CLARK COUNTY EMS

PATIENT CARE PROTOCOLS

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Table of Contents

Introduction

The following PREHOSPITAL PATIENT CARE PROTOCOLS are intended as treatment protocols for both EMTs and Paramedics working under the direction of the Medical Program Director for Clark County. They represent a consolidation of recommendations for patient care from many local and national sources.

PURPOSE:

A. Standardize prehospital care for Clark County.
B. Provide the EMS clinician with a framework for prehospital care and an anticipation of supportive orders from Online Medical Control.
C. Provide hospital staff with an understanding of what aspects of patient care have been stressed to the EMTs and Paramedics, and what their treatment capabilities may be.
D. Provide the basic framework for the Office of the Medical Program Director to review and support patient safety.
E. Differentiate between basic and advanced life support procedures. ALS procedures will be identified by a  preceding the procedure. A  is intended to identify an ALS therapy to be used only with Medical Control Physician concurrence.
F. Identify pediatric specific treatment, procedures and medications. EMTs and Paramedics should consult pediatric guides to ensure appropriate dosing of medications.
F. Expedite patient delivery to institutions best equipped to handle their specific problems.

PROTOCOLS ARE NOT INTENDED TO:

A. Be absolute treatment doctrines. They are guidelines.
B. Be a teaching manual for EMTs or Paramedics; it is assumed that each EMS clinician is trained to their level of certification and understands the Scope of Practice appropriate to their certification, and that they will continue to meet the requirements of the State of Washington for continuing education for recertification. The Office of the Medical Program Director will review and support patient safety.
C. Interfere with the wishes of the patient or family, or the wishes of the patient's physicians.
D. Dictate details of care to advising physicians.
E. Warrant the EMS clinician as an independent practitioner.

It is expected that all EMTs and Paramedics working within Clark County will be familiar with the portion of the PREHOSPITAL PATIENT CARE PROTOCOLS appropriate to their certification level and Scope of Practice. Written acknowledgement of the receipt of this document will be required.

Scope of Practice By Certification Level

https://doh.wa.gov/sites/default/files/2022-02/530173.pdf?uid=651b3ba450fc0

Clark County Authorized Medications List

FOR PEDIATRIC DOSING, DO NOT EXCEED ADULT DOSE
ALL DOSES ARE SINGLE DOSE UNLESS OTHERWISE INDICATED

MEDICATION/ DOSE	INDICATIONS	KEY CONTRAINDICATIONS Including Known Severe Adverse Reaction
ACETAMINOPHEN SUPPOSITORIES 15 mg/kg PR Peds	- Fever >38°C (100.4°F) - Mild to moderate pain	-Has taken APAP in last 4 hours
ACETAMINOPHEN 1000 mg ODT, PO or slow IV drip 15 mg/kg PO Peds	- Mild to moderate pain	- 1,000 mg in previous 6 hours OR 650 mg in previous 4 hours - Has taken more than 3 g in previous 24 hours
ACTIVATED CHARCOAL 50 g PO 1 mg/kg PO Peds	- Ingestion. Give only with Medical Control or Poison Center concurrence	-AMS or inability to maintain own airway. -Aspirated or potential for aspiration.
ADENOSINE (Adenocard) 6 mg followed by 12 mg prn IV. See caveat in Indications 0.1 mg/kg followed by 0.2 mg/kg IV prn Peds	- Narrow complex tachycardia (12 mg then 18 mg if pt. on theophylline). (3 mg then 6 mg if hx of heart transplant, or patient taking dipyridamole, or carbamazepine)	-High degree heart block -Sick sinus syndrome -WPW
ALBUTEROL (Proventil) 5 mg med neb prn 20 mg max <15kg 2.5-5 mg. >15kg 5-10 mg med neb Peds	-Bronchospasm/wheezing -Hyperkalemia	- None in the prehospital setting
AMIODARONE (Cordarone) 300 mg IV/IO repeat 150 mg IV/IO prn 5 mg/kg IV/IO repeat x 2 to max total dose 15 mg/kg IV/IO	VF/pulseless VTach	- Known or suspected long QT (Torsades)
150 mg IV over 10 min x 2 prn 5 mg/kg IV over 20 min x 2 prn Peds	Stable V Tach/WCT	
ASPIRIN 324 mg PO	- Chest Pain/Acute Coronary syndrome	- Anaphylaxis to aspirin or other NSAIDs

