotension, almond odor on breath, altered LOC, respiratory arrest, cardiac dysrhythmia, seizure, lactic academia, dilated pupils, vomiting.

Medical: Diabetic Emergencies

--- EMR ----------

- ABC and vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration
- Determine blood sugar
  - If <60 and patient is able to swallow, give **oral glucose** 1 unit dose (24 gm)

    Or
  - Orange juice or an equivalent high source of sugar solution PO.
  - If blood glucose >400, call ALS intercept if not already enroute
- If not equipped or able to check blood glucose level and blood glucose is suspected to be low and patient is able to self-administer and swallow on command, give **oral glucose** one unit dose (24 grams)
- Recheck blood sugar after sugar is administered.

--- EMT ----------

- If patient is unresponsive, unable to swallow on command or an IV not an option (no IV qualified ems personnel), administer **Glucagon** 1 mg IM or SQ if the EMT has had specialized MPD training.

EMR, EMT STOP

---EMT IV TECH----------

- Vascular access
  - If glucose level is below 60 and patient cannot swallow on command, administer 250mL bolus of D10W; recheck blood sugar.
  - If glucose level is above 400, administer **Normal Saline** 250 ml IV bolus; recheck blood sugar; bolus may be repeated if patient remains hyperglycemic.
    - If unable to obtain vascular access and patient is unresponsive or unable to swallow on command, administer **Glucagon** 1 mg IM or SQ if not already given and EMT has had specialized MPD training.

EMT-IV STOP

--- AEMT ----------

- If glucose level is below 60 and patient cannot swallow on command, administer **Dextrose 50%** 50 mL (25 g) IV; may redose if hypoglycemia recurs during transport.

--- PARAMEDIC ----------

AEMT, PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- After Provider evaluation and/or treatment, when, in the Provider's clinical judgment the patient is stable, the patient may be left at the scene at the patient's request, without Medical Control contact. When in doubt, contact Medical Control.

Medical: Excited Delirium

--- EMR ----------

- High flow O2 or most effective means of administering oxygen.
- If patient body temperature exceeds 102° F, move patient to cooler environment and remove clothing. Cool aggressively with wet sheets, cool packs, and/or evaporative airflow. Avoid ice packs and cold water immersion. Lower body temperature to 102° F.
- Check blood sugar, if hypoglycemic refer to **Medical: Diabetic Emergencies**.
- Restrain patient only as necessary to safely allow for the patients assessment and necessary care. When restraints are necessary refer to **Procedure: Restraints for Aggressive or Violent Patients**
- A protective face mask or hood may be applied to the patient if necessary to reduce the potential transmission of disease via saliva.

EMR STOP

--- EMT ----------

- Consider Cardiac monitor or 12 lead EKG, if available

EMT STOP

---EMT IV TECH----------

- Establish large bore IV of **Normal Saline** 500ml/hr unless symptoms of CHF exist.

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- For severe agitation, administer **Midazolam (Versed)** 2-4mg IV every 3-5 minutes to a max of 10 mg, 5-10 mg IM, 0.3-0.5 mg/kg IN to a max of 10 mg.

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- This protocol deals with one of the most challenging clinical situations you may face among your EMS responses. The protocol identifies goals of evaluation and treatment, but it may only be implemented in an environment with a reasonable degree of safety for the EMS providers. Furthermore, the ability to achieve specific aspects of this protocol will be dependent on the severity of the patient's condition and their willingness to allow medical care.

Medical: Heat Cramps / Exhaustion

--- EMR ----------

- Move patient to cooler environment and remove excess clothing
- ABC and vital signs and core temperature
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration.
- Cool patient
- Oral fluids

EMR STOP

--- EMT ----------

- Cardiac monitor or 12 lead EKG, if available

EMT STOP

---EMT IV TECH----------

- Vascular access
- Administer IV NS 1000 mL if heart rate greater than 100, systolic blood pressure is less than 160, and lung fields are clear to auscultation.

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Treat seizures, arrhythmias or altered LOC per specific protocols

PARAMEDIC STOP

Medical: Heat Stroke

--- EMR ----------

- Move patient to cooler environment and remove excess clothing
- ABC and vital signs, monitoring core temperature as appropriate
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration
- Core temperature with thermometer every 5 minutes
- If patient body temperature exceeds 102° F, move patient to cooler environment and remove clothing. Cool aggressively with wet sheets, cool packs, and/or evaporative airflow. Avoid ice packs and cold water immersion. Lower body temperature to 102° F.
- Treat other associated signs/symptoms per protocol

EMR STOP

--- EMT ----------

- Cardiac monitor or 12 lead EKG, if available

EMT STOP

---EMT IV TECH----------

- Vascular access
- Administer IV NS 1000 mL if heart rate greater than 100, systolic blood pressure is less than 160, and lung fields are clear to auscultation.

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Consider intubation
- Treat seizures, arrhythmias or altered LOC per specific protocols

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Cool aggressively with wet sheets, cool packs, and evaporative airflow. Avoid ice packs and cold water immersion.
- **COOL to 102°F**
- If ET required, consider RSI.

Medical: Hypothermia

--- EMR ----------

- Remove from environment
- ABC and vital signs monitoring core temperature with hypothermia thermometer
- Airway management with **oxygen** maintaining a SaO2 of 94-98% through titration
- Remove wet clothing and start warming process
- Determine Blood sugar
  - If abnormal refer to **Medical: Diabetic Emergencies** protocol
- Treat other associated signs/symptoms per protocol

EMR STOP

--- EMT ----------

- Consider Cardiac monitor or 12 lead EKG, if available

EMT STOP

---EMT IV TECH----------

- Vascular access

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Consider intubation

PARAMEDIC STOP

-- KEY POINTS / CONSIDERATIONS----------

- Assess pulses for minimum of 30 seconds. If there are no pulses start CPR.
- Treat gently, do not rub or manipulate the extremities. Keep patient supine.
- Oxygen should be heated if possible.
- Attempt to increase temperature with hot packs to the groin, neck, and armpits. Cover patient entirely with heated blanket and cover head to minimize heat loss.

Pulseless Patient:

- Core temperature < 30°C (86°F): Start CPR, Withhold IV medications until temperature is >30°C (86°F), Limit one shock for VF/VT, Transport
- Core temperature > 30°C (86°F): Start CPR, Give IV medications as indicated but at increased levels between doses, repeat defibrillation for VF/VT as core temperature rises

Medical: Nausea and/or Vomiting

--- EMR ----------

- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration
- Assess neurological and cardiac status

EMR STOP

--- EMT ----------

- Consider Cardiac monitor or 12 lead EKG, if available
- Administer **Ondansetron (Zofran)** 4mg PO (with specialized MPD training). May repeat once in 10 minutes if no effect for a maximum of 8 mg.

EMT STOP

---EMT IV TECH----------

- Vascular access @ TKO rate.
- Administer IV fluids up to 1 liter if evidence of hypovolemia. May repeat if needed.
- **Pediatric**- Administer 20 ml/kg IV bolus if evidence of hypovolemia.

--- AEMT ----------

- Administer **Ondansetron (Zofran)** 4mg IV, IO or PO. May repeat once in 10 minutes if no effect for a maximum of 8 mg.
- **Pediatric > 1 month** administer **Ondansetron (Zofran)** 0.1mg/kg IV (Oral: <4 yrs. 2 mg ODT: >4 yrs. 4 mg ODT). May repeat once in 10 minutes for a maximum of 8 mg or 0.2 mg/kg.

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

PARAMEDIC STOP

Medical: Near-Drowning

--- EMR ----------

- ABC and vital signs, if the patient is pulseless and apneic, proceed to appropriate cardiac protocol.
- Stabilize spine prior to removing patient from water if there is any suggestion of neck injury (such as diving, personal watercraft, or boating accident).
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration.
- Keep patient warm and dry and remove any wet clothing.
- If other trauma is suspected, refer to the appropriate Trauma protocol.
- If hypothermic, refer to **Medical: Hypothermia** protocol.

EMR STOP

--- EMT ----------

- Cardiac monitor or 12 lead EKG, if available
- SGA airway intervention as necessary, if have SGA endorsement

EMT STOP

---EMT IV TECH----------

- Vascular access, administer warm IV fluids

--- AEMT ----------

- SGA airway intervention as necessary

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Advanced airway intervention, as necessary

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Near drowning may have rapid development of pulmonary edema.
- All near drowning or submersions should be transported. Any patient can deteriorate rapidly.
- If the patient is hypothermic, defibrillation may be unsuccessful until the patient is warmed.
- Many near drowning involve diving injuries to the cervical spine.

Medical: Overdose or Toxic Exposure

--- EMR ----------

- Decontamination as needed
- ABC and vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration
- Determine what was taken, when and how much, if possible and contact poison control
- If OD of oral or parenteral hypoglycemic agent is suspected, check blood glucose level, if equipped and authorized. If level is abnormal refer to **Medical: Diabetic Emergencies** protocol
- For symptomatic opiate overdose: **Naloxone (Narcan)** up to 2mg IN

EMR STOP

--- EMT ----------

- 12-lead EKG, if available or cardiac monitor
- For symptomatic opiate overdose: **Naloxone (Narcan)** 0.4 mg q 2 min IN up to 2 mg maximum.

EMT STOP

---EMT IV TECH----------

- Vascular access.

--- AEMT ----------

- For symptomatic opiate overdose: **Naloxone (Narcan)** 0.4 mg q 2 min up to 2 mg maximum IV, IO, IM, or 2mg IN

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Organophosphate poisoning: Administer 1 dose of **Atropine** 1 mg every min. up to 10 mg IV per dose until secretions dry

PARAMEDIC STOP

--- PHYSICIAN OPTIONS FOR PARAMEDICS ----------

- Dystonic reaction: **Diphenhydramine (Benadryl)** 50 mg IV or IM
- Tricyclic antidepressant OD: **Sodium Bicarbonate** 1 mEq/kg IV until QRS complex narrows
- Tricyclic overdose: Calcium Gluconate 1g IV, over 10 min

--- KEY POINTS / CONSIDERATIONS----------

- Includes patients who are unconscious/unresponsive without suspected trauma or other causes, and patients with a brief loss of consciousness
- If patient is a suspected narcotic overdose (due to history and/or physical findings) administer **Naloxone** prior to checking blood glucose level
- Dystonic reaction is uncontrolled muscle contractions of face, neck or tongue
- Examine 12 Lead EKG for QRS widening or QT prolongation

Medical: Suspected Stroke

--- EMR ----------

- ABC and vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration
- Check blood glucose level, if equipped. If level is abnormal refer to **Medical: Diabetic Emergencies** protocol
- Perform neurological exam: FAST and if positive, then do the Stroke Severity Score (See State of Washington Prehospital Stroke Triage Designation Procedure in the Key Points section).
- Determine the exact time patient was last known well by interviewing patient, family, and bystanders

EMR STOP

--- EMT ----------

- 12-lead EKG, if available, or cardiac monitor
- Limit scene time with goal of ≤ 20 minutes
- Notify destination hospital ASAP.

EMT STOP

---EMT IV TECH----------

- Vascular access

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- If systolic BP is greater than 220 or diastolic BP is greater than 120 contact Medical Control

PARAMEDIC STOP

State of Washington
Prehospital Stroke Triage Destination Procedure

STEP 1: Assess Likelihood of Stroke

- Numbness or weakness of the face, arm, or leg, especially on one side of the body
- Confusion, trouble speaking, or understanding
- Trouble seeing in one or both eyes
- Trouble walking, dizziness, loss of balance, or coordination
- Severe headache with no known cause
- ***If any of above, proceed to STEP 2, if none, transport per regional PCP/county operating procedures***

STEP 2: Perform F.A.S.T. Assessment *(positive if any of Face/Arms/Speech abnormal)*

- **Face**: Unilateral facial droop
- **Arms**: Unilateral arm drift or weakness
- **Speech**: Abnormal or slurred
- **Time**: Best estimate of Time Last Known Well _____

If FAST negative, transport per regional/county operating procedures

STEP 3: If F.A.S.T. Positive - Calculate Stroke Severity Score (LAMS)

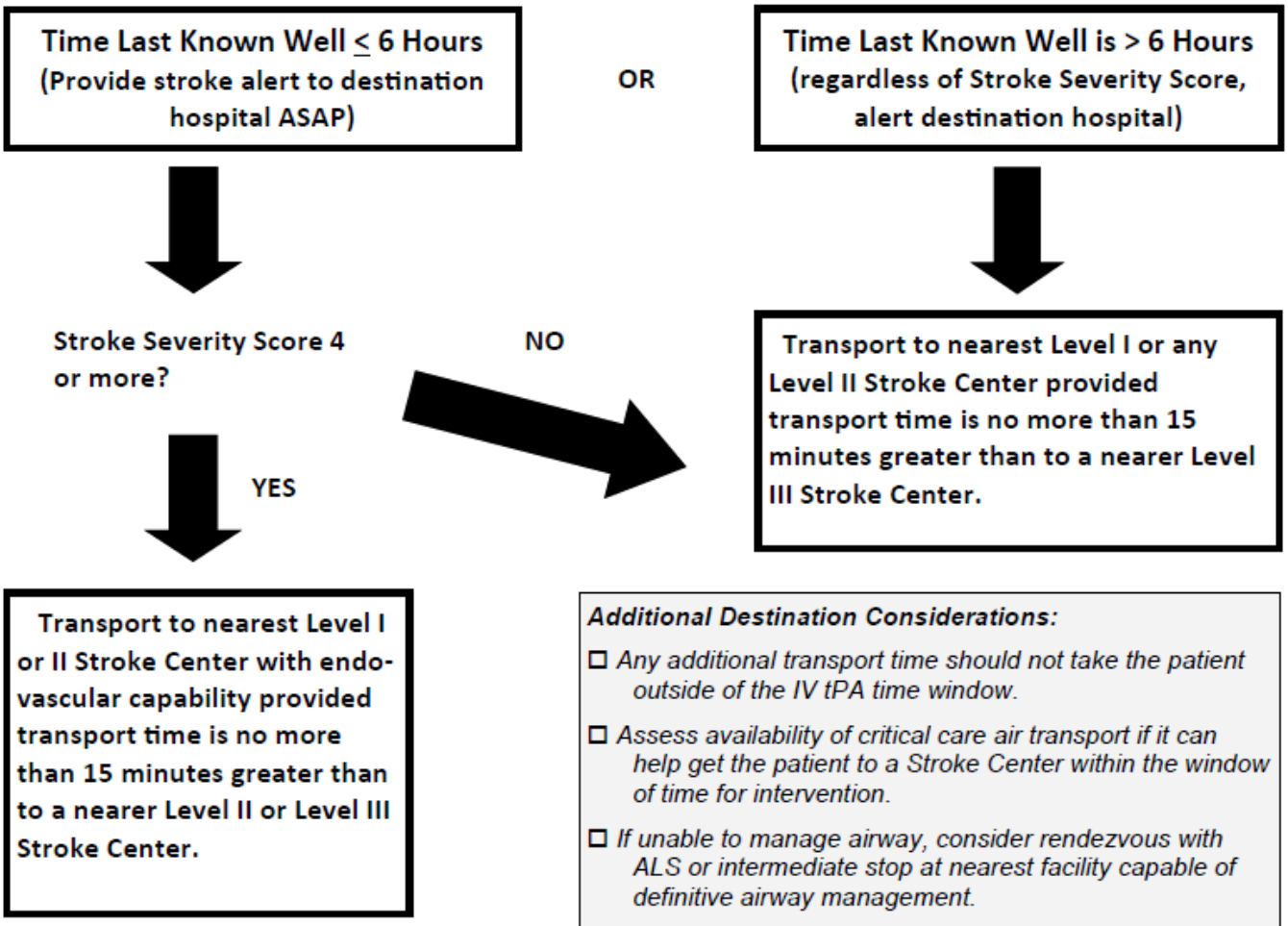
Facial Droop: Absent =0 Present =1

Arm Drift: Absent =0 Drifts =1 Falls Rapid =2

Grip Strength: Normal =0 Weak =1 No Grip =2

Total Stroke Severity Score = (Max. 5 points)

STEP 4: Determine Destination: Time Last Known Well + Stroke Severity Score



Additional Destination Considerations:

- ☐ *Any additional transport time should not take the patient outside of the IV tPA time window.*
- ☐ *Assess availability of critical care air transport if it can help get the patient to a Stroke Center within the window of time for intervention.*
- ☐ *If unable to manage airway, consider rendezvous with ALS or intermediate stop at nearest facility capable of definitive airway management.*
- ☐ *If there are two or more Stroke Centers of the same level to choose from within the transport timeframe, patient preference, physician practice patterns, and local rotation agreements may be considered.*

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The purpose of the Prehospital Stroke Triage and Destination Procedure is to identify stroke patients in the field and take them to the most appropriate hospital, which might not be the nearest hospital. Stroke treatment is time-critical – the sooner patients are treated, the better their chances of survival and recovering function.

For strokes caused by a blocked blood vessel in the brain (ischemic, the majority of strokes), clot-busting medication (tPA) must be administered within 4.5 hours from the time the patient was last known well, a treatment that can be given at WA DOH Level 1, 2 or 3 stroke centers (for a list of categorized hospitals, please click here).

If a patient presents to EMS with a severe stroke, they are more likely to have blockage of a large vessel and can benefit from mechanical clot retrieval (thrombectomy). Thrombectomy must begin by 24 hours since last known well, and is a more complex intervention, only available in Level I and a small number of Level II stroke centers.

There are 3 key elements to determine the appropriate destination hospital: **FAST stroke screen** to identify a patient with a high probability of stroke. **Stroke Severity Score** to determine if a patient meets criteria for "severe" stroke. **Time since Last Known Well (LKW)** which helps determine eligibility for tPA and thrombectomy. **STEPS to determine destination:**

Do a FAST Stroke Screen Assessment: (**F**acial droop, **A**rm drift, **S**peech changes, **T**ime since LKW) is a simple way to tell if someone might be having a stroke. If FAST is negative, stroke is less likely, and standard destination procedures apply. If FAST is positive (face or arms or speech is abnormal), it's likely the patient is having a stroke and the EMS provider moves on to assessing stroke severity.