ATROPINE 1 mg IV/IO prn 3 mg max	Bradycardia	- Atrial fibrillation or atrial flutter - Neonatal resuscitation
2 mg IV. IM if no IV. Double previous dose until symptom resolution	Organophosphate poisoning	
0.02 mg/kg, min 0.1 mg, max 1 mg (Child) & 3 mg (adolescent) Peds		
CALCIUM GLUCONATE 10% 1 g IV/IO over 2-5 min. May repeat x2 PRN. Rapid bolus in cardiac arrest	Hyperkalemia Cardiac Arrest - Consider for wide complex PEA -Hypertensive disorders of pregnancy	-Hypercalcemia and hypercalciuria (hyperthyroidism, Vitamin D overdose, bone metastases). -Patients on digoxin
3 g IV/IO once over 15 min	-Calcium Channel Blocker / Beta Blocker OD	
20 mg/kg IV/IO over 2-5min once not to exceed adult dose	Hyperkalemia, Cardiac Arrest - Consider for wide complex PEA	
60 mg/kg IV/IO Peds (max 3 g)	-Calcium Channel Blocker / Beta Blocker OD	
CALCIUM GLUCONATE 2.5% Mix 1 mL of 10% Calcium Gluconate with 3 mL of Normal Saline. Give via nebulizer. See Poisoning and Overdose for additional routes for rare indications	-Suspected hydrogen fluoride exposure with respiratory distress	-None in the prehospital setting
CALCIUM CHLORIDE ALTERNATIVE 1 g IV/IO over 5 min	Cardiac arrest from suspected hyperkalemia when Calcium Gluconate unavailable. Consider for wide complex PEA.	-Hypercalcemia and hypercalciuria (hyperthyroidism, Vitamin D overdose, bone metastases). -Patients on digoxin
10 mg/kg over 5 minutes Peds		
DEXAMETHASONE (Decadron) 10 mg IV/IM/PO	- Asthma/COPD, Anaphylaxis - Croup First-line in croup, alternative for all other steroid indications	-Hypersensitivity to corticosteroids -Systemic fungal infection
0.6 mg/kg IV/IM/PO Peds		
DEXTROSE D10 **D50** 10 g IV/IO. Repeat 5g IV/IO prn Max 25 g	- Hypoglycemia	-Hyperglycemia -Diabetic Ketoacidosis
D10 2.5 mL/kg max 250 mL Peds		

DILTIAZEM (Cardizem) 0.25 mg/kg IV max 20 mg slow over 2 mins. After 15 mins may repeat 0.35 mg/kg (max 25 mg)	- Atrial fibrillation, atrial flutter with rapid ventricular response PSVT refractory to Adenosine	-History of CHF -Cardiogenic shock -Hypotension -Heart block -WPW
DIPHENHYDRAMINE (Benadryl) 1 mg/kg IV (IM if unable to start IV)/PO max 50 mg	- Allergy, Anaphylaxis, EPS	Relative: Altered mental status
1 mg/kg IV (IM if unable to start IV)/PO max 25 mg Peds		

DROPERIDOL (Inapsine) 2.5-5 mg IV or 5 mg IM q 15 min Max 10mg.	Agitated patient If RASS 3-4 May start with 10 mg IM for adults	- Known long QT syndrome
0.1 mg/kg IM Max 5 mg Peds		
1.25 mg IV/IM/IO 0.625 mg IV/IM/IO in if > 65 or other concerns	Nausea/Vomiting	
DUONEB (0.5 mg Ipratropium/2.5 mg Albuterol) ALTERNATIVE 3 mL	-Bronchospasm/Wheezing -Hyperkalemia	None in the prehospital setting
1.5mL Peds		
EPINEPHRINE 1 mg IV/IO (0.1 mg/mL) q 4 min	Cardiac Arrest	-Not indicated in traumatic arrest or hemorrhagic shock
0.01 mg/kg IV/IO (0.1mg/ml) q 4 min Peds		
2 –40 mcg/min IV drip standard concentration. Increase 2 mcg q 5 min prn	Hypotension/bradycardia	
0.1 mcg/kg/min IV/IO q 5 min prn titrate to a max of 1mcg/kg/min Peds		
2-40 mcg/min IV drip 0.3 - 0.5 mg (1 mg/ml) IM if no IV	Anaphylaxis/Status Asthmaticus	
Start at 0.1 mcg/kg/min IV/IO infusion and increase by 0.05 mcg/kg/min every 2 minute as needed for signs of anaphylaxis. Max dose 0.2 mcg/kg/min.		
0.5 ml/kg (1 mg/ml) med neb Peds ALTERNATIVE (max 5 ml)	Croup/stridor	

EPINEPHRINE – LOW DOSE (10 MCG/ML) 10-20 mcg q 2-5 to SBP >90	- Temporarily correct hypotension - Bridge to an infusion - Concern for imminent respiratory or cardiac arrest.	-Not indicated in traumatic arrest or hemorrhagic shock
1 mcg/kg (0.1 mL/kg) q 2-5 mins max 20 mcg Peds		
ETOMIDATE 0.15 mg/kg IV/IO, max single dose 30 mg	Sedation for cardioversion in unstable tachycardia	Relative: septic shock
0.3 mg/kg, max 60 mg	Sedation during RSI if Ketamine unavailable	

FENTANYL 1 mcg/kg IV/IO/IN/IM (max 100 mcg per dose) q 5-10 mins to 300 mcg max	- Chest pain - Musculoskeletal pain - Post-intubation analgesia	- Known allergy - Respiratory depression
1 mcg/kg max 25 mcg (may be given IN) Peds		
GLUCAGON 1 mg IM	- Hypoglycemia unable to administer dextrose	None
0.02 mg/kg IM max of 1 mg Peds		
HALOPERIDOL (Haldol) ALTERNATIVE ONLY 2.5-5 mg IV/IM q 15 min max 10 mg max	Sedation of RASS +2 agitated patient	Known long QT syndrome Not to be used with Droperidol
10 mg IM	Sedation of RASS +3/+4 agitated patient	
0.1 mg/kg IM Max 5 mg Peds		
IPRATROPIUM BROMIDE (Atrovent) 0.5 mg via Nebulizer	- Bronchospasm/wheezing (initial nebulized treatment only. Do not repeat unless single agent albuterol unavailable)	-None in the prehospital setting
KETAMINE 1 mg/kg IV/IO slow push over 2 mins, max single dose 200 mg.	Sedation during DSI	-Non-traumatic chest pain. - Pediatric patients <1 year old
0.3 mg/kg Max IV/IO 30 mg	Sedation for CPAP	
0.3 mg/kg IV/IO over 2-3 min. Max 30 mg	Pain control (adjunct with Fentanyl)	

0.3 mg/kg IV/IO for Peds >1 year old, not open for patients <1 year old	Pain control (adjunct with Fentanyl)	
KETOROLAC (Toradol) 30 mg IM	- Non-Cardiac pain management NOT FOR TRAUMA SYSTEM PATIENTS	- Age < 2 or > 64. -Renal/Liver disease or transplant -Allergies to aspirin or other NSAIDs -Pregnancy, or lactating -On anticoagulant -Bleeding disorder or hx of ulcer. -Suspected cardiac chest pain. -Any trauma system entry patient. -Altered mental status.
0.5 mg/kg IM/IV max of 30 mg IM and 15 mg IV Peds		
LABETALOL 20 mg over 2 mins. If BP elevated after 10 mins; 40 mg over 2 mins. If BP elevated after 10 mins; 80 mg over 2 mins. May repeat 80 mg every 10 mins if BP elevated to max 300 mg total dose.	- Pregnant patient and BP elevated ≥160 systolic or ≥110 diastolic persistent, >15 mins	- Asthmatic patient - High degree heart block - Uncontrolled heart failure with bradycardia