Assess severity: The stroke severity assessment scores the FAST stroke screen. Patients get points for deficits: **Facial droop** gets 1 point if present, 0 points if absent; **Arm drift** (have patient hold arms up in air) gets 2 points if an arm falls rapidly, 1 point if slowly drifts down and 0 points if the arms stay steady; **Grip strength** gets 2 points if no real effort can be made, 1 point if grip is clearly there but weak, and 0 points if grips seem of full strength. **Add up the points:** A score > 4 is interpreted as "severe."

Determine time since LKW: It is important to use the LKW time as opposed to when symptoms were first noticed. If a patient woke up in the morning with symptoms and was well when they went to bed, time LKW is the time they went to bed. If stroke symptoms occur when the patient is awake, LKW could be the same time the symptoms started if the patient or a bystander noticed the onset. LKW time could also be prior to symptoms starting if a patient delays reporting symptoms or, for example, someone discovers a patient with symptoms but saw them well 2 hours prior.

Determine Destination: Time since LKW < 6 hours and "Severe" (score > 4): This group benefits from preferential transport to a thrombectomy stroke center. The patient should be taken directly to the nearest thrombectomy stroke center provided it is no more than 15 extra minutes travel compared to the nearest stroke center.

Time since LKW is > 24 hours (regardless of severity score): These patients should be taken to nearest Level I or II stroke center provided it is no more than 15 minutes greater than to a nearer Level III stroke center.

Time since LKW 6-24 hours but NOT "Severe": These patients should be taken directly to the nearest Level I or Level II stroke center provided it is no more than 15 extra minutes travel compared to a nearer Level 3

stroke center.

Time since LKW 6-24 hours AND "Severe": Transport to nearest Level I or II Stroke Center with endovascular capability provided transport time is no more than 30-60 min greater than to a nearer Level II or Level III Stroke Center. Regional care procedures and county operating procedures may provide additional guidance.

Notification: Immediately notify the destination hospital of incoming stroke. If the patient is within 6 hours LKW, call a stroke alert according to county operating procedures or locally determined protocol.

Document: key medical history, medication list and next of kin phone contacts; time on scene; FAST assessment and results (or reason why not); blood glucose level; LKW time (including unknown); and whether the hospital was notified from the field and if it was a stroke alert.

OB/Gyn: Childbirth-

--- EMR ----------

Management of a Normal Delivery

- Support the baby's head over the perineum.
- If the membranes cover the head after it emerges, tear the sac with your fingers or forceps to permit escape of the amniotic fluid. Suction meconium as needed. **Suction mouth and then nose with a bulb syringe**. Depress the bulb syringe before placing in the baby's mouth or nose.
- Gently guide the head downward until the shoulder appears. The other shoulder is delivered by gentle upward traction. The infant's face should be upward at this point.
- If the cord is around the neck, loosen cord and attempt to slip overhead. If unable to do so, clamp it with two clamps, cut the cord between the clamps, and unwrap the cord from around the neck.
- Clamp the umbilical cord with two clamps and cut the cord between them. First clamp 4" above baby, second clamp 6" above baby.
- Dry and wrap baby to keep warm, warming hat on head if available.
- APGAR score should be recorded at 1 minute and 5 minutes after birth
- Transport as soon as possible.

Management of a Breech Delivery

- Contact Medical Control
- Place patient on left side
- If unable to deliver head, place sterile gloved hand into the vagina with palm towards baby's face to press away vaginal tissue and establish an airway.
- Transport immediately to highest level of care within 30 minutes.

Management of Prolapsed Cord or Limb Presentation

- Contact Medical Control
- Place the mother on left side or in knee-to-chest position.
- Place sterile gloved hand in the vagina and attempt to hold the baby's head away from the cord.
- Keep the cord, moist using a sterile dressing and sterile saline.
- Transport immediately to highest level of care within 30 minutes.
- Do not withhold resuscitation efforts to determine APGAR score

APGAR SCORE

Points	0	1	2
A-Appearance	Blue/Pale	Pink body/blue ext	Completely pink
P-pulse	Absent	Below 100BPM	Above 100BPM
G-Grimace (Flick soles)	No response	Grimace	Vigorous Cry
A-Activity (Muscle tone)	Limp	Some Flexion	Active Motion
R-Respirations	No Effort	Weak/Irregular	Strong Cry

--- EMT ----------

---EMT IV TECH----------

--- AEMT ----------

--- PARAMEDIC ----------

EMR, EMT, EMT-IV, AEMT, PARAMEDIC STOP

--- KEY POINTS----------

- Determine the estimated date of expected birth, the number of previous pregnancies and # of live births
- Determine if the amniotic sac (bag of water) has broken, if there is vaginal bleeding or mucous discharge, or the urge to bear down.
- Determine the duration and frequency of uterine contractions
- Examine the patient for crowning. If delivery is not imminent, transport as soon as possible. If delivery is imminent, prepare for an on-scene delivery.
- If multiple births are anticipated but the subsequent births do not occur within 10 minutes of the previous delivery transport immediately.
- After delivery of the placenta gently massage the uterus
- Bring the placenta and any other tissue to the hospital for inspection
- Suction thick meconium as soon as possible, using no more than 100 mmHg of suction.
- Endotracheal suctioning only if thick meconium is present and child is lethargic/ obtunded.
- Transport as soon as possible to highest level of care within 30 minutes.

OB/Gyn: Eclampsia

--- EMR ----------

- ABC and Vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration.

EMR STOP

--- EMT ----------

- 12 lead EKG, if available, or cardiac monitor.

EMT STOP

---EMT IV TECH----------

- Vascular access

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- If patient is seizing or has had a witnessed seizure, **Magnesium** 2 gm diluted in 10 mls NS over 2 minutes IV or 2 gm IM in the buttock

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Pre-eclampsia is defined as BP greater than 140/90 in a pregnant patient (or one who has recently given birth) with severe headache, confusion and/or hyper-reflexia
- Eclampsia is the above with seizure activity
- May repeat magnesium doses at medical control's request.

OB/Gyn: Pre-term Labor (24-37 weeks)

--- EMR ----------

- ABC and Vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration.

EMR STOP

--- EMT ----------

- 12 lead EKG, if available, or cardiac monitor.

EMT STOP

---EMT IV TECH----------

- Vascular access
- Normal saline 500ml IV bolus

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Transport to the closest appropriate hospital.
- Notify destination hospital ASAP
- If patient unwilling to go to closest hospital, contact Medical Control for assistance in determining appropriate destination

OB/Gyn: Vaginal Bleeding

--- EMR ----------

- ABC and Vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration.
- Establish last menstrual period.
- Apply loose perineal pad.
- Collect any tissue passed and bring to hospital

EMR STOP

--- EMT ----------

- 12 lead EKG, if available, or cardiac monitor.

EMT STOP

---EMT IV TECH----------

- Vascular access of **normal saline** and titrate to a systolic pressure of 100 mm Hg

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC----------

PARAMEDIC STOP

Pediatric Emergencies

- For these protocols, pediatric patients are defined as children 8 years of age or less
- Procedures for Paramedics are only for the following clinical situations:
  - Cardiac or Respiratory Arrest
  - Cardiac Dysrhythmias (Bradycardia, Supraventricular Tachycardia)
  - Asthma/Acute Bronchospasm
  - Anaphylaxis/Allergic Reaction
  - Stridor
  - Seizures
  - Pain Management
  - Sedation
  - Altered Mental Status/Overdose
  - Diabetic Emergencies
  - Major Trauma
  - Hypoperfusion
- In all other clinical situations, you must contact Medical Control
- Have a Broselow Pediatric Tape or similar device available to accurately determine the correct medication dosage
- Normal Vital Signs for Infants and Children:

Age	Respirations	Pulse	Systolic BP
Newborn	30-60	100-180	>60
Infant (< 1 year)	30-60	100-160	>60
Toddler (1-3 years)	24-40	90-150	>70
Preschooler (3-5 years)	22-34	80-140	>75
School-aged (6-8 years)	18-30	70-120	>80

Pediatric: Airway Obstruction, Infant (less than 1 year)

--- EMR ----------

- Confirm severe airway obstruction. Check for the sudden onset of severe breathing difficulty, ineffective or silent cough, weak or silent cry.
- Give up to 5 back slaps and up to 5 chest thrusts.
- Repeat step 2 until effective or victim becomes unresponsive.
- If victim becomes unresponsive with no breathing or no normal breathing (i.e., agonal gasps), begin CPR
- Before you deliver breaths, look into mouth. If you see a foreign body that can be easily removed, remove it.
- Refer to **Procedural: Airway Management** protocol

--- EMT ----------

---EMT IV TECH----------

--- AEMT ----------

EMR, EMT, EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- If unable to ventilate patient, attempt to remove obstruction with laryngoscope and McGill forceps.

PARAMEDIC STOP

Pediatric: Altered Level of Consciousness

--- EMR ----------

- ABC and Vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration.
- Determine blood sugar
- If suspected overdose, follow **Pediatric: Overdose or Toxic Exposure** protocol

EMR STOP

--- EMT ----------

- Consider 12-lead EKG, if available, or cardiac Monitor
- Determine blood sugar
  - If <60 follow **Pediatric: Diabetic Emergencies** protocol

EMT STOP

---EMT IV TECH----------

- Vascular access

--- AEMT ----------

--- PARAMEDIC ----------

EMT-IV, AEMT, PARAMEDIC STOP

Pediatric: Anaphylaxis

--- EMR ----------

- ABC and Vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration.
- Refer to **Procedural: Epinephrine Injection** Protocol

EMR STOP

--- EMT ----------

- 12-lead EKG, if available, or cardiac Monitor
- Administer **Epinephrine-** 1:1,000 concentration (1 mg/mL) IM 0.15mg with specialized training.
- **Albuterol** < 1year; 1.25 mg, > 1 year; 2.5 mg via nebulizer
- **Diphenhydramine (Benadryl)** 1 mg/kg PO; max dose 25 mg with specialized MPD training.

EMT STOP

---EMT IV TECH----------

- Vascular access

EMT-IV, AEMT STOP

--- AEMT ----------

- **Diphenhydramine (Benadryl)** 1 mg/kg IV if not already given PO; max dose 25 mg

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Administer **Epinephrine-** 1:1,000 concentration (1mg/mL) 0.01mg/Kg IM (max 0.3 mg) if not already given.
- Consider intubation

PARAMEDIC STOP

--- PHYSICIAN OPTIONS FOR PARAMEDICS ----------

- For cardiovascular collapse: **Epinephrine** 1:10,000 concentration (1 mg/ 10 mL) 0.01 mg/kg (0.1 ml/kg) IV, IO or ET; max dose 0.5 mg

--- KEY POINTS / CONSIDERATIONS----------

- If an EMT has administered an **Epi-Pen**, or the patient has administered their own epinephrine auto injector, contact Medical Control prior to administering additional epinephrine subcutaneously

Pediatric: Asthma, Acute

--- EMR ----------

- ABC and Vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration.

EMR STOP

--- EMT ----------

- Determine if patient has been given his/her own asthma medications and assist with prescribed metered dose inhaler.
- 12-lead EKG, if available, or cardiac monitor
- **Albuterol** < 1year; 1.25 mg, > 1 year; 2.5 mg via nebulizer

---EMT IV TECH----------

EMT, EMT-IV STOP

--- AEMT ----------

AEMT STOP

--- PARAMEDIC ----------

- **Albuterol** < 1year; 1.25 mg, > 1 year; 2.5 mg via nebulizer; may repeat times 2.
- **Epinephrine** 1:1,000 concentration (1mg/mL) 0.01 mg/kg IM, if patient in severe distress; max 0.3 mg

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Absence of breath sounds can be indicative of status asthmaticus. Be prepared for imminent respiratory arrest

Pediatric: Asystole or PEA

--- EMR ----------

- CAB and CPR, per AHA Guidelines
- Airway management with high concentration **oxygen** via BVM
- Secure airway as per AHA Guidelines. Initial use of oropharyngeal airway and BVM is acceptable
- AED

EMR STOP

--- EMT ----------

- 12-lead EKG, if available, or cardiac Monitor

EMT STOP

---EMT IV TECH----------

- Vascular access, IV/IO
- **Normal Saline** 20 ml/kg rapid IV or IO bolus

--- AEMT ----------

- **Epinephrine** 1:10,000 concentration (1 mg/ 10 mL) 0.01 mg/kg (0.1 ml/kg) IV or IO
- Repeat **Epinephrine** every 3 – 5 minutes

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Consider advanced airway.

PARAMEDIC STOP

--- PHYSICIAN OPTIONS FOR PARAMEDICS ----------

- **Epinephrine** 1:10,000 concentration (1 mg / 10 mL) 0.01 mg/kg (0.1 ml/kg) IV or IO; repeat **Epinephrine** every 3- 5 minutes

--- KEY POINTS / CONSIDERATIONS----------

- Call Medical Control and begin transport to the closest hospital as soon as possible
- Confirm asystole in at least 2 leads
- Perform CPR for 5 cycles between medication doses.

Pediatric: Diabetic Emergencies

--- EMR ----------

- ABC and vital signs
- Airway management with oxygen therapy maintaining a SaO2 of 94-98% through titration
- Check blood glucose level, if equipped.
- Give oral glucose if EMR has had specialized training.

EMR STOP

--- EMT ----------

- If blood glucose is known or suspected to be low and patient is able to self-administer and swallow on command, give **oral glucose** one-unit dose (19-24 grams)
- Call for ALS intercept if unable to swallow on command, or mental status remains altered following administration of **oral glucose**
- If patient is unresponsive or unable to swallow or an iv not an option (no iv qualified ems personnel), then administer **Glucagon** 0.5 mg IM or SQ with specialized MPD training if less than 20 kg. If greater than 20 kg, then 1 mg IM or SQ.

EMT STOP

---EMT IV TECH----------

- Vascular access
    - If glucose level is below 60 and patient cannot swallow on command, administer 5mL/kg bolus bolus of D10W up to 250 mL; recheck blood sugar.
    - If glucose level is above 400, administer **Normal Saline** 20 ml/kg IV bolus; recheck blood sugar; bolus may be repeated if patient remains hyperglycemic.
- If unable to obtain vascular access and patient is unresponsive or unable to swallow on command, administer **Glucagon** 0.5mg IM or SQ with specialized MPD training if less than 20 kg. If greater than 20 kg, then 1 mg IM or SQ if not already given.

--- AEMT ----------

- If blood sugar is below 60, administer **D_{50}** 1 ml/kg IV, under 1 year give **D_{25}** 2ml/kg IV.

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- If blood glucose above 400 and signs of dehydration administer fluid bolus:

Patient's Age	Amount of **Normal Saline**
Less than 1 year	10 ml/kg
1-8 years old	20 ml/kg

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- If the patient's guardian wishes to RMA (refusal of medical aid) the patient and you have administered any medications you must contact Online Medical Control Physician prior to completing the RMA

Pediatric: Hypoperfusion / Hypovolemia

--- EMR ----------

- ABC and vital signs
- Airway management with oxygen therapy maintaining a SaO2 of 94-98% through titration

EMR STOP

--- EMT ----------

- 12-lead EKG, if available, or cardiac Monitor

EMT STOP

---EMT IV TECH----------

- Vascular access
- Normal Saline 20 ml/kg IV bolus

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Consider additional bolus if needed

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Diagnostic criteria for UNSTABLE includes: capillary refill time > 2 seconds, cool, clammy or mottled skin, inability to recognize parents, tachycardia, tachypnea, systolic BP less than 70 mmHg (2 years and older) or systolic BP less than 60 mmHg (less than 2 years old).
- A falling BP is a LATE sign of shock
- Contact receiving hospital early, with "Trauma Alert" call, giving brief description of mechanism of injury and estimated time of arrival

Pediatric: Overdose or Toxic Exposure

--- EMR ----------

- ABC and vital signs
- Airway management with oxygen therapy maintaining a SaO2 of 94-98% through titration
- Determine what was taken, when and how much, if possible, contact poison control
- Check blood glucose level, if equipped, if altered mental status is present, or if overdose of oral hypoglycemic agents is suspected. If level is abnormal, refer to **Pediatric: Diabetic Emergencies** Protocol
- Decontamination as needed
- For symptomatic opiate overdose: **Naloxone (Narcan) 0.1 mg/kg** up to 2mg IN

EMR STOP

--- EMT ----------

- 12-lead EKG, if available, or Cardiac Monitor

EMT STOP

---EMT IV TECH----------

- Vascular access

EMT-IV

--- AEMT ----------

- For symptomatic opium overdose give **Narcan** 0.1 mg/kg IV, IN, or IM, to max of 2 mg

--- PARAMEDIC ----------

AEMT STOP, PARAMEDIC STOP

--- PHYSICIAN OPTIONS FOR PARAMEDICS ----------

For symptomatic patient with:

- Organophosphate poisoning: **Atropine** 0.02 mg/kg IV per dose every 3 – 5 minutes, until secretions dry
- Dystonic reaction: **Diphenhydramine (Benadryl)** 1 mg/kg IV or IM. (*Dystonic reaction is uncontrolled contractions of face, neck or tongue.*)

--- KEY POINTS / CONSIDERATIONS----------

- Call Medical Control as soon as possible
- Includes patients who are unconscious/unresponsive without suspected trauma or other causes, and patients with a brief loss of consciousness

Pediatric: Pain Management, Severe

--- EMR ----------

- ABC and vital signs
- Airway management with oxygen therapy maintaining a SaO2 of 94-98% through titration

EMR STOP

--- EMT ----------

- 12-lead EKG, if available, or cardiac Monitor
- Tylenol 10 mg/kg PO (max 650 mg)
- **Ondansetron (Zofran)** < 4 yrs. 2 mg PO , ≥ 4 yrs. 4 mg ODT with specialized MPD training, if patient becomes nauseous.

EMT STOP

---EMT IV TECH----------

- Vascular access

EMT-IV

--- AEMT ----------

- **Ondansetron (Zofran)** 0.1 mg/kg IV, if patient becomes nauseous.

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- **Fentanyl Citrate** 1mcg/kg IV, IO

PARAMEDIC STOP

--- PHYSICIAN OPTIONS FOR PARAMEDICS ----------

- Additional **Fentanyl Citrate** IV or IO to max dose of 400 mcg.
- Additional **Ondansetron (Zofran)** 0.1 mg/kg IV, oral < 4 yrs. 2 mg ODT, ≥ 4 yrs. 4 mg ODT.

--- KEY POINTS / CONSIDERATIONS----------

- Contraindications to standing order pain management: altered mental status, hypoventilation, hypotension, other traumatic injuries
- This protocol may NOT be used in conjunction with the Pediatric Procedural Sedation Protocol, unless Medical Control is established.