LEVALBUTEROL (Xopenex) ALTERNATIVE 2.5 mg	- Wheezing/bronchospasm - Hyperkalemia	None in the prehospital setting
1.25 mg Peds		
LIDOCAINE 1.5 mg/kg	VF, VT	-Heart rate is < 50 -Periods of sinus arrest -Second- or third-degree heart block
1 mg/kg Peds		
40 mg over 2 mins	Local pain control after IO insertion	
0.5 mg/kg over 2 mins		
MAGNESIUM SULFATE 2 g IV bolus mix w/ 50 ml NS	WCT, Torsades	-None in the prehospital setting
50 mg/kg IV Peds		
4 g IV/IO over 20 mins. May give 10 g IM (5 g each buttock if no access)	Eclampsia	
2 g IV over 15mins	TCA OD	
50 mg/kg Peds		
2 g in 50 mL over 20 min IV.	Resp Distress	
50 mg/kg IV Peds		
METHYLPREDNISOLONE (Solu-Medrol) 125 mg IV	- Asthma/COPD - Anaphylaxis - Addisonian Crisis	-None in the prehospital setting

2 mg/kg IV Peds		
MIDAZOLAM (Versed) 5 mg IV/IO or 10 mg IM q 5 min prn until seizure stops ALTERNATIVE 10 mg IM. Repeated q 5min until seizure stops	Seizures	-None in the prehospital setting
0.2 mg/kg IV/IO/IM/IN. Repeat every 5 min until seizure stops, Peds		
5 mg IV/IO ALTERNATIVE 0.05 mg/kg IV bolus x 1 then 0.1 mg/kg/hr via pump.	Post intubation sedation if Ketamine not available	
2.5–5.0 mg IV/IM may repeat prn max 10 mg	Moderate - Severe Agitation	
0.2 mg/kg IV/IO/IM/IN, max 10mg, Peds		
2.5 mg IV	NIPPV sedation	
2.5-5 mg IV/IM q 5 mins PRN	Sedation for procedure	
0.2 mg/kg IV/IO/IM/IN Max 10 mg Peds		
2.25 mg IV/IM q 5 min PRN	Reduce shivering during active cooling in heat emergencies	-None
0.2 mg/kg IV/IO Max single dose 2mg, may repeat once in 10 minutes, Peds ALTERNATIVE 0.2 mg/kg IM/IN Max single dose 10 mg PRN to control shivering, Peds		
2.5 – 5 mg IV/IM q 5 min prn	Hyperadrenergic syndrome or seizure due to poisoning	-None
0.2 mg/kg IV/IO/IM/IN, Peds		

NALOXONE (Narcan) 2 mg IM/IN or 0.5-2 mg IV q 5 min max 8 mg 0.1 mg/kg IV/IO/IM/IN q 3-5 min max single dose 2 mg per dose. Max total dose 8 mg Peds.	- Narcotic OD w/ respiratory depression - ALOC w/ respiratory depression	Newborns
NITROGLYCERIN 0.4 mg. May repeat x 2 q 3-5 min.	- Chest pain, CHF/PE	-BP < 110 mmHg systolic. -Patients taking phosphodiesterase inhibitor
NOREPINEPHRINE 4 mcg/min. standard concentration, increase q 5 min in 4 mcg/min increments to max of 12 mcg/min 0.1 mcg/kg/min increase by 0.1 mcg/kg/min q 5 mins PRN to max of 0.4 mcg/kg/min Peds	- Shock (not hypovolemic)	- Hypovolemic shock
OLANZAPINE (Zyprexa) 10 mg ODT	- Adult 18-65 years w/ psychotic symptoms or mild agitation	-Known long QT syndrome -Pregnancy is considered a relative contraindication
ONDANSETRON (Zofran) 8 mg PO/IV/IM 0.1 mg/kg IV/IM max 2 mg If < 15 kg. 4 mg If > 15 kg. Peds	- Nausea/Vomiting	-Known long QT syndrome -Children < 6 months old
OXYMETAZOLINE (Afrin) 2 sprays IN	- Epistaxis	-Uncontrolled HTN -Glaucoma
RACEMIC EPINEPHRINE 0.05 mL/kg max 0.5 mL in 5 mL NS via med neb Peds	- Croup/Epiglottitis	-None in the prehospital setting
ROCURONIUM 1.5 mg/kg IV max 300mg 0.5 mg/kg IV	Facilitate intubation Long term paralytic	-None
SODIUM BICARBONATE 1 mEq/kg slow IV push x 2 q 5min	- TCA/Benadryl OD - TBI if sx of posturing	None in the prehospital setting
SODIUM THIOSULFATE 50 mL of 25% solution IV/IO over 10 to 30 min	- Cyanide Poisoning	Do not administer to a patient who has been given hydoxocobalamin (Cyano-Kit)

1.6 mL/kg slow IV over 10 min Peds		

SUCCINYLCHOLINE ALTERNATIVE 1.5 mg/kg IV push max single dose 300 mg	- Facilitate intubation. First choice if neuro eval needed i.e. head injury, status sz., new stroke.	-Major burns and crush injuries between 48 hours and 6 months old -Neuromuscular disease -Suspected hyperkalemia (e.g. end-stage renal disease patients who have missed dialysis)
TRANEXAMIC ACID (TXA) 2 g in 50 mL NS IV over 10 – 20 min	Traumatic shock/injury	-Suspected CVA, MI, or PE -Time since trauma > 3 hours -Pediatric patients < 15 years of age or < 50kg if age unknown -Drowning, hanging -GCS 3 with unreactive pupil -Any CPR
1 g IV over 20 mins	OB hemorrhage	
0.5 g via MAD	Epistaxis	
VECURONIUM (Norcuron) ALTERNATIVE 0.1 mg/kg IV	- Long Term Paralytic	-Patient not intubated
VERAPAMIL ALTERNATIVE 5 mg IV slow over 2-3 mins. May repeat 5 mg q 15 min PRN to max of 20 mg	- Atrial fibrillation/flutter with rapid ventricular response	-Hypotension -WPW -CHF

Universal Patient Care Protocol

TREATMENT:

A. Assess scene safety; hazards; number of patients; mechanism of injury.
   1. Request additional resources as needed
   2. Consider declaration of Mass Casualty Incident if needed
B. Minimum PPE for all patient contacts will include gloves, and eye protection.
   1. Use above plus surgical mask for any immunocompromised patient, provider choice, patient request, declaration by Clark County Public Health due to respiratory illness season or required by facility.
   2. Use above plus N95 or higher level of mask during aerosol generating procedures (AGP), infected (respiratory illness, fever, infectious symptoms) patient or when desired by the provider.
      a. AGPs include CPR, intubation, nebulizer/inhaler, positive pressure ventilation or any procedure causing the patient to cough, sneeze or forcefully exhale.
   3. **If responding to a residence/facility with a known or potential outbreak assume all patient contacts are potentially infected, until assessed.**
      a. All patients will be asked to "come to us" if they are ambulatory by contacting the residence or facility through verbal contact from doorway, call into the residence/facility, or by CRESA who will direct staff to add the direction of – "If you are safe to do so, please make your way or assist the patient in getting to the front door of your residence or facility to meet the crews."
C. Begin initial patient assessment, determine responsiveness and initial chief complaint.
   1. ABC or CAB if cardiac arrest (see Cardiac Arrest Guidelines).
   2. Secure airway and start oxygen as needed.
   3. Control any major external bleeding per Hemorrhage Control protocol
   4. Evaluate patient responsiveness, motor and sensory function in all extremities
   5. Expose patient as appropriate to complaint and to scene conditions.
D. Monitor vital signs, SpO_2, $ETCO_2$ and obtain CBG readings as appropriate.
E. Monitor ECG if appropriate to patient complaint/condition
F. Establish vascular access (IV or IO) as appropriate for patient's condition.
G. Obtain pain severity scale if applicable.
H. Perform secondary survey appropriate to patient presentation and complaint.
   1. May not be possible if patient has critical primary survey problems.
I OPQRST/SAMPLE HISTORY from patient or caregiver, if possible.
J. Follow appropriate Protocol if chief complaint or assessment findings change.