Pediatric: Seizures, Active

--- EMR ----------

- ABC and Vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration.
- Check blood glucose level, if equipped and agency is authorized. If level is abnormal refer to **Pediatric: Diabetic Emergencies** Protocol

EMR STOP

--- EMT ----------

- 12-lead EKG, if available, or cardiac monitor

EMT STOP

---EMT IV TECH----------

- Vascular access

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Secure airway
- If patient continues to seize:
  - **Midazolam (Versed)** 0.1 mg/kg IV, IO max of 5mg or 0.2 mg/kg IM with maximum of 10 mg

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Call Medical Control as soon as possible
- Protect the patient and EMS crew from injury during the seizure
- Remove the needle from the syringe for rectal administrations

Pediatric: Symptomatic Bradycardia

--- EMR ----------

- ABC and vital signs
- Airway management with oxygen therapy maintaining a SaO2 of 94-98% through titration
- AED
- If heart rate is bradycardic and patient's mental status and respiratory rate are decreased, ventilate with BVM
- If symptomatic bradycardia persists despite oxygenation and ventilation, start CPR and follow cardiac arrest protocol.

EMR STOP

--- EMT ----------

- 12-lead EKG, if available, or Cardiac Monitor

EMT STOP

---EMT IV TECH----------

- Vascular access IV/IO

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Consider intubation if unable to adequately ventilate or oxygenate child
- **Epinephrine** 1:10,000 dose 0.01 mg/kg IV or IO
- Repeat **Epinephrine** every 3 – 5 minutes
- **Atropine** 0.02 mg/kg, with a minimum dose 0.1 mg IV, IO if bradycardia is due to increased vagal tone or primary AV conduction block
- Repeat **Atropine** once in 5 minutes, to maximum total dose of 0.04 mg/kg

PARAMEDIC STOP

--- PHYSICIAN OPTIONS FOR PARAMEDICS ----------

- Transcutaneous pacing if due to complete heart block
- IV bolus may be infused if indicated 20 ml/kg

--- KEY POINTS / CONSIDERATIONS----------

- Call Medical Control as soon as possible
- Newborn/Infant bradycardic if pulse less than 80 bpm; child over 1 year of age bradycardic if pulse less than 60 bpm
- Symptomatic includes poor systemic perfusion, hypotension, respiratory difficulty or altered level of consciousness
- Do not treat asymptomatic bradycardia. Contact Medical Control.

Pediatric: Tachycardia with Pulses and Poor Perfusion

--- EMR ----------

- ABC and vital signs
- Airway management with oxygen therapy maintaining a SaO2 of 94-98% through titration
- AED

EMR STOP

--- EMT ----------

- 12-lead EKG, if available, or Cardiac Monitor

EMT STOP

---EMT IV TECH----------

- Vascular access
- **Normal Saline** 20 ml/kg IV bolus; may repeat once

--- AEMT ----------

EMT-IV, AEMT STOP

-- PARAMEDIC ----------

- UNSTABLE wide complex patient
  - Synchronized cardioversion 0.5 – 1 J/kg, if not effective increase to 2 J/kg
  - Consider sedation if vascular access available
- Stable patient, narrow QRS:
  - Consider vagal maneuvers
  - **Adenosine (Adenocard)** 0.1 mg/kg (max 6 mg); may repeat at 0.2 mg/kg (max dose 12 mg)
- Stable patient, wide QRS:
  - **Amiodarone** 5 mg/kg (**Amiodarone** 150 mg diluted in 100ml, 1.5 mg/ml) IV/IO; over 10 minutes

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Call Medical Control as soon as possible
- Newborn/Infant SVT if pulse greater than 220 bpm; child over 1 year of age SVT if pulse greater than 180 bpm, with no discernable p-waves
- The most common causes of Sinus Tachycardia in children are fever and dehydration
- UNSTABLE includes cardio-respiratory compromise, hypotension, or altered level of consciousness
- Do not treat asymptomatic tachycardia. Contact Medical Control.

During Evaluation:

- Secure, with airway and vascular access when possible
- Consider expert consultation
- Prepare for cardioversion

Treat Possible Contributing Factors:

Hypovolemia	Toxins
Hypoxia	Tamponade, cardiac
Hydrogen Ion (acidosis)	Tension Pneumothorax
Hypo- Hyperkalemia	Thrombosis (coronary or pulmonary)

Pediatric: Ventricular Fibrillation / Pulseless V-Tach

--- EMR ----------

- CPR per AHA Guidelines
- Airway management with high concentration **oxygen** via BVM
- Secure airway as per AHA Guidelines. Initial Use of oropharyngeal airway and BVM is acceptable
- AED

EMR STOP

--- EMT ----------

- 12-lead EKG, if available, or cardiac Monitor
- Follow the factory pediatric setting on your AED/monitor.
- SGA airway intervention as necessary with SGA endorsement.

EMT STOP

---EMT IV TECH----------

- Vascular access, IV/IO

--- AEMT ----------

- SGA airway intervention
- **Epinephrine** 1:10,000 dose (1 mg/10 mL) 0.01 mg/kg IV/IO
- Repeat **Epinephrine** every 3 – 5 minutes

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Consider advanced airway.
- Defibrillate at 4 J/kg between doses of medication, if rhythm is unchanged
- Consider the use of ONE of the following:
  - **Lidocaine**, 1 mg/kg IV, IO or ET. Repeat twice as needed
  - **Amiodarone** 5 mg/kg (**Amiodarone** 150 mg diluted in 100ml, 1.5 mg/ml) IV, IO; repeat twice up to 15 mg/kg

PARAMEDIC STOP

--- PHYSICIAN OPTIONS FOR PARAMEDICS ----------

- Consider **Magnesium** 25 – 50 mg/kg IV/IO to maximum of 2 gm for Torsades de Pointes

--- KEY POINTS / CONSIDERATIONS----------

- Call Medical Control and begin transport to the closest hospital as soon as possible
- Treat V-Tach without a pulse as V-fib
- Use the small (pediatric) pads for patients less than 10 kg; if unavailable, use adult pads
- Initial defibrillation 2 J/kg, defibrillate at 4 J/kg after each medication administration

Procedural: Air Medical Utilization

Criteria to use when considering use of air medical services:

- Ground transport time exceeds 15 minutes, AND
- Trauma patient meets anatomical or physiological criteria described below, or medical patient requires intervention(s) not possible by ground crew
- When the patient's clinical condition indicates the need for advanced life support capabilities- this includes cardiac arrest, respiratory distress or arrest, upper airway obstruction, or anaphylaxis. The intent of these cases is to deliver the patient to the hospital as rapidly as possible.

Circumstances where air medical helicopters may be appropriate:

- Mechanism of injury: vehicle roll-over with ejected or unbelted passenger; vehicle striking pedestrian at >10 mph; falls from >15'; motorcycle victim ejected at >20 mph; multiple victims
- Time/distance factors: transportation time to the hospital is greater than 15 minutes by ground ambulance; remote (wilderness) location with difficult or prolonged ground access time; patient extrication time >20 minutes; or utilization of local ground ambulance leave local community without ground ambulance coverage.

Request for service:

- The highest level of pre-hospital personnel on scene may request a helicopter be placed on standby or be launched.
- Request will be made by radio or direct through local dispatch.
- Air should only be cancelled by EMS personnel who have completed a patient assessment.

Destination:

- Patients transported by air medical services will be taken to the nearest appropriate facility in accordance with the air medical services provider's protocols.
- Do not delay on the scene for the helicopter. If it is considered critical for the individual patient and the patient is packaged and ready for transport, start enroute to the hospital and reassign the Landing Zone either closer to the hospital or at the hospital's designated Landing Zone; the helicopter can intercept with you.

Key Points:

- A landing zone will consist of an area minimum 60'x60' (ideal site is 100'x100'), <10 degree slope, free from debris, obstruction, hazards, (i.e. wires, fences, trees, loose objects), four corners of the landing zone should be marked.
- LZ officer should notify pilot as soon as he/she can hear the aircraft and then see the aircraft.
- When EMS arrives, assess the situation. If it is determined by the most highly trained EMS provider ON THE SCENE that the helicopter is not needed, it should be cancelled as soon as possible.

Procedural: Airway Management

--- EMR ----------

- **Oxygen** therapy using nasal cannula, 2-6 lpm, if patient will not tolerate NRB, titrate to a SaO2 94-98%
- **Oxygen** therapy/ non-rebreather mask 10-15 lpm,, titrate to a SaO2 94-98%
- **Oxygen** therapy using bag valve mask 15 lpm, BVM, titrate to a SaO2 94-98%
- Oropharyngeal airways
- BVM assisted ventilation

EMR STOP

--- EMT ----------

- Nasopharyngeal or Oropharyngeal airways
- SGA airway intervention as necessary with SGA endorsement.
- Continuous Positive Airway Pressure (CPAP)

---EMT IV TECH----------

- IV access

EMT, EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Adult & Pediatric endotracheal intubation
- Rapid Sequence Intubation
- Cricothyroidotomy

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Medication facilitated intubation is to be performed only by paramedics who have received specific training and are approved by the agency medical director.
- Tidal Volume settings for portable transport ventilators: 5 – 7 ml/kg Always have a BVM available when using a portable transport ventilator
- Intubation may be attempted on a patient 2 times by one Paramedic and one more time by a second paramedic maximum. If unsuccessful utilize a rescue airway device or ventilate with BVM.
- Contraindications for use of CombiTube/I-Gel/King Airway:
  1. Esophageal disease, pharyngeal hemorrhage, tracheostomy or laryngectomy
  2. Patients who have ingested a caustic substance
  3. Patients with known obstruction of larynx and/or trachea

Procedural: Capnography

--- EMR ----------

- Not in scope of practice

EMR STOP

--- EMT ----------

Indications:

- Capnography shall be used as soon as possible in conjunction with any airway management adjunct, including Combitube, I-Gel, and King airway with specialized training.
- Capnography shall be used as soon as possible in conjunction with basic bag-valve-mask ventilations not utilizing advanced airway adjuncts.
- Capnography should also be used on all patients treated with CPAP.
- When possible, Capnography should be used on all patients receiving magnesium, and/or epinephrine for respiratory distress.

Procedure:

1. Ensure proper airway management and ventilation.
2. Ensure the capnography cable is plugged into the Zoll or other capable monitor.
3. Allow the unit to warm up.
4. Ensure the capnography has "zeroed" and reading 0 mmHg.
5. Attach the capnography sensor to the advanced airway T connector on the BVM or other oxygen delivery device.
6. Ventilate the patient several times.
7. Note ETCO2 level and waveform. Document them on patient PCR.
8. Proper ETCO2 levels include:
   - 35-45 (38 ideal) mmHg for respiratory arrest, unconsciousness, or other patients using capnography
   - 12-15 mmHg for cardiac arrest patients initially, rising during the arrest.
9. Ventilations should coincide with ETCO2 levels when possible:
   - If the ETCO2 level is lower than normal, slow the rate of ventilations. 4 ventilations per minute is the minimum number of breaths per minute.
   - If the ETCO2 is greater than normal, increase the rate of ventilations. Consider causes of acidosis.
   - During cardiac arrest, allow ETCO2 levels to rise.
   - During ROSC- If the patient is spontaneously breathing, allow the patient to adjust their own ETCO2.
   - During ROSC- If the patient is not spontaneously breathing, target ETCO2 is 50 mmHg.
10. The capnometer shall remain in place with the airway device and monitored throughout transport.
11. For the cardiac arrest patient, a rise in ETCO2 levels indicates adequate perfusion pressures and could indicate a return of spontaneous circulation.

12. Any loss of CO2 detection or waveform indicates an airway problem. Consider the following causes:

    D: Dislodgement

    O: Obstruction

    P: Pneumothorax

    E: Equipment failure

13. The capnogram should be monitored as procedures are performed to verify or correct any airway problems.

14. Document ETCO2 findings in the PCR.

---EMT IV TECH----------

--- AEMT ----------

--- PARAMEDIC ----------

EMT, EMT-IV, AEMT, PARAMEDIC STOP

Procedural: CombiTube

--- EMR ----------

- Not in scope of practice

EMR STOP

--- EMT ----------

S.G.A. Endorsement required!

Indications:

- Cardiac or respiratory arrest
- Patients with GCS< 8 and no gag reflex
- ALS unable to intubate

Contraindications:

- Patient age, weight, height, inconsistent with manufacture recommendations
- Patient is conscious or has gag reflex
- Esophageal disease
- Caustic ingestion

Complications:

- Airway trauma from poor technique
- Displacement of pharyngeal balloon
- Administration of D50 or Naloxone causes return of consciousness and gag reflex

Placement procedure:

1. Trauma – stabilize neck in neutral position, Medical- head tilt
2. Suction airway if needed with rigid tip catheter no more than 15 seconds
3. BVM w/02 @ 15lpm, pre-oxygenate with 100% 02
4. Tube preparation:
   a) Draw 100cc of air into large syringe
   b) Draw 15cc of air into smaller syringe
   c) Connect large syringe to blue bulb and inject 100cc of air, check large cuff for leaks and defects, deflate leaving syringe attached
   d) Connect smaller syringe to white bulb and inject 15cc of air, check small cuff for leaks and defects, deflate leaving syringe attached
   e) Lube cuffs and tube between the cuffs

5. Remove O.P.A.
6. Open airway by grasping lower jaw between index finger and thumb. Lift anteriorly
7. Insert the CombiTube along the base of the tongue into the airway. If resistance is felt, DO NOT force. Proper depth is achieved when the teeth or alveolar ridge are between the heavy black lines.
8. Inject 100cc of air into blue bulb and remove syringe.
9. Inject 15cc of air into white bulb and remove syringe
10. Ventilate through the blue tube: Verify silence over epigastrium, verify chest rise and lung sounds
11. If bowel sounds are found, no chest rise, and no lung sounds: Ventilate through the white tube
12. Remove tube if unable to ventilate, or gag reflex returns
13. Tube removal:
    a) Turn patient on side and have suction ready
    b) Clip both hoses behind inflation bulbs or deflate with syringes
    c) Remove tube while suctioning
    d) Insert O.P.A. or N.P.A as tolerated
14. Continue ventilations and reassess patient.
15. Monitor end-tidal CO2, ideal range 35-45

---EMT IV TECH----------

--- AEMT ----------

--- PARAMEDIC ----------

EMT, EMT-IV, AEMT, PARAMEDIC STOP

Procedural: Conducted Energy Devices – Barb Removal

--- EMR ----------

- Not in scope of practice

EMR STOP

--- EMT ----------

- EMS personnel may be requested to assess patients after a Conducted Energy Device ("conducted energy weapon", electric control device", electronic restraint", tazer, "taser", or "stun gun") deployment, and/or to remove barbs lodged in someone's skin. Be aware that secondary injuries may result from falls sustained after the device has been deployed. Subjects should not be dazed or confused following device deployment.

Indications-

- Available scientific evidence suggests that NOT all patients subjected to a conducted energy device will require an EMS evaluation.
- If requested by law enforcement, EMS providers will conduct a patient evaluation applying usual standards of care, protocols, skills and policies.

Contradictions-

- Patient will be transported if any of the following situations apply:
  - Any patient 12 years or younger
  - Pregnant patients greater than or equal to 20 weeks gestation
  - Any abnormal vital signs
  - Use of more than 3 device shocks on a patient
  - Barbs that have hit the following areas:
- Eyes/orbits
- Neck
- Genitalia
  - Significant trauma or mechanism of injury related to events before, during, or after device application (e.g. falls, MVA)
  - Burns, if greater than mild reddening of the skin between barbs
  - Barbs that cannot be removed using usual methods
  - Persistent agitated behavior that is not responsive to verbal de-escalation
  - History of coronary disease, CHF, cardiac arrhythmias, or AICD/pacer
  - Patients will also be transported if, in the judgment of EMS, further evaluation

Procedure-

- Assessing patients following conductive energy device deployment
  - Confirm device has been shut off and the barb cartridge has been removed from the device.
- **Barb Removal**
  1. Utilize appropriate PPE (gloves.) Inform all caregivers of the intent to remove the contaminated sharp.
  2. Remove one barb at a time. Stabilize the skin surrounding the Conducted Energy Device barb. Firmly grasp the barb and with one smooth hard jerk, remove barb from patient's skin.
  3. Visually examine the barb tip to ensure it is fully intact. If any part of the barb remains in the subject, transport the patient to a medical facility for removal.
  4. The Conducted Energy Device barb is considered a sharp and EMS personnel should take all precautions to avoid accidental needle sticks when removing barbs.
  5. Ensure the barb is placed in an appropriate container and return the barb/container to the law enforcement officer for evidence.
  6. Provide wound care by cleansing the affected area with antiseptic and cover with an adhesive bandage.
  7. Inform subject of basic wound care and the need to seek additional care in the event that signs of infection occur (redness-pain-drainage- swelling-fever.) The subject will need a tetanus shot if he or she has not received one within the previous 5 years.

---EMT IV TECH----------

--- AEMT ----------

--- PARAMEDIC ----------

EMT, EMT-IV, AEMT, PARAMEDIC STOP

Procedural: CPAP

--- EMR ----------

- Not in scope of practice

EMR STOP

--- EMT ----------

- CPAP is an alternative to intubation in the awake patient who is experiencing respiratory failure and an adjunct to the treatment of severe CHF.
- **Indications-**
  - Severe CHF with respiratory distress not relieved by supplemental oxygen
  - Hypoxemia due to CHF or COPD
  - Respiratory failure
- **Contradictions-**
  - Respiratory arrest, unconsciousness or agonal respirations
  - Cardiogenic shock
  - Persistent vomiting
  - Asthma without coexisting COPD or CHF
  - Pneumothorax or penetrating chest trauma
- **Procedure-**
  - Assess vital signs, cardiac monitor & pulse oximetry
  - Explain procedure to the patient
  - Clear upper airway of secretions by suction or having the patient cough and/or blow nose
  - Make sure CPAP device is connected to oxygen regulator and that the oxygen bottle is turned on
  - Prepare circuit to apply to patient
  - Continue to reassess vital signs: if hypotension develops discontinue CPAP or reduce pressure. If patient failing CPAP therapy, consider intubation.