KEY CONSIDERATIONS:

A. If patient is unable to provide medical history, check for medical alert bracelets and necklaces, or other means of documenting medical history which can provide critical medical information and treatment.
   1. If disability present, reported, or suspected, see Ability Checklist reference

Updated: April 2026

B. Pediatrics:
    1. Use a length/weight-based assessment tool to estimate patient weight and guide medication. **Do not exceed maximum adult dosing criteria.**
    2. Use pediatric assessment triangle to assist when first assessing a child.
C. Medications will need to be at the low end of the dosing scale in geriatrics (>65) and in patients with chronic renal disease or chronic liver disease
D. Critical Patient Care:
    1. For critical patient care scenes, every effort to perform an inter-agency review (hotwash) should be made as soon as possible after delivery of the patient to the ED.
E. Offered and Refused
    1. For those treatment options offered to the patient and the patient refuses those treatment options, i.e. medications, procedures, it is imperative that this information is documented in the EHR. Document in the treatment and response section the medication/procedure as “offered” and in the notes section indicate the patient “refused”
F. EMS – Definition of a patient:
    1. Any person who has requested EMS (1st party caller).
    2. A patient exists if a 2nd party caller witnessed acute signs or symptoms which imply illness or injury, even in the face of denial by the patient.
    3. Any person for whom a Power of Attorney has called 911.
    4. Any person for whom a health care professional calls 911.
    5. Any person involved in a situation that a trained provider suspects would lead to illness or injury.

Abdominal Pain/Acute Abdomen

TREATMENT:

A. Treat per Universal Patient Care Protocol.
B. Place patient in a position of comfort.
C. If systolic blood pressure is < 90 mmHg systolic, follow Shock protocol and initiate rapid transport.
   1. If patient has a suspected abdominal aortic aneurysm, titrate IV to maintain systolic blood pressure of 90 mmHg (MAP 65).
D. Do not allow the patient to eat or drink.
E. Treat pain per Pain Management protocol.
F. Treat nausea/vomiting per Vomiting/Significant Nausea protocol.

PEDIATRIC PATIENTS:

A. Consider non-accidental trauma.
B. Closely monitor vital signs; blood pressure may drop quickly.
C. If systolic BP is inappropriate for age, treat per shock protocol.
   Lowest normal pediatric systolic blood pressure by age:
   - < one month: > 60 mmHg.
   - One month to 1 year: > 70 mmHg.
   - > 1 year: 70 + 2 x age in years.

Abuse and Maltreatment

PEDIATRIC/ADULT ABUSE:

A. Be alert to findings suspicious of abuse:
   1. Explanations of mechanisms of injury conflicting with actual injury.
   2. Suspicious injuries - cigarette burns, multiple bruises of varied age, belt marks, etc.
   3. History of repeated injuries.
   4. Blame placed upon others.
   5. Procrastination by caretaker(s) in seeking aid.
   6. Sexual abuse may accompany physical abuse or may be present without signs of apparent physical abuse.
   7. Evidence of medical neglect for injuries or infections.
   8. Unexplained trauma to genitourinary systems or frequent infections to this system.
   9. Evidence of malnourishment and/or serious dental problems.

B. Treat any injuries per protocols.
   1. Transport without delay for critical cases.

C. Document and Report as carefully as possible caretaker's descriptions of the event(s):
   1. Note the environment carefully including temperature.
   2. Note the reaction of all individuals on scene (include all caretakers).
   3. Note clothing, stains, conditions, bring clothing in with patient.
   4. Encourage the caretaker(s) to allow transport to the hospital for medical evaluation and/or treatment. If refusing, consult Medical Control for further instruction.
   5. Should caretaker(s) not allow recommended transport, notify Law Enforcement.

D. Support and reassure:
   1. Be non-judgmental; be supportive to family concerns.

E. Notify receiving physician of abuse, neglect, or potential of same.
   1. EMS providers are mandated to report suspected abuse of children and vulnerable adults:
      a. Child Protective Services: 1-866-363-4276
      b. Adult Protective Services: 1-800-562-6078
   2. Mandatory reporter page:
      a. https://www.dshs.wa.gov/altsa/home-and-community-services/reporting-abuse-mandatory-reporter

Altered Mental Status/Coma – Hypo/Hyperglycemia, Opioid OD

TREATMENT:

A. Treat per Universal Patient Care protocol.
B. Treat underlying cause if known.
   - HYPERGLYCEMIA
      1. Monitoring:
         a. Check blood glucose level. Typical reading HI or well above normal.
      2. If glucose > 250 mg/dL with symptoms of dehydration, vomiting, abdominal pain, or altered level of consciousness:
      a. Fluid challenge NS: 1 L bolus IV; reassess and re-bolus 1L if indicated.
   - HYPOGLYCEMIA
      1. Determine blood glucose level. If < 70 mg/dL (or < 80 mg/dL in a known diabetic patient):
         a. If patient can protect their airway, give EMS **oral glucose** 15 g or other carbohydrates.
      b. If patient is unable to protect their airway infuse **Dextrose** 10 g IV/IO. May repeat **Dextrose** 5 g IV/IO every 3 minutes as needed to total 25 g Dextrose.
      2. Check BGL after 5 minutes and repeat as above if blood sugar remains low and patient remains symptomatic.
      3. If patient on short-acting insulin and clear reason for hypoglycemia (e.g., did not eat enough, took excess insulin), may **treat and release per protocol**. If not, consult OLMC.
      4. If no IV/IO can be established, **Glucagon** 1 mg (unit)
         a. Patients receiving glucagon should be transported, contact OLMC for patient refusal.
   - SUSPECTED OPIOID OVERDOSE with respiratory depression
      1. If BLS provider OR difficult IV access, give **Naloxone** 2 mg IM/IN every 5 minutes up to 8 mg.
      2. **Naloxone** 0.5 - 2 mg IV. May repeat every two minutes titrating to respiratory rate. If no improvement, repeat **Naloxone** 2 mg every 3-5 minutes up to a maximum of 8 mg total. Consider larger doses if Methadone overdose.
C. If patient experiences withdrawal symptoms, use Medications for Opioid Use Disorder. If opioid withdrawal and all other symptoms have been treated, may consider sedation per Agitated Patient Management protocol.

PEDIATRICS:

A. **Dextrose**. For infants birth to 1 week with BGL < 40 mg/dL and older than 1 week with BGL < 70 mg/dL give:
   1. If patient can protect their own airway, give EMS oral glucose or complex carbohydrates OR
   2. **D10**, 2.5 mL/kg IV/IO, not to exceed 250 mL total.
B. **Glucagon** 0.02 mg/kg IM to a maximum of 1 mg.

Updated: April 2026

- C. **Naloxone** 0.1 mg/kg IV/IO/IM/IN every 3-5 minutes to a maximum of 2 mg per dose. Max total dose 8 mg. Do not give to newborns.
- D. Pediatric fluid challenge: 20 mL/kg. May repeat x 1 as needed for hypotension.

Allergic Reaction and Anaphylaxis

ADULT

A. Treat per Universal Patient Care protocol.

- MILD REACTION (Generalized itching and hives ONLY)

1. **Benadryl** 1 mg/kg IV (IM if unable to start IV)/PO max 50 mg.

- SEVERE REACTION (Dyspnea, wheezing, angioedema, and/or shock)

1. **Epinephrine** 1 mg/mL**.** Give 0.3 mg IM. OR **Epi Autoinjector** per manufacturers guidelines. May repeat IM dose in 10 mins if IV drip not available and patient still with severe symptoms.
2. **Epinephrine infusion**. Start at 2 mcg/min IV drip and increase by 2 mcg every 2 minutes as needed for signs of anaphylaxis. Max dose 40 mcg/min.
3. Fluid challenge 20 mL/kg to maintain MAP > 65.
4. **Diphenhydramine** 1 mg/kg IV (IM if unable to start IV)/PO max 50 mg.
5. **Albuterol** 5 mg Nebulizer for wheezes. ALTERNATIVE **DuoNeb** 3 mL ALTERNATIVE **Levalbuterol** 2.5 mg
6. **Methylprednisolone** 125 mg IV. ALTERNATIVE **Dexamethasone** IV/IM/PO 10 mg.
7. If refractory shock:
   a. **Norepinephrine infusion.** Start at 4 mcg/min. Increase 4 mcg/min q 5 mins to max of 12 mcg/min to maintain MAP > 65.