---EMT IV TECH----------

--- AEMT ----------

--- PARAMEDIC ----------

EMT, EMT-IV, AEMT, PARAMEDIC STOP

Procedural: EBOLA

--- EMR ----------

- The current Ebola outbreak in West Africa raises the possibility of patients with Ebola traveling from the affected country to the United States
- The likelihood of contracting EVD is extremely low unless a person has direct, unprotected contact with the body fluids of a person who is sick with EVD. EVD is not transmitted by air, food or water. Early recognition is critical to controlling the spread of EVD.

Indications-

- Sudden fever (fever >101.5 degrees);
- Chills, and muscle aches;
- Diarrhea, nausea, vomiting, and abdominal pain occurring after about five days.
- Other symptoms such as chest pain, shortness of breath, headache, or confusion may also develop.
- Advanced and severe symptoms may include jaundice (yellow skin), severe weight loss, and mental confusion, bleeding inside and outside the body, shock, and multi-organ failure.

Procedures-

- Following CDC Guidelines, Lincoln County 911 has a process in place to screen certain calls that may suggest the presence of EVD. If the Dispatch Officer has a high index of suspicion for presence of EVD, they will advise the responders. When notified, EMS personnel will:
  - Prior to entering the residence, put on gloves, protective eyewear, fluid resistant or impermeable gown, hood and mask.
  - A single EMS responder will make initial approach to the patient and confirm positive triage as a possible Ebola patient.
  - Should the triage criteria be confirmed, the single EMS responder who makes the initial approach to the patient will contact the SO to request direct communication with the Lincoln County On-Call Public Health Officer to address immediate directions to citizens possibly exposed and initiate follow up regarding other possible citizen exposures to the disease.
  - Providers should double glove.
  - Limit the number of people with patient contact to only essential care providers.
  - Avoid direct, unprotected contact with patient bodily fluids including urine, saliva, feces, vomit, sweat and semen.
  - Obtain a thorough history from the patient, including if the patient has:
    - Recently lived in, or traveled to, a country where an Ebola outbreak is occurring;
    - Recently travelled through major airports in the U.S. If possible, specify the airport; Current key airports include: JFK in New York, Washington D.C.-Dulles, Newark-New Jersey, Chicago-O'Hare, and Atlanta International.
    - Had recent contact with someone who is sick with EVD or had contact with the bodily fluids of someone who is sick with EVD.
  - Obtain baseline vital signs including temperature. Document findings.
  - If the patient is showing acute life threatening symptoms, AMR in Spokane has a dedicated EVD unit and will be contacted for transport. If a patient is already hospitalized and in need of a transfer to a higher level of care a request for AMR's dedicated transport vehicle will be made. Transport should only occur via the dedicated, pre-configured ambulance.
  - Continue supportive care as needed until arrival of the AMR EVD unit.

- As soon as patient care is transferred to AMR, immediately begin decontamination of equipment and the transport vehicle. After returning to the station:
  - Remove PPE carefully without contaminating eyes, mucous membranes or clothing with potentially infectious materials; A hospital representative who is trained in supervising removal of PPE must be present while removing PPE.
  - Discard disposable PPE in containers specified by the hospital;
  - Thorough hand washing should be performed immediately after removal of PPE; and
  - Thoroughly decontaminate non-disposable equipment (e.g., Thermometer, Blood Pressure Cuff, Heart Monitor and Leads, etc.) prior to re-using. Under no circumstances should non-disposable equipment be used to treat subsequent patients without first being decontaminated. All PPE must be worn during the decontamination process.
- Ambulances and personnel should not respond to subsequent calls without having been thoroughly decontaminated.
- Vehicle decontamination will be performed at the agency's main station.
- In detail, document the patient contact as soon as possible following decontamination procedures.

EMR STOP

--- EMT ----------

---EMT IV TECH----------

- Treat any acute symptoms (e.g., breathing problems, hypotension, etc.) in accordance with the appropriate Lincoln County Patient Care Protocol. If and advanced airway must be placed, exercise care to avoid exposure to respiratory secretions. Providers must use a N95 filtering face piece for respiratory protection.
- Aggressive IV fluid replacement may be required. If so, make sure to exercise caution to avoid needle stick or splashing of blood. At all times, gloves, mask, hood, gown and protective eye wear must be worn while placing the IV. Immediately dispose of all needles and sharps in puncture- proof, sealed containers.

EMT-IV STOP

--- AEMT ----------

--- PARAMEDIC ----------

AEMT, PARAMEDIC STOP

Procedural: EBOLA Matrix

	EMS provider at patient side	EMS Driver During transport	EMS Personnel Decon after patient contact	EMS During Transport-special consider	Decon of ambulance and equipment	Waste Manage-ment
Suspected-Ebola -travel <21 days -contact w/ EVD -Fever >100.4 -other symptoms-HA, vomit, muscle px, diarrhea	Level C PPE: -Tyvek suit -booties -PAPR -double gloves	Level D PPE: -Tyvek suit -booties -safety glasses -face shield -double gloves	If <u>non-gross</u> contamination doff PPE into plastic bags following doff guidelines. If <u>gross</u> contamination-Level C-wash in ER decon shower then doff. Level D- doff in plastic bag after wiped off with PDI-Sani wipes.	-Call MCOD for destination -Block Cab pass-through with pillow -Turn on back vent / negative flow fan -Keep all windows closed -consider surgical mask on patient	Level D PPE: -Tyvek suit - booties -N95 mask -safety glasses -face shield -double gloves -Use PDI super sani wipe on all non- disposable equipment -Air out with vent on and doors open for 20 min	-Triple bag waste - Double bag linen
Suspected other contagion-(Flu, TB, Norovirus) Fever >100 F cough sore throat body aches vomit diarrhea bleeding	Level D PPE: -Glasses -gloves -N-95 mask -Consider gown	Level D PPE: -Glasses - N-95 mask	Doff PPE into garbage. Follow standard contact precautions.	-Turn on back vent / negative flow fan -Keep all windows closed -consider blocking cab pass-through -consider surgical mask on patient	Level D PPE: -Glasses -gloves -N-95 mask -Consider gown -Use PDI super sani wipes on all non-disposable equipment -Air out with vent on and doors open for 20 min	Standard Precautions

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Procedural: Epinephrine Injection

--- EMR ----------

- Place patient on oxygen. If stable, administer **oxygen** at 2-4 L/min via nasal cannula. If unstable, administer **oxygen** at 10-15 L/min via NRB.
- Administer **Epinephrine Auto-Injector**.
  - Adult-**EpiPen** (0.3 mg)
  - Infant/Child-**EpiPen Jr**. (0.15 mg) describes individual who is under 10 yrs. of age and/or weighing <60 lbs.
  - Ensure **EpiPen** is not expired, cloudy or crystallized

EMR STOP

--- EMT ----------

- Administer **Epinephrine Auto-Injector** or administer **Epinephrine** 1:1000 concentration (1mg/mL) IM from EMS supplies if EMT has had specialized MPD training.
  - Adult dose 0.3 mg
  - Infant/Child dose 0.15 mg
- Record time of injection & reassess in two minutes

---EMT IV TECH----------

--- AEMT ----------

--- PARAMEDIC ----------

EMR, EMT, EMT-IV, AEMT, PARAMEDIC STOP

Procedural: Epinephrine Drip

--- EMR ----------

--- EMT ----------

---EMT IV TECH----------

--- AEMT ----------

- Not in scope of practice.

EMR, EMT, EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Use for symptomatic bradycardia not responding to medication or pacing or anaphylactic shock resistant to repeated doses of IM Epinephrine.
- Inject 10ml of 1:10,000 (1 mg/ 10 mL) **Epinephrine** into a 1000 ml bag of NS and mix well.
- Begin to infuse at 1 ml/ minute (1mcg/min) and titrate upward by 1 mL/minute for desired effect.

PARAMEDIC STOP

Procedural: Evidentiary Blood Draw

--- EMR ----------

--- EMT ----------

- Not in scope of practice

EMR, EMT STOP

---EMT IV TECH----------

- Blood may be drawn at the request of law enforcement as provided in RCW 46.2 0.308.
- Occasionally the local law enforcement agency may request an evidentiary blood draw on a scene pursuant RCW 46.20.308. On scene blood draws will only be complete if there is no delay in patient care.
- <u>Guideline</u>
  - Evidentiary blood draws should be performed in a controlled and designated place at the Lincoln County Sheriff's office. At no time will patient care be delayed or compromise for the purpose of a blood draw for a law enforcement officer.
  - Requests for evidentiary blood draws will primarily be performed by an EMS supervisor unless not available.
  - All evidentiary blood draws must be performed in the presence of, and witnessed by, the requesting officer.
  - All evidentiary blood draws must be performed by utilizing the blood draw kit or blood draw supplies provided by the requesting officer and by following the specific instructions indicated for the collection of the blood draw specimen.
  - Medico-legal documentation will be completed in the designated EMS reporting system to include blood collection process, witnesses and vital signs, past medical history and demographics of the individual that the specimen was collected from.
  - EMS personnel are drawing blood for evidentiary purposes may be summoned to a court of law to provide testimony as to their involvement in the blood draw collection process.
- <u>Procedure</u>
  - Make contact with the requesting law enforcement officer to discuss the request and to collect the blood draw supplies needed. Be sure to verify that was vials are not expired and that the date is noted.
  - Always utilized universal precautions and trained sanitary techniques.
  - Cleans the selected venipuncture site using aseptic technique (providone-iodine and NO alcohol swabs).
    - A providone-iodine pad is mainly utilized for collection of blood alcohol specimens.
    - The prep should be applied using circular target motion starting at the intended puncture site and rotating outwards. This technique pushes the bacteria away from the inside of the venipuncture site to the outside.
    - Gauze should be used when applying pressure to the venipuncture site immediately after the needle is withdrawn. Adequate pressure to stop the bleeding is crucial to avoid formation of a hematoma or bruise.
    - Tape and bandage may be used to cover the site after the bleeding has stopped to prevent disruption of the clot.
  - Following normal medical procedures and using the needle and blood collection vials

provided, collect a full vial(s) of blood specimen on the subject in each provided blood vial.

- Venipuncture attempts will be limited to two (2) unsuccessful attempts at which time the requesting officer must transport the subject to a hospital for collection of a blood specimen.
- Immediately after blood collection, slowly shake the anticoagulant powder and blood by inverting the blood vials several times. Do not shake the vials vigorously.
- Carefully transfer the filled blood vials directly back to the requesting law enforcement officer and ensure that your name and title are on the seal and submission form.
- Upon completion of blood draw, always perform a blood glucose level checked and obtain vital signs.
- All disposable supplies utilized for blood draw will be disposed of appropriately.

--- AEMT ----------

--- PARAMEDIC ----------

EMT-IV, AEMT, PARMEDIC STOP

Procedural: Helmet / Shoulder Pad Removal

--- EMR ----------

- The helmet must be maneuvered over the nose and ears while the head and neck are held rigid.
- Inline immobilization is first applied from above.
- Inline immobilization is applied from below by a second rescuer with pressure on the jaw and occiput.
- The helmet is removed.
- Inline immobilization is reestablished from above. Special Considerations Regarding Football Helmets.

When to Remove the Helmet:

- The Inter-Association Task Force recommends that neither that football helmet nor the shoulder pads be removed before transportation.
- The Inter-Association Task Force recommends that only the facemask be removed unless the rescuer is unable to access the airway by any other means (or if helmet does not adequately secure the head).
- By removing only the facemask and not the entire helmet, the spine will remain in a neutral position.

Guidelines for Removal:

- The helmet should be removed on the field only under any of the following circumstances:
  - If after a reasonable period of time the facemask cannot be removed to gain access to the airway
  - IF the design of the helmet and chin strap is such that even after removal of the facemask, the airway cannot be controlled or ventilation provided
  - If the helmet and chin straps do not hold the head securely such that immobilization of the helmet does not also immobilize the head.
  - If the helmet prevents immobilization for transport in an appropriate position.

When to Remove the Shoulder Pads:

- Possible situations in which removal of shoulder pads would be necessary before transport to an emergency facility may include (but NOT limited to) the following:
  - The helmet is removed.
  - Multiple injuries require full access to shoulder area.
  - Ill-fitting shoulder pads caused the inability to maintain spinal immobilization Studies have shown excess movement in the cervical spine when helmet or shoulder pads are removed alone, thus, helmet and shoulder pads must be removed simultaneously to avoid cervical hyperextension and maintain in-line neutral stabilization.
- Concerns regarding the removal of equipment include:
  - The ability to maintain neutral spinal alignment.
  - The ability to secure rigid fixation of the athlete to the board.
  - A guarantee of access to the airway and to the chest for resuscitation efforts.
  - The Inter-Association Task Force recommends that neither the football helmet nor the shoulder pads be removed before transportation. Furthermore, the simultaneous removal of the helmet and shoulder pads in best done in a controlled atmosphere.

How to Remove the Shoulder Pads:

- The Inter-Association Task Force recommends that the shoulder pads be removed only in conjunction with the athlete's helmet and only when it is warranted.
  - Cut the jersey and all other shirts from the neck to the waist and from the midline to the end of each arm sleeve.
  - Cut all of the straps used to secure the shoulder pads to the torso.
  - Cut all of the straps used to secure the shoulder pads to the arms.
  - Cut lace and straps over the sternum. A consistent manufactured characteristic of shoulder pads in the mechanism to attach the two halves of the shoulder pad unit on the anterior aspect. This lace or strap system allows for quick and efficient access to the anterior portion of the chest.
  - Cut and/or remove any and all accessories such as neck rolls or collars so they can be removed simultaneously with the shoulder pads. The shoulder pads can now be released with full access to chest, face, neck, and arms. The posterior portion of the shoulder pads helps to maintain spinal alignment when the helmet and shoulder pads are in place.
  - A primary responder maintains cervical stabilization in a cephalad direction by placing your forearms on the athlete's chest while holding the maxilla and occiput.
  - With responders at each side of the athlete, their hands are placed directly against the skin in the thoracic region of the back.
  - Additional support is placed at strategic locations down the body as deemed appropriate in consideration of the size of the patient.
  - While the patient is lifted, the individual who was in charge of the head/shoulder stabilization should remove the helmet and immediately remove the shoulder pads by spreading apart the front panels and pulling them around the head.
  - All shirts, jerseys, neck rolls and extenders should be removed at this time.
  - The patient is lowered.
  - It is highly recommended that these procedures be practiced with all necessary rescue and medical personnel using the equipment commonly worn by the athletes.

- Poorly maintained or modified equipment may hamper the safe removal process which may lead to an increase in the severity of the initial injury so be sure all equipment is properly maintained.

MPD recommendation: at EMT's discretion remove helmet if needed for proper patient care.

--- EMT ----------

---EMT IV TECH----------

--- AEMT ----------

--- PARAMEDIC ----------

EMR, EMT, EMT-IV, AEMT, PARMEDIC STOP

Procedural: I-Gel Supraglottic Airway

--- EMR ----------

- Not in scope of practice.

EMR STOP

--- EMT ----------

- **S.G.A. endorsement required!**
- **<u>Indications</u>**
  - Cardiac arrest when the patient has no gag reflex and sufficient personnel are present to perform without interruption of chest compressions.
  - Non-cardiac arrest patient without a gag reflex and at risk for airway compromise.
  - Endotracheal intubation is impossible due to patient access, difficult airway anatomy, or ACLS is not immediately available.
- **<u>Contradictions</u>**
  - Deforming facial trauma.
  - Conscious or semi-conscious patients with an intact gag reflex.
- **<u>Warnings</u>**
  - This airway may not prevent aspiration of stomach contents; however, in clinical trials evidence of aspiration was extremely low.
- **<u>Insertion techniques</u>**

1. Based on patient weight, select the appropriate size I-Gel.

Size 1	5-11 lbs.
Size 1.5	11-25 lbs.
Size 2	22-55 lbs.
Size 2.5	55-77 lbs.
Size 3	65-130 lbs.
Size 4	110-200 lbs.
Size 5	200 lbs. +

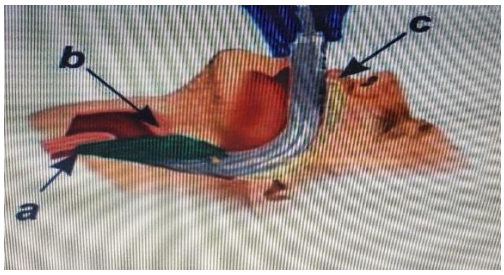
2. Lubricate back, sides and front of cuff. Avoid putting lubricant in or near the openings.
3. Suction as needed.
4. Position the I-gel so the cuff outlet is facing the chin of the patient.

5. The patient should be in the sniffing position with head extended and neck flexed.
6. The jaw thrust technique may be used for patients suspected of having c-spine injuries.
7. Introduce the leading soft tip into the mouth directing towards the hard palate.
8. Glide the device downwards and backwards along the hard palate with a continuous but gentle push until a definitive resistance is felt.

   DO NOT APPLY EXCESSIVE FORCE.
9. The incisors should be resting on the bite-block.
10. Secure device while holding in position.
11. Manual Ventilation

    * Attach BVM to I-Gel and connect BVM to suitable method of oxygen delivery and titrate the flow meter to 15L/min.

    * Ventilate patient at appropriate rate.
12. If required, an appropriate size nasogastric tube may be passed down the gastric channel.
13. Confirm placement by auscultation and chest movement.
14. Monitor end-tidal CO2 if the equipment is available.
15. Remember to document procedure on PCR.



---EMT IV TECH----------

--- AEMT ----------

--- PARAMEDIC ----------

EMT, EMT-IV, AEMT, PARMEDIC STOP

Procedural: Infusion Pump

--- EMR ----------

--- EMT ----------

---EMT IV TECH----------

--- AEMT ----------

- Not in scope of practice.

--- PARAMEDIC ----------

Indications:

- Stable patient, with an infusion pump running, who is being transported between facilities.

Contraindications:

- Infusion device not authorized for use.
- Infusion of agents by central venous access devices.
- Infusion of agents not authorized by drug infusion maintenance protocol.

Procedure:

- Perform patient assessment and record vital signs.
- Assess that patient meets criteria for this protocol.
- Ensure there are no contraindications to use of this protocol.
- At the referring hospital, the hospital staff will gather IV fluid to be infused and ensure the infusion pump is functioning properly. The infusion rate will be set based on a written and signed physician's order. The infusion pump will be labeled with the concentration, and time the infusion was prepared.
- Prior to transport, the EMS personnel will confirm: The physician's written and signed order for the infusion; the infusion pump has enough IV fluid for the expected transport time; the infusion tubing is properly connected on the patient's intravenous; the rate of infusion pump delivery; the infusion is in progress; the volume of infusion already administered.
- If an alarm is displayed during transport, the attendant should attempt to correct the problem. If the problem is corrected, the alarm display message will disappear. If the problem cannot be remedied, the attendant should press the start / stop button to turn the infusion off, and infusion of normal saline should be instituted at keep vein open rate.
- Several error messages may appear during the infusion pump operation. Error conditions indicate the pump has detected a possible internal malfunction. If an error message appears, the attendant should turn the pump off and then on again. If the error display message disappears when the pump is turned on again, ensure the IV Fluid is infusing at the prescribed rate. If the error message persists, the pump should be turned off. The possible internal error malfunction should be reported to the sending and receiving facilities.

- Upon arrival at the receiving hospital EMS personnel should confirm the volume infused during transport and any additional volume remaining. These volumes should be charted on the patient care report.
- Inform the receiving hospital of any problems encountered with the infusion, and how they were resolved. Document these problems and their resolution on the patient care report.

Documentation Requirements:

- Patient's presenting signs and symptoms, including vital signs.
- Dosage of IV Fluid being delivered by infusion pump.
- Patient assessment, including vital signs at regular intervals during transport. An acceptable interval is q15-20 minutes, unless required more frequently by referring physician.
- Volume delivered during transport, and volume remaining in infusion pump.
- Record of any alarms or error messages displayed by the infusion device during transport, with a description of corrective action to manage alarm or message.
- Changes from baseline, if any, that occur during transport.
- Signature and license number of EMS personnel performing any transfer of function skills.

Training Requirements:

- Attend in-depth class and lecture on operation of the infusion pump.
- Demonstrate the ability to take appropriate corrective actions for all potential alarms and error display messages that can be encountered when using the infusion pump.
- Acquire supervised familiarization with the infusion pump in an operational setting prior to certification.
- Pass a written examination.
- Approval to use infusion protocol by the Medical Director.
- Retraining for MPD approval is done every 12 months.
- A record will be kept documenting all cases where this protocol is used.

Loss of Approval:

- Loss of approval to use infusion protocol is at the discretion of the MPD or Emergency Medical Services director.

Quality Assurance Requirements:

- Appropriate quality assurance and review of all instances where this protocol is used must be reviewed by the EMS Director or MPD. As a minimum, the following must be assessed:
    - Appropriateness of implementation.
    - Adherence to protocol.
    - Any deviation from the protocol.
    - Corrective measures taken, if any indicated

PARAMEDIC STOP

Procedural: Intranasal Medication Delivery

Naloxone/Narcan

--- EMR ----------

- Draw up appropriate amount of medication into syringe.
- Attach intranasal medication delivery device to the syringe.
- Using your free hand to hold the head stable, placed the tip of the intranasal medication delivery device snugly against the nostril aiming slightly up and outward.
- 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.

EMR STOP

--- EMT ----------

---EMT IV TECH----------

--- AEMT ----------

--- PARAMEDIC ----------

EMT, EMT-IV, AEMT, PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Always deliver half of the medication dose up each nostril.
- Do not use more than 1 mL of medication per nostril.
- Always use the most concentrated form of the medication available.
- Beware that mucus, blood and nasal constructors reduced absorption. Suction nostrils or consider alternate drug delivery method in the situations.

Procedural: Intraosseous Infusion, Adult

--- EMR ----------

--- EMT ----------

- Not in scope of practice

EMR, EMT STOP

---EMT IV TECH----------

* An alternative technique for establishing IV access in critical adult patients when peripheral IV access is difficult or time sensitive.

Indications

- Immediate vascular access in emergencies.
- Intravenous fluids or medications are urgently needed and a peripheral IV cannot be established in 2 attempts or 90 seconds **AND** the patient exhibits one or more of the following:
  - An altered mental status (GCS of 8 or less).
  - Imminent respiratory failure.
  - Hemodynamic instability (systolic BP of < 90).
- IO placement may be considered prior to peripheral IV attempts in cases of cardiopulmonary or traumatic arrest.

Contradictions

- Fractures of the bone selected for I/O infusion.
- Excessive tissue at insertion site with the absence of anatomical landmarks (consider alternate site).
- Previous significant orthopedic procedure (IO within 24 hours, prothesis consider alternate site)
- Infection at the site selected for insertion (consider alternate site).

Procedure

- Assemble all necessary equipment.
- Prepare I/O driver and needles set.
- Select proper site.
  - Proximal Tibia
    - For patients greater than or equal to 40 kg, insertion site is approximately 2 fingers width proximal to the medial malleus and positioned midline on the medial shaft.
    - For patients less than 40 kg, insertion site is approximately 1 fingers width proximal to the medial malleus and positioned midline on the medial shaft.
  - Proximal Humeral
    - For all patients, identify the greater tubercle insertion site approximately 2 fingers width inferior to the coracoid process and the acromion.
- Prep the surface.

- Stabilize patients with leg and begin insertion from a 90° angle to the plane of the tibial plateau. Gently advanced the needle set into position- do not force. Stop when you feel a "pop" on smaller patients.
- Remove driver from the needle set.
- Remove the stylet from the catheter.
- Confirm placement (catheter is stable at a 90° angle to the bone, able to aspirate blood and fluid flow without evidence of extravasation).
- Connect tubing.
- Flush or bolus the IO catheter rapidly with 10 mL of normal saline.
- Administered by infusion or medication under pressure.
- If unsuccessful or subcutaneous swelling occurs:
    - Stop IO, remove needle, cover wound.
    - Make second attempt at another appropriate site.

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Consider adding 20 - 40 mg **Lidocaine** 2% to the conscious adult patient for anesthetic

PARAMEDIC STOP

Procedural: Intraosseous Infusion, Pediatric

--- EMR ----------

--- EMT ----------

- Not in scope of practice

EMR, EMT STOP

---EMT IV TECH----------

* An alternative technique for establishing IV access in critical adult patients when peripheral IV access is difficult or time sensitive.

Indications

- Immediate vascular access in emergencies.
- Intravenous fluids or medications are urgently needed and a peripheral IV cannot be established in 2 attempts or 90 seconds **AND** the patient exhibits one or more of the following:
  - An altered mental status (GCS of 8 or less).
  - Imminent respiratory failure.
  - Hemodynamic instability (systolic BP of < 90).
- IO placement may be considered prior to peripheral IV attempts in cases of cardiopulmonary or traumatic arrest.

Contradictions

- Fractures of the bone selected for I/O infusion.
- Excessive tissue at insertion site with the absence of anatomical landmarks (consider alternate site).
- Previous significant orthopedic procedure (IO within 24 hours, prothesis consider alternate site)
- Infection at the site selected for insertion (consider alternate site).

Procedure

- Assemble all necessary equipment.
- Prepare I/O driver and needles set.
- Select proper site.

  - Proximal Tibia
    - For patients greater than or equal to 40 kg, insertion site is approximately 1 finger width proximal to the medial malleus and positioned midline on the medial shaft.
  - Distal Tibia
    - For patients greater than or equal to 40 kg, the insertion site is approximately 2 fingers widths proximal to the medial malleus and positioned midline on the medial shaft.
  - Proximal Humeral
    - For all patients, identify the greater tubercle insertion site approximately 2 fingers width inferior to the coracoid process and the acromion.

- Prep the surface.
- Stabilize patients with leg and begin insertion from a 90° angle to the plane of the tibial plateau. Gently advanced the needles set into position- do not force. Stop when you feel a “pop” on smaller patients.
- Remove driver from the needle set.
- Remove the stylet from the catheter.
- Confirm placement (catheter is stable at a 90° angle to the bone, able to aspirate blood and fluid flow without evidence of extravasation).
- Connect tubing.
- Flush or bolus the IO catheter rapidly with 10 mL of normal saline.
- Administered by infusion or medication under pressure.
- If unsuccessful or subcutaneous swelling occurs:
    - Stop IO, remove needle, cover wound.
    - Make second attempt at another appropriate site.

--- AEMT ----------

EMT-IV, AEMT, STOP

--- PARAMEDIC ----------

Consider adding 20 - 40 mg **Lidocaine** 2% to the conscious adult patient for anesthetic

PARAMEDIC STOP

Procedural: Intubation

--- EMR ----------

--- EMT ----------

---EMT IV TECH----------

--- AEMT ----------

- Not in scope of practice

EMR, EMT, EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Prepare necessary equipment.
- Ventilate patient with supplemental oxygen as necessary; hyper-oxygenate prior to intubation attempt.
- Performing intubation.
- Visualize cuff going past the vocal cords.
- Inflate cuff.
- Place end-tidal CO2 detector onto tube, ventilate with BVM or Auto Vent.
- Confirm tube placement.
  - End tidal CO2 detector should change to yellow after 6 to 7 breaths.
  - Watch for chest to rise and fall.
  - Look for mist in tube.
  - Auscultate lateral lung fields and epigastrium with a stethoscope.
- Once ET tube placement has been confirmed, secure tube and continued ventilation with BVM or Auto Vent.
- If unable to intubate using ETT, consider using supraglottic airway device.
- **Documentation of intubation**
  - Date and time
  - Medications used, if applicable
  - Primary and secondary placement confirmation techniques used
  - Size of tube and depth of tube at the teeth
  - How tube was secured

PARAMEDIC STOP

Procedural: King Tube Airway

--- EMR ----------

- Not in scope of practice.

EMR STOP

--- EMT ----------

***Supraglottic airway endorsement required**

Indications

- Intended for airway management in patients over 4 feet in height without controlled or spontaneous ventilation.

Contraindications

- Responsive patients with an intact gag reflex.
- Patients with known esophageal disease.
- Patients who have ingested caustic substances.
- Patients under 4 feet in height.

Warnings

- High airway pressure may divert gas either to the stomach or to the atmosphere.
- Intubation of the trachea cannot be ruled out as a potential cause occasion of the insertion of the King tube. After placement, perform standard checks for breath sounds.
- Lubricate only posterior surface of the King tube to avoid blockage of the aperture or aspiration of the lubricant.

Procedure

Size	Description	Connector Color	Inflation Volume
2	12 to 25 kg	Green	25 to 35 mL
2.5	25 to 35 kg	Orange	30 to 40 mL
3	4 to 5 feet tall	Yellow	40 to 55 mL
4	5 to 6 feet tall	Red	50 to 70 mL
5	>6 feet tall	Purple	60 to 80 mL

- Verify cardiac and/or respiratory arrest.
- Ventilate via BVM at 15 L/ minute
- Ventilate 1 to 2 minutes prior to King airway insertion attempt.
- Suction hypopharynx as needed.
- Using the information provided, choose the correct King tube size, based on patient height.
- Test cuff and inflation system for leaks by injecting maximum recommended volume of air into the cuffs. Remove all air from cuffs prior to insertion.
- Apply lubricant to the beveled distal tip and posterior aspect of the tubing, taking care to avoid

introduction of lubricant in or near the ventilator openings.

- Have a spare King tube ready and prepared for immediate use.
- Pre-oxygenate, if possible.
- Positioned the head. The ideal head position for insertion of the King tube is the "sniffing position". However, the angle and shortness of the tube also allows it to be inserted with the head in a neutral position.
- Hold the King tube at the connector with dominant hand. With nondominant hand, hold mouth open and apply chin lift
- With King Tube rotated laterally 45 to 90 such that the little orientation line is touching the corner of the mouth, introduce it into the mouth and advanced behind base of tongue.
- As tube tip passes under tongue, rotate tube back to midline (blue orientation line faces chin).
- Without exerting excessive force, advance tube until base of connector is aligned with teeth or gums.
- Using the syringe provided, inflate the cuffs with 60cc of air.
- Attach resuscitator bag to the 15mm connector of the King tube which refer to the distance from the distal ventilatory opening. When properly placed, with the distal tip and cuff in the upper esophagus, and the ventilatory openings aligned with the openings to the larynx, the depth markings give an indication of the distance, in centimeters, from the vocal cords to the teeth.
- Confirm proper position by auscultation, chest movement and verification of CO2 by capnography if available.
- Readjust cuff inflation to just seal volume (cuffs with minimum volume necessary to seal the airway at the peak ventilatory pressure employed).
- Secure to patient using tape or other acceptable means. A bite block can also be used, if desired.

DO NOT COVER THE PROXIMAL OPENING OF THE GASTRIC LUMEN.

The gastric access lumen allows the insertion of a 16 Fr diameter gastric tube into the esophagus and stomach if needed. Lubricate gastric tube prior to insertion.

Removal of King Airway

- Immediately remove airway if patient regains consciousness or begins to fight tube.
- Turn patient on their side
- Deflate cuffs
- Remove King airway
- Be prepared for patient to vomit
- Assist ventilation PRN
- Administer O2 at 15L/min.

---EMT IV TECH----------

--- AEMT ----------

--- PARAMEDIC ----------

EMT, EMT-IV, AEMT, PARAMEDIC STOP

Procedural: Needle Thoracostomy

--- EMR ----------

--- EMT ----------

---EMT IV TECH----------

--- AEMT ----------

- Not in scope of practice

EMR, EMT, EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Identify the second intercostal space in midclavicular line on the side of the tension pneumothorax OR at 4th or 5th intercostal space in the mid-axillary line
- Prep location
- Attach a 10 or 12 gauge 3 inch , over the needle catheter to a 10 cc syringe
- If patient is conscious place patient in upright or semi-fowlers position
- If unconscious patient may be supine when procedure is performed
- Insert needle/catheter into the skin at a 25-30 degree angle to chest wall directly over the superior aspect, (over the top) of the third rib into the second intercostal space.
- Intercostal nerves, artery and vein run beneath the ribs so avoid this area.
- Puncture the parietal pleura; a "pop" is usually felt. A rush of air with a rapidly improving patient helps confirm the diagnosis.
- Aspirate as much air as possible; if necessary, the syringe can be removed to allow "free flow" of air from the pneumothorax until equilibrium is reached.
- Remove the needle, secure the catheter to the skin; apply a flutter –valve, if possible.

Precautions

- **This procedure is to be used only if life-threatening situations**
- Complications include local hematomas, cellulitis and pneumothorax.
- **THIS PROCEDURE WILL CREATE A PNEUMOTHORAX WHETHER ONE PREVIOUSLY EXISTED OR NOT.**

PARAMEDIC STOP

Procedural: Pain Management

--- EMR ----------

- ABC and vital signs
- Airway management through titration

EMR

--- EMT ----------

- Acetaminophen 650 mg PO (adult) or 10 mg/kg PO (peds, max 650 mg)
- **Ondansetron** (Zofran) 4 mg PO with specialized MPD training if patient becomes nauseous

EMT STOP

---EMT IV TECH----------

- Vascular access

--- AEMT ----------

- **Ondansetron** (Zofran) 4 mg IV if patient becomes nauseous

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- **Fentanyl Citrate** 1 mcg/kg IV/IM/ IO initially, then 25-75 mcg IV every 10 minutes titrated to effect with a maximum dose of 200 mcg.
- **Ketamine** 0.1-0.2 mg/kg iv every 15 minutes PRN pain to supplement pain relief

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- For patients with:
  - Severe burns without hemodynamic compromise
  - Isolated extremity injuries such as fractures or dislocations with severe pain suspected
  - hip fractures should be treated as extremity injuries
  - Shoulder injuries should be treated as extremity injuries
- For all other painful conditions, contact Medical Control for orders
- Contraindications to standing order pain management: altered mental status, hypoventilation, SBP<100, other traumatic injuries.
- This protocol may NOT be used in conjunction with the Procedural Sedation Protocol, unless Medical Control is established.

Procedural: Restraints for Aggressive or Violent Patients

--- EMR ----------

- Not in scope of practice

EMR STOP

--- EMT ----------

If blood sugar is less than 60, refer to Medical: Diabetic Emergencies.

- The use of physical restraints for patients who pose a threat to themselves or others is indicated only as a last resort.
- Physical restraint should be preceded by an attempt at verbal control and the least restrictive means of control necessary must be employed. If restraints are used, care must be taken to protect the patient from possible injury. Special precautions must be taken to reduce the risk of respiratory compromise.
- Request assistance from law enforcement
- Restraint equipment applied by EMS personnel must be either padded leather restraints or soft restraints (i.e. posey, Velcro, or seat belt type). Both methods must allow for quick release.
- The application of the following form of restraint should **not** be used by EMS personnel:
  - Hard plastic ties or any restraint device requiring a key to remove.
  - "Sandwiching" patients between backboards, scoop-stretchers, or flat as a restraint.
  - Restraining a patience's hands and feet behind the patient (i.e. leg restraints)
  - Methods or other materials applied in a manner that could cause respiratory, vascular or neurological compromise.
- Restraint equipment applied by law enforcement (i.e. handcuffs, plastic ties or leg restraints) must provide sufficient slack in the restraint device to allow the patient to straighten the abdomen and chest and take full tidal volume breaths. Restraint devices applied by law enforcement require the officer's continued presence to insure patient and scene safety. The officer should, if at all possible, accompany the patient in the ambulance on a predetermined route. A method to alert the officer of any problem that may occur during transport should be discussed prior to leaving the scene.
- Patients should not be transported in the prone position (on their stomach) unless necessary to provide emergency medical stabilization. EMS personnel must ensure that the patient position does not compromise the patient's respiratory/circulatory systems or does not preclude any necessary medical intervention to protect the patient's airway should vomit occur.
- If providers are at risk of contamination by salivary and respiratory secretions from a combative patient, a protective device may be applied to the patient to help reduce the chance of disease transmission in this manner.
- Determine blood sugar

- Restrained extremities should be evaluated for pulse quality, color, nerve and motor function every fifteen minutes.
- The medical incident report shall document the following:
  - The reason the restraints were needed
  - Which agency applied the restraints
  - The periodic extremity evaluation
  - The periodic evaluation of the patient's respiratory status

EMT STOP

---EMT IV TECH----------

- Vascular access
- If blood sugar is less than 60, refer to **Medical: Diabetic Emergencies**.

EMT-IV STOP

--- AEMT ----------

AEMT STOP

--- PARAMEDIC ----------

--- PHYSICIAN OPTIONS FOR PARAMEDICS ----------

- Chemical restraints may be used to help control combativeness. Administer **Midazolam (Versed)** 2 mg IV/IM every 3-5 minutes to a maximum of 10 mg, 0.3-0.5 mg/kg IN to a max of 10 mg.
- Ketamine – adult dose - 4 mg/kg IM (max dose 400mg) or 2 mg/kg IV/IO slow push over 60 seconds. Peds dose - 4 mg/kg IM (max dose 400mg) or 1 mg/kg IV/IO slow push over 60 seconds
- Medical control must be contacted prior to any use of Chemical restraints.
- If using ketamine, a dose of versed must be given to help avoid an emergence reaction.

PARAMEDIC STOP

Procedural: RSI

--- EMR ----------

--- EMT ----------

---EMT IV TECH----------

--- AEMT ----------

- Not in scope of practice

EMR, EMT, EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Prepare the following equipment
  - BVM with functioning oxygen system
  - Suction unit with rigid pharyngeal tip
  - Laryngoscope, endotracheal tubes, stylet and syringe
  - Have rescue device available
  - Any appropriate medications to be utilized
- Ensure of functioning and secure IV line in place
- Establish cardiac monitor and pulse oximetry
- Pre-Oxygenate with 100% **oxygen**
- **Pre-medicate**
  - **Suspected Head Injury-** in cases requiring control of intracranial pressure such as traumatic head injuries, hypertensive crisis, intracranial bleed or patients at risk for ventricular dysrhythmia, you may administer **Lidocaine,** 1.5 mg/kg IV/IO bolus prior to giving **Succinylcholine** or **Rocuronium** and intubating.
  - **Pediatric RSI-** in cases involving a pediatric patient, <8 years old administer **Atropine**, 0.02 mg/kg IV/IO bolus. Note: BVM ventilation is preferred management in this age group and should always be attempted first.
- Administer sedation
  - **Midazolam (Versed)**, Adult 2-4 mg IV, Children 0.1-0.2 mg/kg IV slow push

    Or

    Etomidate 0.3 mg/kg IV push

    Or

    Ketamine 2 mg/kg IV
- Administer **Succinylcholine,** Adult 1-1.5 mg/kg IV, Children 1-2 mg/kg IV.
- Consider **Rocuronium** as a replacement when Succinylcholine is contraindicated or needing paralysis for long transports, **Rocuronium** Adult 0.6-1.2 mg/kg IV, Children 0.6 mg/kg.

- Observe patient for fasciculation's to subside and patient to be unresponsive about 45 seconds for complete relaxation if using succinylcholine.
    - Intubate pt., if first attempt is unsuccessful, re-oxygenate using BVM for 30-60 seconds.
    - If repeated intubation fail x 2, ventilate with BVM until spontaneous respirations returns, or move to rescue device.
    - Confirm tube placement and document as per intubation protocol.

PARAMEDIC STOP

Procedural: Sedation

--- EMR ----------

--- EMT ----------

---EMT IV TECH----------

--- AEMT ----------

- Not in scope of practice

EMR, EMT, EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- **Midazolam (Versed)** 2-4 mg IV, 0.3-0.5 mg/kg IN to a max of 10 mg

  Or

- **Etomidate** 0.1 mg/kg iv push – may repeat once

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- For patients with the following anxiety producing or painful procedures including:
  - Cardioversion
  - Transcutaneous pacing
- Not for disentanglement or management of suspected fractures without Medical Control
- This protocol may NOT be used in conjunction with the Pain Management Protocol, unless Medical Control is established

Procedural: Transcutaneous Pacing

--- EMR ----------

--- EMT ----------

---EMT IV TECH----------

--- AEMT ----------

- Not in scope of practice

EMR, EMT, EMT-IV, AEMT STOP

--- PARAMEDIC ----------

Indications

- Hemodynamically unstable or symptomatic bradycardia. (eg. BP <100 systolic, altered mental status, signs of shock, dyspnea, diaphoresis, etc.)

Procedure

- Establish rhythm
- **Atropine** per Bradycardia protocol
- Consider **Midazolam (Versed)/Fentanyl** for anti-anxiety and pain control
- Attach pacing pads and monitoring electrodes
- Select pacing on monitor
- Set pacing rate to 60 bpm
- Start pacing and increase until mechanical capture is obtained. The dose for pacing should be 2 milliamperes above the dose that produces observed capture.
- Feel for a pulse, preferably femoral or radial to confirm mechanical capture.
- If patient is conscious, assess patient comfort, consider sedation as needed. See sedation protocol.
- Document with rhythm strips, date, time, baseline rhythm, current required to capture, pacing rate, patient response, medications used, date and time if terminated.

PARAMEDIC STOP

Respiratory: Asthma, Acute

--- EMR ----------

- ABC and Vital signs
- Airway management with oxygen therapy maintaining a SaO2 of 94-98% through titration.

EMR STOP

--- EMT ----------

- Determine if patient has utilized his/her own asthma medications
- Assist patient with their own medication hand held aerosol inhaler or assist a patient with their nebulized medication.
- C.P.A.P. if needed to maintain SaO2 of 94-98% and/or to reduce work of breathing.
- Consider Cardiac Monitor or 12 lead EKG, if available
- **Albuterol** 2.5 mg in 3 ml (unit dose) or albuterol 2.5 mg/ipratropium 0.5 mg (DuoNeb unit dose) via nebulizer or inline with CPAP, may repeat 2 times.

EMT STOP

---EMT IV TECH----------

- Vascular access

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- May double the dose in severe cases
- Magnesium sulfate mix 1 gm in 50 mls NS IV Piggyback over 30 minutes

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Remember, “all that wheezes is not asthma!” Consider allergic reaction, airway obstruction, pulmonary edema, COPD exacerbation

Respiratory: COPD Exacerbation

--- EMR ----------

- Establish and maintain airway
- Vital signs
- Administer **oxygen** @ 2-4 L/min via Nasal Cannula.
- Assist patient with their own medications as appropriate
- Monitor SaO2 & attempt to maintain at 90%
- If patient is in extreme distress, increase oxygen therapy, maintaining a SaO2 of 94-98% through titration

EMR STOP

--- EMT ----------

- C.P.A.P. if needed to maintain SaO2 of 94-98% and/or to reduce work of breathing
- Cardiac Monitor or 12 lead EKG, if available
- **Albuterol** 2.5 mg in 3 ml (unit dose) or albuterol 2.5 mg/ipratropium 0.5 mg (DuoNeb unit dose) via nebulizer or inline with CPAP, may repeat 2 times.

EMT STOP

---EMT IV TECH----------

- Vascular access

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- **Albuterol** 2.5 mg in 3 ml (unit dose) via nebulizer or ET tube; may repeat to a total of three doses
- Consider endotracheal intubation/RSI and positive –pressure ventilation if patient has decreased level of consciousness or other signs of respiratory failure.

PARAMEDIC STOP

Respiratory: Pulmonary Edema, Acute

--- EMR ----------

- ABC and Vital signs
- Airway management with oxygen therapy maintaining a SaO2 of 94-98% through titration.
- Sit patient upright, if possible

EMR STOP

--- EMT ----------

- Cardiac Monitor or 12-lead EKG, if available
- C.P.A.P. if needed to maintain SaO2 of 94-98% and/or to reduce work of breathing.
- **Albutero**l 2.5 mg in 3 ml (unit dose), if wheezes are present

EMT STOP

---EMT IV TECH----------

- Vascular access

AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- **Nitroglycerin** 0.4 mg, every 5 minutes sublingual, if the patient's systolic BP is above 100 mmHg
- **Furosemide** (Lasix) 20-40mg IV over 2 – 3 minutes if diagnosis is certain and patient appears fluid overloaded (wet lungs, peripheral edema, distended neck veins) and SBP greater than 120 mm Hg.
- **Norepinephrine (Levophed)** 0.05 mcg/kg/min not to exceed 30 mcg/min or 2 mcg/kg/min titrate to keep SBP above 100 mm Hg, not to exceed 30 mcg/min

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- All patients with rales do not have pulmonary edema — consider the possibility of pneumonia or chronic obstructive pulmonary disease (COPD) exacerbation.

Trauma: General

-- KEY POINTS / CONSIDERATIONS----------

- Patients with unmanageable airway go to the closest hospital or call for aeromedical or request ALS rendezvous while enroute to the highest level Trauma Center.
- All other UNSTABLE patients with airway managed go to highest level Trauma Center within 15 minutes:
  - If more than 15 minutes from Trauma Center consider aeromedical assistance. Refer to the Aeromedical Utilization Policy.
  - If more than 15 minutes from Trauma Center and aeromedical assistance is not available, transport patient to the next highest level trauma center
- All times start at the time the EMS provider determined the patient to be UNSTABLE
- Notify the receiving facility as early as possible giving brief description of mechanism of injury, and estimated time of arrival
- UNSTABLE patients should be enroute to the hospital/landing zone within 10 minutes of disentanglement/extrication
- The following are Trauma Designated Facilities in area:

Sacred Heart	Level II
Deaconess	Level III
Holy Family	Level III
Valley	Level III
Lincoln Hospital	Level V
Odessa Memorial	Level V
Coulee Medical Center	Level V

- Trauma Code Criteria for Regional Hospitals:
  - Hypovolemic shock
  - Neck, chest and abdominal injuries
  - Penetrating injuries to neck, chest, abdomen or pelvis
  - Age specific hypotension in children
  - Unable to intubate in pre-hospital setting with suspected need for surgical airway
  - Anticipated arrival of greater than three seriously injured patients
  - Pediatric falls greater than three times their height
  - Pediatric patients with significant trauma to abdomen or chest
  - Penetrating head injury, including isolated GSW to the head
  - Transfer patient from other hospital receiving blood to maintain vital signs
  - Flail chest
  - Multiple fractures
  - High risk auto crash (death of same car occupant, ejection from automobile, intrusion >12 inches occupant site or >18 inches any site, or vehicle telemetry data consistent with high risk of injury)
  - Fall equal to or greater than 20 feet

- Pedestrian hit at equal or greater than 20 mph or thrown greater than 15 feet
- Motorcycle/ATV crash >20 mph
- Pediatric pedestrian versus car
- Patients ≥ 65 years old with a ground level fall with a head strike who is on anticoagulants or other high-risk co-morbidities.

Trauma: Abdominal Injuries

--- EMR ----------

- ABC and vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration
- For abdominal evisceration, cover with moist sterile dressing
- Keep extruded contents warm

EMR STOP

--- EMT ----------

- Consider Cardiac Monitor or 12 lead EKG, if available

EMT STOP

---EMT IV TECH----------

- Venous access at 2 sites

EMT-IV STOP

--- AEMT ----------

AEMT STOP

--- PARAMEDIC ----------

AEMT, PARAMEDIC STOP

Trauma: Amputations

--- EMR ----------

- ABC and vital signs
- Control bleeding
- Apply commercial tourniquet to control potentially life-threatening limb hemorrhage not controlled with direct pressure or other simple measures
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration
- Collect parts and debride of gross contaminants with saline
- **Do not use** dry ice
- If using ice packs for cooling, wrap with gauze to prevent contact with amputated parts
- Wrap in sterile saline moistened gauze, place in plastic bag, seal, and place in ice water or with chemical cold pack (be sure amputated part does not come into direct contact with cold source)
- Label with patient name, date and time – Note disposition of amputated part on PCR – Keep amputated part with patient

--- EMT ----------

EMR, EMT STOP

---EMT IV TECH----------

- Vascular access, I.O. if needed

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

PARAMEDIC STOP

Trauma: Burns

--- EMR ----------

- Stop the burning. Remove any clothing, jewelry, etc.
- ABC and vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration
- If burns are < 10% BSA, use moist sterile dressings
- If burns are > 10% BSA, use dry sterile dressings (burn sheets)
- Burns to the eye require copious irrigation with Normal Saline

--- EMT ----------

EMR, EMT STOP

---EMT IV TECH----------

- Vascular access at 2 sites, IO if needed

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- If patient has signs of airway involvement be prepared to intubate
- **Fentanyl Citrate** 1mcg/kg IV/IO or 2 mcg/kg IN to a maximum of 100 mcg.

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Be alert for other injuries, including cardiac dysrhythmias
- If hazardous materials, notify the destination hospital immediately to allow for decontamination

Trauma: Chest Trauma

--- EMR ----------

- ABC and vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration, assist ventilations if needed.

EMR STOP

--- EMT ----------

- If sucking chest wound, seal with occlusive dressing (taped on three sides); if dyspnea increases, release the dressing momentarily during exhalation
- If flail chest, stabilize flail segment if possible.
- Contact receiving hospital as soon as possible
- Cardiac Monitor or 12 lead EKG, if available

EMT STOP

---EMT IV TECH----------

- Vascular access at 2 sites, using the side opposite the injury if possible
- Normal Saline per the **Traumatic: Hypoperfusion/Hypovolemia** Protocol

EMT-IV STOP

--- AEMT ----------

AEMT STOP

--- PARAMEDIC ----------

- If patient is in cardiac arrest, proceed with needle chest decompression before intubation
- If the patient has the following, Paramedics may proceed with needle decompression before appropriate airway management:
    - Signs and symptoms consistent with a tension pneumothorax (absence of breath sounds on one side, extreme dyspnea, jugular vein distention, cyanosis despite administration of 100% O2, or tracheal deviation) – AND
    - Evidence of hemodynamic compromise (unexplained hypotension and tachycardia)

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- **<u>Begin transportation as soon as possible and perform ALS treatment enroute to the hospital</u>**
- Signs and symptoms of a tension pneumothorax: absent lung sounds on one side, extreme dyspnea, jugular vein distention (JVD), cyanosis (even with 100% oxygen), tracheal deviation AND hypotension
- Hemodynamic compromise is defined as: hypotension and tachycardia

Trauma: Crush Injury

--- EMR ----------

- ABC and Vital Signs
- Take spinal precautions if indicated
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration

EMR STOP

--- EMT ----------

- Cardiac monitor or 12 lead EKG, if available

EMT STOP

---EMT IV TECH----------

- Vascular Access, two IV/IO's. Administer 250 ml bolus of NS, continue to give at rate of 500 ml/hr

EMT-IV STOP

--- AEMT ----------

AEMT STOP

--- PARAMEDIC ----------

- Pain control as per pain management protocol
- **Sodium Bicarbonate** 50 mEq IV/IO over 5 minutes given immediately prior to release from entrapment
- **Albuterol** 2.5mg SVN started immediately after release

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- If RSI is indicated, avoid the administration of succinylcholine

Trauma: Electrical Injuries

--- EMR ----------

- If cardiac arrest, initiate CPR per AHA Guidelines, use AED, & request ALS
- Consider C-Spine
- ABC's and vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration
- Manage burn injuries as per burn protocol, entrance/exit wounds

EMR STOP

--- EMT ----------

- If BP drops < 90mmHg systolic treat for shock
- 12-lead EKG if available, or Cardiac monitor
- Airway management, consider S.G.A. if appropriately endorsed

EMT STOP

---EMT IV TECH----------

- Vascular access - refer to burn protocol
- Maintain systolic pressure >90 mmHg

EMT-IV STOP

--- AEMT ----------

AEMT STOP

--- PARAMEDIC ----------

- Consider intubation
- Manage dysrhythmias

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- Be aware of **scene safety**
- Ventricular fibrillation and asystole are the most common dysrhythmias
- Damage is often hidden; the most severe damage will occur in muscle, vessels, and nerves.
- **In lightning strikes with multiple victims, treat those in cardiac arrest first, instead of normal triage.**

Trauma: Extremity Injuries

--- EMR ----------

- ABC's and vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration
- Monitor perfusion, motor and sensory status before and after splinting
- Apply dressings and splint fractures as necessary

EMR STOP

--- EMT ----------

- Consider pelvic stabilization device for pelvic fractures, pelvic sling or pelvic wrap
- Consider alignment with gentle traction if pulses absent or gross deformity noted.

EMT STOP

---EMT IV TECH----------

- Venous access

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- **Fentanyl Citrate** 1 mcg/kg IV/IM/IO initially, then 25-75 mcg every 5-10 minutes titrated to effect with a maximum dose of 200 mcg.
- **Ketamine** 0.1-0.2 mg/kg iv every 15 minutes PRN pain to supplement pain relief

PARAMEDIC STOP

--- PHYSICIAN OPTIONS FOR PARAMEDICS ----------

- Additional **Fentanyl Citrate** IV/IM/IO to max dose of 400 mcg if medical control approves.

Trauma: Eye Injuries

--- EMR ----------

- ABC and vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration
- Check vision in each eye separately
- Look for leakage of intraocular fluid
- Shield injured eye with an inverted paper cup or similar item
- Consider covering sides of uninjured eye to prevent lid and eye movement
- Avoid pressure dressings
- Stabilize impaled objects, DO NOT remove
- Foreign objects NOT embedded in the eye(s), flush with copious amounts of NS from the bridge of the nose outward
- Chemical burns, flush eye(s) with copious amounts of NS or low pressure water from the bridge of the nose outward for 15 minutes

--- EMT ----------

EMR, EMT STOP

---EMT IV TECH----------

- Vascular access

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- **Fentanyl Citrate** 1mcg/kg IV/IM/IO to a maximum of 100 mcg

PARAMEDIC STOP

Trauma: Head and Facial Injuries

--- EMR ----------

- Immobilize C- Spine
- ABC's and vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration

EMR STOP

--- EMT ----------

- For avulsed teeth, rinse with saline and replace if possible
- Or, place in saline and transport with the patient
- Cardiac monitor or 12 lead EKG, if available

EMT STOP

---EMT IV TECH----------

- Vascular access. Run IV initially at TKO unless hypovolemia is present (see **Trauma: Hypovolemia/Hypovolemia** Protocol)

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Intubate if needed
- For seizures, **Midalzolam (Versed**) 5-10 mg IM; or 2-4 mg IV, to a max of 10 mg

PARAMEDIC STOP

Trauma: Hemorrhage

--- EMR ----------

- ABC and vital signs
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration
- Control bleeding using direct pressure, pressure dressings, and pressure points.
- For uncontrolled life-threatening limb hemorrhage (heavy bleeding not controlled with direct pressure or other simple measures) apply commercial tourniquet device 4-6 inches proximal to bleeding site. Record time tourniquet was placed.
- If hemorrhage is not controlled and wound is not amenable to tourniquet placement, apply a topical hemostatic dressing, if available, with direct pressure.

EMR STOP

--- EMT ----------

- Consider ALS intercept
- Consider Cardiac monitor or 12 lead EKG, if available
- If epistaxis, consider oxymetazoline (Afrin) instill 2 to 3 sprays into each nostril with specialized MPD training.

EMT STOP

---EMT IV TECH----------

- Vascular Access, two IV/IO's. Administer 250 ml bolus of NS, continue to give at rate of 500 ml/hr

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Consider intubation

PARAMEDIC STOP

Trauma: Hypoperfusion / Hypovolemia

--- EMR ----------

- ABC and vital signs
- Apply Commercial Tourniquet to control potentially life-threatening limb hemorrhage not controlled with direct pressure or other simple measures
- Airway management with **oxygen** therapy maintaining a SaO2 of 94-98% through titration.

EMR STOP

--- EMT ----------

- Cardiac Monitor or 12 lead EKG, if available

EMT STOP

---EMT IV TECH----------

- Vascular access
- If COMPENSATED SHOCK:
  - Normal Saline, 1 liter, then 500 ml/hour
- IF DECOMPENSATED SHOCK:
  - Additional vascular access, infuse Normal Saline, 2 liters, then 500 ml/hour

--- AEMT ----------

EMT-IV, AEMT STOP

--- PARAMEDIC ----------

- Intubate if necessary

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

- COMPENSATED SHOCK is defined as significant mechanism of injury AND tachypnea, tachycardia, pallor, or restlessness, AND Systolic BP greater than 100 mmHg
- DECOMPENSATED SHOCK is defined as clinical picture of shock AND Systolic BP less than 100 mmHg
- A falling BP is a LATE sign of shock
- Contact receiving hospital early, with “Trauma Alert” call, giving brief description of mechanism of injury and estimated time of arrival
- Contact Medical Control if guidance of care or orders are needed

Trauma: Spinal Injuries

--- EMR ----------

- Immobilize C-Spine
- ABC's and vital signs
- Secure to long backboard (or equivalent) providing lateral immobilization- first the body then the head
- Pad under head to achieve neutral alignment in adults
- Pad appropriately to achieve neutral alignment (consider using the Back Raft)
- Remove motorcycle, bicycle helmets when necessary for airway management or alignment.
- Football helmets may be removed at EMS's judgment – if done, shoulder pads must be removed too

EMR STOP

--- EMT ----------

- Cardiac Monitor or 12 lead EKG, if available

EMT STOP

---EMT IV TECH----------

- Vascular access

--- AEMT ----------

EMT_IV, AEMT STOP

--- PARAMEDIC ----------

PARAMEDIC STOP

--- KEY POINTS / CONSIDERATIONS----------

Non-Immobilization of Spine in Trauma Patients

- No midline point tenderness of cervical spine
- No mental impairment. Patient must be conscious and alert No alcohol use or odor of an alcoholic beverage
- No distracting injuries
- A neuro exam must be performed without positive findings
- Motor: Shoulder Abduction, adduction/elbow flexion/extension. Hand grip and wrist flexion/extension
- Sensory: Document any subjective complaints and do pinprick at biceps/forearm/hand and thigh/calf/foot
- Findings must be well documented, and a thorough report must be given to receiving facility stating the reasons why spinal immobilization was not performed in the field.

LINCOLN COUNTY MEDICATION LIST

Medication Formulary

Note: Pediatric doses are to never exceed adult doses.

MEDICATION	ADULT	PEDIATRIC	ROUTE	MAX DOSE
Acetaminophen	650 mg	10 mg/kg	PO	650 mg
Aspirin	324 mg (4 x 81 mg tablets)		PO	324 mg
Adenosine 1st dose 2nd dose / 3rd dose	6 mg 12 mg	0.1 mg/kg 0.2 mg/kg	IV IV	30 mg
Albuterol	2.5 mg nebulized	1.25 mg < 1 year 2.5 mg > 1 year		7.5 mg
Amiodarone- V-Fib/Pulseless V- Tach V-Tach with Pulse	300mg diluted in 20 mL of NS 150mg (*mix with 100ml of D5W given over 10 mins.)*	5 mg/kg 5 mg/kg (*mix with 100ml of D5W given over 10 mins.)*	IV, IO IV, IO	450 mg
Atropine Bradycardia Organophosphate poisoning RSI	0.5 mg , repeat .5 mg q 3 min 1 mg q 1min	0.02 mg/kg 0.02 mg/kg q 3-5 min <8 yo: 0.02mg/kg	IV, IO IV, IO IV, IO	3 mg 10 mg
Calcium Gluconate	1 gm IV over 10 min		IV	1 gm
Dextrose	50 mL	1 mL/kg of D25 (under 1 year old)	IV	100 mL
Diphenhydramine (Benadryl)	50 mg	1 mg/kg	IV, IM, PO	50 mg
EPI 1:10,000 (1mg/10 mL) -Arrest 1:1,000 (1mg/mL) Anaphylaxis 1:1,000 (1 mg/mL) Asthma Infusion	1 mg 0.3 mg not used 1 mL/min. (1 mcg/min) max 5 mcg/min)	0.01mg/kg 0.15 (EMT) 0.01 mg/kg (P) 0.01 mg/kg	IV IM IM	6 mg 2 doses .3 ml
Etomidate sedation induction	0.1 mg/kg 0.3 mg/kg	Same as adult	IV/IO IV/IO	20 mg
Fentanyl	1 mcg/kg 2 mcg/kg (intranasal)		IV, IO IN	200 mcg
Furosemide (Lasix)	20-40 mg	1 mg/kg	IV	40 mg

Glucagon		1 mg	0.05 mg/kg	IM, SQ	1 mg
Ipratropium		0.5 mg nebulized	0.5 mg		1 mg
Ketamine	Excited Delirium Induction Pain Management	4 mg/kg 2 mg/kg 0.1-0.2 mg/kg	Same as adult	IM IV, IO IV	Weight based
Lidocaine	V-Fib/V-Tach RSI	1-1.5 mg/kg 1.5 mg/kg	1 mg/kg	IV, IO, ET	200 mg
Magnesium Sulfate	Eclampsia Torsades w/o Pulse Asthma	2 gm diluted in 10 mls over 2 min or 2 gm IM buttock injection 2 gm in 10 MLS D5W bolus Mix 1 g in 50 mls NS ivpb over 30 min	25-50 mg/kg max 2 g	IV	4 g
Midazolam (Versed)	Sedation/Seizure/RSI Sedation/ Seizure/ Behavioral Seizures Behavior	2-4 mg IV/IO .3-.5mg/kg IN 5-10 mg IM 2-5mg IV/IM q 3-5 min	0.1-0.2 mg/kg 0.2 mg/kg	IV, IO IN IM IV/IM	10 mg
Naloxone (Narcan)		0.4-2 mg 2 mg	0.1 mg/kg	IV IN	2 mg
Nitroglycerine		0.4 mg		SL	1.2 mg
Norepinephrine (Levophed)		0.05 mcg/kg/min	0.05 mcg/kg/min	IV	Weight based
Ondansetron (Zofran)		4 mg	0.1 mg/kg >1 month	IV, PO	8 mg
Oxymetazoline (Afrin)		2-3 sprays per nostril		IN	3 sprays
Rocuronium		0.6-1.2 mg/kg	0.6 mg/kg	IV	Weight based
Sodium Bicarbonate		1 mEq/kg	1 mEq/kg	IV	2 doses
Succinylcholine		1-1.5 mg/kg	1-2 mg/kg	IV	Weight based

mg = milligram
mcg = microgram
mEq= milliequivalent

Medication Infusions

Norepinephrine Dosage Sheet

For the chart, add **4mg** norepinephrine to **250mL** NS or D5W. Use **60 gtts/mL** IV Set

Desired Dose (mcg/min)	4 mcg/min	8 mcg/min	12 mcg/min	16 mcg/min	20 mcg/min	24 mcg/min	28 mcg/min	30 mcg/min
Drip Rate (drops/min)	15 gtts/min	30 gtts/min	45 gtts/min	60 gtts/min	75 gtts/min	90 gtts/min	105 gtts/min	113 gtts/min

Norepinephrine Infusion Preparation

1) Draw 4 mL off and discard from a 250 mL bag of NS or D5W

2) Add 4 mg(1 mg/mL) norepinephrine(Levophed) resulting in 250 mL of a 16 mcg/mL solution of norepinephrine.

3) Connect and prime a 60 gtts/mL IV set for medication administration.

4) Using high contrast sticker, label IV bag with medication name, amount added, date/time added, resulting concentration and provider initials

Weight Chart:

LB	352	308	242	220	198	176	154	121	99	77	55	33	15	7.5
KG	160	140	110	100	90	80	70	55	45	35	25	15	7	3.5

Acetaminophen (Tylenol®)

CLASSIFICATION

* Analgesic, Antipyretic

INDICATIONS

* Pain, Fever

CONTRADICTIONS

* Hypersensitivity to the drug

* Hepatic failure or impairment

USE WITH CAUTION

* Many other over the counter medications contain acetaminophen, be careful to not accidentally double dose the patient.

Administration

* Adult: 650mg (max dose)
* Pediatric: 10 mg/kg (>6 months)

ADENOSINE (ADENOCARD)

CLASSIFICATION

* Antiarrhythmic

ACTION

* Acts on AV node to slow conduction and inhibit reentry pathways

INDICATIONS

* Conversion of Paroxysmal SVT to sinus rhythms

CONTRADICTIONS

* Second and third-degree heart blocks, sick sinus syndrome, unless patient has a pacemaker

*Allergic to Adenosine

USE WITH CAUTION

* May produce TRANSIENT first, second and third-degree blocks

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

* Apprehension
* Back/neck pain
* Blurred vision
* Burning sensation
* Dizziness
* Lightheadedness
* Chest pain
* Facial flushing
* Hypotension
* Sweating
* Palpations
* Numbness/Tingling in arms
* Shortness of breath
* Dyspnea
* Hyperventilation
* Nausea

ALBUTEROL AEROSOL

CLASSIFICATION

* Bronchodilator

ACTION

* Relaxes bronchial and uterine smooth muscle by acting on beta 2 adrenergic receptors

INDICATIONS

* Bronchospasm in patients with reversible obstructive airway disease

CONTRADICTIONS

* None listed

USE WITH CAUTION

* Patients with cardiovascular disease
* Elderly patients generally require a lower dose

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

* Tremor
* Nervousness
* Dizziness
* Insomnia
* Headache
* Tachycardia
* Palpations
* Hypertension
* Drying and irritation of nose and throat
* Heartburn
* Nausea and vomiting
*Muscle cramps

AMIODARONE

CLASSIFICATION

* Antiarrhythmic

ACTION

* Depresses automatically of the SA node
* Increases atrial and ventricular refractory period and prolongs QT interval

INDICATIONS

* Ventricular fibrillation
* Sustained ventricular tachycardia with pulse

CONTRADICTIONS

* Known hypersensitivity
* Severe heart blocks

USE WITH CAUTION

* Liver dysfunction
* Thyroid dysfunction

ASPIRIN

CLASSIFICATION

* Analgesic

ACTION

* In low doses, aspirin appears to impede clotting by blocking prostaglandin synthesis, which prevents formation of the platelet-aggregating substance thromboxane A2

INDICATIONS

* Reduction of the risk of heart attack in patients with previous MI or unstable angina
* Patients with suspected acute myocardial infarction

CONTRADICTIONS

* Patients with hypersensitivity to aspirin

USE WITH CAUTION

* GI distress
* Nausea
* Occult bleeding
* Dyspepsia
* GI bleeding
* Angioedema
* Hypersensitivity reactions (anaphylaxis, asthma)
* Reye's syndrome

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

* Allergic reaction
* Epigastric pain

ATROPINE SULFATE

CLASSIFICATION

* Parasympathetic

ACTION

* Cardiac:
    * Increases firing rate of SA node which results in an increased pulse rate
    * Increases conductivity velocity through the AV node
* Non-Cardiac:
    * Decrease of all body secretions
    * Dilation of pupils and paralysis of the ciliary muscle
    * Decrease in bladder tone resulting in urinary retention
    * Central nervous system stimulation

INDICATIONS

* Slow cardiac rhythms resulting in hypotension, decreased mentation or ventricular irritability (PVCs)
* Sinus bradycardia
* Second or third-degree heart block
* Organophosphate anticholinesterase poisoning

CONTRADICTIONS

* Atrial fibrillation

USE WITH CAUTION

* Urinary retention (frequent problem in middle-aged or elderly men)
* Do not mix with Sodium Bicarbonate or Isuprel

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

* Cardiac:
    * Tachycardia, Palpations, Ventricular fibrillation
* Non-cardiac:
    * Dryness of mouth (common)
    * Pain in eyes or blurred vision (precipitates glaucoma)
    * Restlessness, Irritability
    * Change in mental status
    * Urinary retention

DEXTROSE 25% (D25W) AND 50% (D50W)

CLASSIFICATION

* Simple Carbohydrate

ACTION

* Provides calories required for metabolic needs
* Spares body proteins

INDICATIONS

* Suspected hypoglycemia

CONTRADICTIONS

* None

USE WITH CAUTION

* With suspected intracranial bleed, use only with confirmed severe hypoglycemia

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

* Extravasation causes tissue sloughing

DIPHENHYDRAMINE (BENADRYL)

CLASSIFICATION

* Sedative, antihistamine

ACTION

* Potent antihistaminic agent which possesses anticholinergic (antispasmodic), antiemetic and sedative effects

INDICATIONS

* Antihistaminic
* Anaphylaxis as an adjunct to epinephrine
* Uncomplicated allergic conditions of the immediate type

CONTRADICTIONS

* Hypersensitivity
* Asthmatic attack

USE WITH CAUTION

* Has Atropine-like action (anticholinergic)

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

* Drowsiness
* Nervousness
* Blurring of vision
* Nose and throat tingling
* Weakness in hands
* Hypotension
* Confusion
* Nausea and vomiting
* Dry mouth
* Heaviness
* Vertigo

EPINEPHRINE HYDROCHLORIDE

CLASSIFICATION

* Beta Adrenergic Stimulator

ACTION

* Alpha and Beta-adrenergic effects:
    *Increases force of cardiac contraction
    *Increases pulse rate and systolic blood pressure
    * Increases conduction velocity through the AV node
    * Increases irritability of ventricles
    *Dilates bronchi

INDICATIONS

* As a cardiac stimulant during a cardiac arrest
* Anaphylactic shock
* Severe allergic reactions
* Status Asthmaticus (subcutaneously)

CONTRADICTIONS

*Chest pain accompanied by ectopic beats or tachycardia

USE WITH CAUTION

* Bronchial asthma and significant emphysema, when patients may have heart disease

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

* Hypertension
* Supraventricular tachycardia
* Ventricular arrhythmias
* Ventricular tachycardia
* Ventricular fibrillation
* Premature Ventricular Contractions

ETOMIDATE

CLASSIFICATION

* A short-acting sedative-hypnotic agent.

ACTION

* Reduces subcortical inhibition at the onset of hypnosis while inducing neocortical sleep.

* Minimal cardiovascular and respiratory depressant

* No analgesic effect

INDICATIONS

* To induce sedation prior to endotracheal intubation particularly to patients at risk for hypotension

CONTRADICTIONS

* Sensitivity to etomidate.

USE WITH CAUTION

* May depress respirations.

* Nausea, vomiting, and myoclonus may occur.

* Etomidate may cause adrenal suppression when used on patients with septic shock; other sedative agents should be considered.

FENTANYL CITRATE

CLASSIFICATION

* Narcotic Analgesic

ACTION

* Opiate receptor agonism

INDICATIONS

* Analgesia

CONTRADICTIONS

* No absolute contradictions

USE WITH CAUTION

* Receiving facility should be consulted before using Fentanyl on any patient with multiple or isolated trauma involving head, spine or torso

* Use caution administering to pediatric patients with hypotension, bradypnea or coincident drug use (including alcohol)

* Use with caution in patients with increasing ICP

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

* Respiratory depression

* Bradycardia

* Sedation

* Nausea

* Bronchoconstriction

FUROSEMIDE (LASIX)

CLASSIFICATION

* Diuretic

ACTION

* Promotes fluid loss
* Promotes electrolyte loss
    * Sodium
    * Potassium (most significant)
    * Chloride
    * Magnesium (long term)
* Vasodilator

INDICATIONS

* Congestive heart failure
* Pulmonary edema
* Cerebral edema

CONTRADICTIONS

* Known hypersensitivity to Furosemide
* Dehydration
* Electrolyte depletion (potentially with patients already on diuretics
* Hypotension

USE WITH CAUTION

* Concomitant drug therapy
    * Steroids
    * Digitalis preparations
    * Other diuretics
    * Hypotensive agents
* Cirrhosis of the liver
* Renal disease

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

* Hypotension
* Transient deafness or ringing in the ears, which results from rapid infusion, primarily in patients with renal insufficiency
* Failure to urinate within 30 minutes, after bladder distention due to obstruction must be considered
* Symptoms of electrolyte depletion; i.e., leg cramps, dizziness, lethargy, mental confusion

GLUCAGON

CLASSIFICATION

* Catalyst to release liver glycogen stores

ACTION

* Increases blood glucose concentration by converting liver glycogen to glucose

INDICATIONS

* Suspected hypoglycemia, especially if IV insertion is difficult or impossible

* Beta blocker overdose

CONTRADICTIONS

* Situations having decreased liver glycogen stores:

    * Liver disease

    * Starvation

USE WITH CAUTION

* Patient will require IV D50W or oral carbohydrates (food, orange juice with sugar, etc.) once recovered OR if no response to glucagon.

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

*Nausea and vomiting

* Blood glucose levels fall to normal or to hypoglycemia level in 1 – 1 ½ hours if patient does not receive IV D50W or food by mouth after glucagon given.

IPRATROPIUM

CLASSIFICATION

* An inhaled anticholinergic (parasympatholytic) agent

ACTION

* Vagally -mediated reflexes by antagonizing the action of acetylcholine.

* Results in bronchodilatation.

* Median duration is 5 to 7 hours.

INDICATIONS

* Bronchial asthma

* Bronchospasm in emphysema

* Chronic bronchitis

* Wheezing associated with toxic smoke inhalation

* Pediatric respiratory distress with wheezing

CONTRADICTIONS

* Hypersensitivity to ipratropium bromide

* Hypersensitivity to atropine or its derivatives

USE WITH CAUTION

* Should be used with caution in patients with narrow angle glaucoma and prostatic hypertrophy or bladder neck obstruction. Only use with pregnant patients if necessary. Providers should ensure that the patient's eyes are protected from contact with this solution.

KETAMINE

CLASSIFICATION

* Dissociative Sedation Agent & Anesthetic

INDICATIONS

* Excited Delirium or severe agitation interfering with necessary patient assessment and/or treatment.

CONTRADICTIONS

- Hypersensitivity to Ketamine/Ketalar .
- Patients in whom a significant elevation of blood pressure would constitute a serious hazard.
- Acute ocular/globe injuries or glaucoma

USE WITH CAUTION

- Patients may evelop hypertension, tachycardia, hypersalivation, laryngospasm and may experience emergence phenomenon presenting as anxiety, agitation, or apparent hallucinations.
- Full vital signs monitoring should be done including EtCo2, cardiac monitor, and SpO2 required Q5 min following administration of Ketamine.

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

*Nausea and vomiting

* Experience emergence phenomenon presenting as anxiety, agitation or apparent hallucinations

* Be prepared for OSI to manage laryngospasm should the patient's airway become compromised.

LIDOCAINE HYDROCHLORIDE

CLASSIFICATION

* Antiarrhythmic

ACTION

* Suppresses Ventricular arrhythmias
* Local anesthetic

INDICATIONS

* Ventricular Arrhythmias
* Suspected ICP prior to RSI

CONTRADICTIONS

* Known hypersensitivity
* Severe heart blocks

USE WITH CAUTION

* Liver disease
* Congestive heart failure
* Severe respiratory depression
* Hypovolemia
* Shock
* Any form of heart block

MAGNESIUM SULFATE

CLASSIFICATION

* Electrolyte

ACTION

* Central nervous system depressant
* Suppresses the spread of seizure activity in the cerebral cortex

INDICATIONS

* Cardiac arrest (Torsades, Hypomagnesemia)
* Torsades with a pulse
* Seizures
* Magnesium deficiency
* Asthma/COPD

CONTRADICTIONS

* Renal disease
* Heart block
* Hypermagnesemia

USE WITH CAUTION

* Can cause hypotension
* Respiratory depression

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

* Hypotension
* Asystole
* Cardiac arrest
* Respiratory depression
* CNS depression

MIDAZOLAM (VERSED)

CLASSIFICATION

* Benzodiazepine

ACTION

* Sedation, anti-anxiety, amnesia
* Peak action 1-5 minutes after IV injection
* Duration of action: 30-90 minutes

INDICATIONS

* For use as an adjunct in endotracheal intubation with succinylcholine in patients that are aware
* Cardioversion

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

* Over-sedation
* Paradoxical excitement
* Nausea
* Apnea

NALOXONE HYDROCHLORIDE (NARCAN)

CLASSIFICATION

* Narcotic Antagonist

ACTION

* Narcotic antagonist

* May precipitate withdrawal symptoms in patients physically dependent on narcotics

INDICATIONS

* Respiratory depression secondary to narcotics and related drugs:

    * Heroin
    * Meperidine (Demerol)
    * Diphenoxylate (ingredient in Lomotil)
    * Levorphanol (Levo-Dromaron)
    * Pentazocine (Talwin)
    * *Codeine
    * Propoxyphene
    * Hydromorphone (Dilaudid)
    * Morphine Sulfate

* Suspected acute opiate overdose

CONTRADICTIONS

* Known hypersensitivity

USE WITH CAUTION

* In patients known to be physically dependent on narcotics; be prepared to restrain violent patients if necessary after Narcan has been administered.

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

* Withdrawal symptoms

    * Sweating
    * Gooseflesh
    * Tremor
    * Convulsions
    * Dilation of pupils
    * Tearing of eyes
    *Agitation or Belligerence
    * Nausea and Vomiting

NITROGLYCERIN

CLASSIFICATION

* Vasodilator

ACTION

* Dilates veins and arteries in peripheral circulation resulting in:
    * Reduces resistance to blood flow
    * Decreased blood pressure
    * Decreased workload on heart
* Dilates coronary arteries
* Dilates blood vessels in smooth muscle; gastrointestinal tract, gallbladder, bile ducts, uterus
* Improves cardiac output in patients with congestive heart failure

INDICATIONS

* Angina Pectoris
* Severe hypertension
* Refractory congestive heart failure

CONTRADICTIONS

* Known hypersensitivity
* Hypotension: BP below 100 systolic
* Caution with Viagra and similar drugs

USE WITH CAUTION

* Hypotension

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

* Hypotension
* Throbbing headache
* Skin flushing

NOREPINEPHRINE

CLASSIFICATION

* Alpha/Beta Adrenergic Stimulator

ACTION

* Increased blood pressure
* Increases myocardial contractility (inotropic effect-cardiac output increases)
* Slight increase in pulse rate (chronotropic effect-beta adrenergic stimulation)
* Increases potential for tachyarrhythmias or ventricular irritability
* Effects: Both alpha and beta effects are rate related

INDICATIONS

* Cardiogenic shock secondary to myocardial infarction or post-resuscitation to support the cardiovascular system
* Congestive heart failure
* Septicemia
* Spinal cord trauma
* Anaphylaxis

CONTRADICTIONS

* Uncorrected tachyarrhythmias
* Hypovolemic shock

USE WITH CAUTION

* Avoid extravasation of epinephrine into surrounding tissue. If intravenous infusion infiltrates, stop the infusion and notify the receiving physician immediately
* DO NOT mix Sodium Bicarbonate or similar alkaline solutions or inactivation of norepinephrine will result

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

* Hypertension
* Supraventricular tachycardia
* Ventricular arrhythmias
    * Premature ventricular contractions
    * Ventricular tachycardia
    * Ventricular fibrillation

ONDANSETRON (ZOFRAN)

CLASSIFICATION

* Antiemetic

ACTION

* Antiemetic
* Onset of action 5-10 minutes after IV injection
* Duration of action 4-6 hours

INDICATIONS

* For control of nausea and vomiting

USE WITH CAUTION

* Side effect are minimal
    * Headache
    * Diarrhea

OXYGEN

CLASSIFICATION

* Gas

ACTION

* Required for normal physiological processes of all cells

INDICATIONS

* Any suspected hypoxic state
* Shock
* Cardiac or pulmonary complaints

CONTRADICTIONS

* COPD- consider giving a lower % of oxygen

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

* Respiratory arrest in patients with hypoxic drive

ROCURONIUM

CLASSIFICATION

* Paralytic Agent

ACTION

* Non-depolarizing neuromuscular blocking agent
* Peak action 2-4 minutes after IV injection
* Duration of action 20-40 minutes (see adverse reactions)

INDICATIONS

* For use as an adjunct in endotracheal intubation when succinylcholine is contraindicated

CONTRADICTIONS

* Known hypersensitivity
* Do not use with awake, alert patients

USE WITH CAUTION

* Paralysis median time is 30 minutes and may be as long as 90 minutes
* Protect airway from aspiration; administration may induce vomiting

SODIUM BICARBONATE

CLASSIFICATION

* Alkalizing Agent

ACTION

* Alkalizing agent
* Increases potassium influx into cells

INDICATIONS

* Metabolic acidosis resulting from
    * Cardiac arrest
    * Shock
* Tricyclic overdose with wide QRS

CONTRADICTIONS

* Metabolic alkalosis

USE WITH CAUTION

* DO NOT MIX WITH
    * Calcium Chloride
    * Epinephrine (Adrenalin)
    * Isoproterenol (Isuprel)
    * Dopamine (Intropin)

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

* Signs of congestive heart failure
    * Shortness of breath
    * Rales

SUCCINYLCHOLINE

CLASSIFICATION

* Paralytic agent

ACTION

* Depolarizing neuromuscular blocking agent
* Peak action 1-2 minutes after IV injection

INDICATIONS

* For use as an adjunct in endotracheal intubation

CONTRADICTIONS

* Do not use with alert, awake patients
* Muscular dystrophy
* Penetrating eye injuries

USE WITH CAUTION

* Protect airway from aspiration; administration may induce vomiting
* Patients with extensive muscle trauma

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

* Arrhythmias
* Bradycardia
* Hypotension
* Prolonged blockade
* Hypertension
* Hyperthermia (rare)

MEDICAL SPANISH

INITIAL QUESTIONING

Is there someone with you who speaks English?
¿Hay alguien con usted que hable ingles?
Ah-ee ahl-gee-ehn hohn oss-tehd keh ah-bleh enn-glehs?

I speak a little Spanish. Please answer yes or no to the following questions. Hablo un poco de español. Por favor conteste si o no a las siguientes preguntas.
Ah-bloh oon pohr-fah-borg kokn-tehs-the see oh noh ah lahs see-gee-ehn-tehs preh-goon tahs.

Speak slowly, please. Hable despacia, por favor.
Ah-bleh dehs-pah-see-oh, pohr fah-bohr.

What is your name?
¿Cómo se llama?
Koh-moh she yah-mah?

When did the problem start?
¿Cuándo empezó el problema?
Kwahn-doh ehm-peh-soh ehl prog-bleh-mah?

How old are you?
¿Cuántos años tiene?
Kwahn-tohs ah-nyohs tee-eh-neh?

What medicine do you take?
¿Qué medicina torna?
Keh meh-dee-see-nah toh-mah?

NUMBERS

1. uno
2. dos
3. tres
4. cuatro
5. cinco
6. seis
7. siete
8. ocho
9. neueve
10. diez
11. once
12. doce
13. trece
14. catorce
15. quince
16. dieciséis
17. diecisiete
18. dieciocho
19. diecinueve
20. viente
21. vientiuno
22. vientidós
23. veintritrés
24. veinticuatro
25. veinticinco
26. veintiséis
27. veintisiete
28. veintiocho
29. veintineuve
30. treinta

DAYS OF THE WEEK

Lunes: Monday
Martes: Tuesday
Miércoles: Wednesday
Jueves: Thursday
Viernes: Friday
Sábado: Saturday
Domingo: Sunday

COMMON MEDICAL QUESTION/TERMS

How do you feel?
¿Cómo se siente?
Koh-moh she see-ehn-the?

What is the problem?
¿Cuál es el problema?
Kwahl ehs ehl proh-bleh-mah?

Have you had this problem before?
¿Ha tenido este problema antes?
Ah the-nee-doh ehs-the proh-bleh-mah ahn-tehs?

Do you have nausea or vomiting?
¿Tiene nausea o vómito?
Tee-eh-neh nah-oo-she-ah oh boh-meh-toh?

Don't move
No se meuva
Noh she mweh-bah

We are going to give you an IV Vamos a ponerie suero intravenoso.
Bah-mohs ah poh-nehr-leg soo-eh-roh enn-trah-beh-noh-soh.

Do you have a fever?
¿Tiene fiebre?
Tee-eh-neh fee-eh-breh?

Calm down
Cálmese
Kahl-meh-sah

Where does it hurt?
¿Donde le duele?
Dohn-deh leh dweh-leh?

Show me
Enséñeme
Ehn-she-nyeh-meh.

When?
¿Cuándo?
Kwahn-doh?

How?
¿Cómo?
Koh-moh?

For how long?
¿Por cuánto tiempo?
Pohr kwahn-toh tee-ehm-poh?

Why?
¿Por qué?
Pohr keh?

Relax, please
Por favor, relájese
Pohr fah-bohr, reh-lah-heh-she.

High Blood Pressure? Alta presion de la sangre?
Ahl-tah preh-see-ohn deh lah sahn-greh?

Diabetes?
Diabetes?
Dee-ah-beh-tehs?

Asthma?
Asma?
Ahs-mah?

Epilepsy? Epilepsia?
Eh-pee-lep-see-ah?

Heart disease? Ehfermedad del corazón?
Ehn-fehr-meh-dad dehl koh-rah-sohn?

Stomach ulcers? Ulceras del estomago?
Ool-she-rahs dehl ehs-toh-mah-goh?

Do you take medicine?
¿Tomas usted medicina?
Toh-mah oos-tehd lah meh-dee-see-nah?

PAIN

When did the pain start?
¿Cuándo empezó el dolor?
Kwahn-doh ehm-peh-soh ehl doh-lohr?

Where did the pain start?
¿Donde empezó el dolor?
Dohn-deh ehm-peh-soh ehl doh-lohr?

Does the pain travel to another place?
¿Le viaja el dolor a otro lugar?
Leh vee-ah-hah ehl doh-lohr ah oh-troh loo-gahr?

How long does the pain last?
¿Cuánto tiempo le dura el dolor?
Kwahn-toh tee-ehm-poh leg doo-rah ehl doh-lohr?

Is it severe?
¿Es severo?
Ehs she-beh-roh?

Does it ache?
¿Es adolorido?
Ehs ah-doh-loh-ree-doh?

Is it like pressure?
¿Es opresivo?
Ehs oh-preh-see-boh?

Is the pain the same since it started?
¿Es el dolor igual desde que empezó?
Ehs ehl doh-lor ee-gwahl dehs-deh keh ehm-peh- soh?

CHEST PAIN

Pain in the chest?
¿Dolor del Pecho?
Doh=lohr dehl peh-choh?

Point to where the pain is, please. Apunte dónde tiene el dolor, por favor.
Ah-poon-the dohn-deh tee-eh-neh ehl doh-lohr.

Does the pain travel to your left shoulder (arm)?
¿Le viaja el dolor al hombre (brazo) izquierdo? *Leh bee-ah-hah ehl doh-lohr ahl ohm-broh (brah- soh) ees-kee-her-doh?*

Is it piercing?
¿Es punzante?
Ehs poon-sahn-the?

OB / GYN

Are you having contractions?
¿Tiene contracciones?
Tee-eh-neh kohn-track-see-ohn-ehs?

(Don't) push.
(No) Empuje.
(Noh) Ehm-poo-heh

How many minutes do the contractions last?
¿Cuántos minutes le duran las contracciones? *Kwahn-tohs mee-noo-tohs leh doo-rahn lahs kohn- trahk-see-ohn-ehs?*

Mnemonics/Assessment Tools

Patient Assessment:	Newborn Assessment:	Medical:
A: Airway	**A:** Appearance	**M:** Morphine
B: Breathing	**P:** Pulse Rate	**O:** Oxygen
C: Circulation	**G:** Grimace (facial actions)	**N:** Nitrates
D: Disability	**A:** Activity	**A:** Aspirin
E: Expose	**R:** Respirations	

History:	
S: Signs and symptoms	**P:** Progression of symptoms
A: Allergies	**A:** Associated chest pain
M: Medications	**S:** Sputum productions, speech, word sentences
P: Pertinent past medical history	**T:** Temperature, tiredness
L: Last oral intake	**M:** Medications the patient is currently taking
E: Events leading to injury or illness	**E:** Exercise/Exertion normally tolerated
	D: Diagnosis (previous)

Trauma Assessment:	Trauma:	
Scene safety	**V:** Vitals	**T:** Tracks, Tags, Tattoos
Spinal Stabilization	**O:** Oxygen	**I:** Instability
LOC	**M:** Monitor	**C:** Crepitus
Airway	**I:** IV/Information	**S:** Scars
Breathing	**T:** Transport decision	
Oxygen	**H:** History	
Circulation	**A:** Allergies	
Arterial Bleeds	**M:** Medications	
Bare the Body		

Trauma or Pain Questions:	Trauma:
O: Onset	**D:** Deformities
P: Provocation, progression	**C:** Contusions
Q: Quality, pain type?	**A:** Abrasions
R: Radiation	**P:** Punctures
S: Severity	
T: Time, duration	**B:** Burns
	T: Tenderness
	L: Lacerations
	S: Swelling

Causes of Pulseless electrical Activity (PEA) – "5" H's and T's:

H: **Hypovolemia**
H: **Hypoxia**
H: **Hydrogen ion – acidosis**
H: **Hypo-/Hyperkalemia**
H: **Hypoglycemia**
H: **Hypothermia**

T: **Toxins**
T: **Tamponade, cardiac**
T: **Tension Pneumothorax**
T: **Thrombosis, (Coronary or Pulmonary)**
T: **Thrombosis, (hypovolemia increased ICP)**

Altered Mental Status (ALOC):

A: **Alcohol, Drugs**
E: **Endocrine (glands)**
I: **Insulin, Infection**
O: **Overdose**
U: **Uremia (2^0 kidney insufficiency)**

T: **Trauma**
I: **Infection**
P: **Psychiatric**
S: **Shock**

Triage:

A: **Alert**
P: **Responsive to Verbal**
V: **Responsive to Pain**
U: **Unresponsive**

Charting:

S: **Subjective**
O: **Objective**
A: **Assessment**
P: **Plan**

PHONE NUMBERS

HOSPITALS

Deaconess	509-458-7100
Emergency Charge Nurse	509-473-3600
East Adams	509-650-5400
Grand Coulee	509-633-1753
Holy Family	509-482-2460
Emergency Charge Nurse	509-482-3951
Lincoln Hospital (Davenport) . .	509-725-7101
Nursing Station .	509-725-2970
Spokane Valley	509-473-5177
Emergency Charge Nurse	509-828-9673
Spokane Veterans Affairs . .	509-434-7000
Sacred Heart Adult . . .	509-474-3342
EMS Line	409-474-4840
ED Charge Nurse	509-474-3600
Sacred Heart Children's . ,	509-474-5690

Harborview Medical Center . .		206-731-3000
	Reports .	206-731-3074
University of Washington Medical Center		206-598-3300
	Reports	206-598-2000
	Emergency	206-598-400
Virginia Mason		206-624-1144
	Emergency	206-583-6433

COMMUNICATION CENTERS

Lincoln County Sheriff's Office	509-725-3501
Life Flight	800-232-0911
Airlift Northwest	800-426-2430

INFORMATION

Chem Trek	800-424-9300
Coast Guard Group Seattle	206-217-6001
Diver's Alert Network (DAN)	877-595-0625
Department of Ecology	425-649-7000
National Response & Terrorist Hotline	800-424-8802
Poison Control	800-222-1222
Washington State Ferries Office-Operations	206-515-3456 Watch Officer

Appendix A

Updated sections on 12/2020:

Appendix B

OXYMETAZOLINE

CLASSIFICATION

* Adrenergic Agonist Agent; Decongestant;

ACTION

* Topical vasoconstriction in nasal cavity

INDICATIONS

* Epistaxis
* Nasal congestion

CONTRADICTIONS

* Not for pediatric use.

ADVERSE EFFECTS TO OBSERVE AND REPORT TO THE RECEIVING FACILITY

*Burning, stinging, sneezing, hypertension.