PEDIATRIC

A. Treat per Universal Patient Care protocol.

B. ALS Care as indicated above.

- MILD REACTION (Generalized itching and hives ONLY)

1. **Diphenhydramine** 1 mg/kg IV (IM if unable to start IV)/PO max 25 mg.

- SEVERE REACTION - (Dyspnea, wheezing, angioedema, and/or shock

1. **Epinephrine 1 mg/mL.** Give 0.01 mg/kg IM max 0.3 mg OR **Epi Autoinjector** per manufacturers guidelines. May repeat IM dose in 10 mins if IV drip not available and patient still with severe symptoms.
2. **Epinephrine infusion**. Start at 0.1 mcg/kg/min IV/IO infusion and increase by 0.05 mcg/kg/min every 2 minute as needed for signs of anaphylaxis. Max dose 0.2 mcg/kg/min.
3. Fluid challenge 20 mL/kg IV/IO to maintain capillary refill < 2 seconds.
4. **Benadryl** 1 mg/kg IV (IM if unable to start IV)/PO max 50 mg.
5. **Albuterol** Patient weight <15kg 2.5-5 mg. >15kg 5-10 mg Nebulizer for wheezes. ALTERNATIVE **DuoNeb** 1.5 mL.

   ALTERNATIVE **Levalbuterol** 1.25 mg
6. **Methylprednisolone 2 mg/kg** IV (Max 125 mg). ALTERNATIVE **Dexamethasone** 0.6 mg/kg IV/IM/PO (Max 10 mg).
7. If refractory shock:
   a. **Norepinephrine** 0.1 mcg/kg/min. May increase by 0.1 mcg/kg/min every 5 mins PRN to max of 0.4 mcg/kg/min

Behavioral Emergency

PROCEDURE:

A. Assess and assure scene safety. Utilize the "come to us" approach if the individual is in a building or enclosed area.
B. Approach the individual in a calm, slow, reassuring and honest manner. Have one direct point of contact with the individual, multiple people attempting to intervene may increase the patient's confusion and agitation. Remaining responders should quietly stand back and be ready to intervene as necessary.
C. Protect the individual, bystanders and rescuers from injury. Follow Agitated Patient Management Protocol, if indicated.
D. Obtain history, physical and mental status examination if safe to do so
E. **Assess and treat any medical conditions per EMS protocol**
F. Determine if individual is eligible for transport to alternative care as per Transport to Alternative Mental Health Facility protocol.
    1. Contact the receiving facility and advise them you have an EMS patient for consideration and establish they can accept the patient. See Resource Phone List
    2. Contact medical control for confirmation of assessment findings and appropriateness of transport to a non-medical facility.
    3. Document inclusion criteria and provide to receiving facility.
G. All individuals will be assessed and evaluated by EMS, if safe to do so, regardless of transport status.
H. If transport to ED necessary due to patient condition, request or alternative facility not available/appropriate, transport to **closest** ED.

ADULT MOBILE CRISIS INTERVENTION (AMCI)

A. Can respond to any call from EMS or law enforcement for consultation. See Resource Phone List Identify yourself and ask for AMCI

SPECIFIC PRECAUTIONS:

A. Red Flags that this might **not** be a psychiatric condition:
    1. Waxing and waning level of consciousness
    2. Abnormal vital signs
    3. Dilated or pinpoint pupils
    4. First psychotic episode over the age of 30
    5. Acute onset over hours/days (consider substance abuse)
B. Psychiatric signs/symptoms.
    1. Mood disorder: depression, mania, suicide ideation, anxiety
    2. Thought disorder: hallucinations, pressured speech, racing thoughts, grandiose or paranoid ideation, delusions.
C. Medical illnesses including hypoglycemia, hypoxia, stroke, head injury, CNS infection may mimic psychiatric illness. Do not assume the patient's condition is purely psychiatric.

MANAGEMENT OF AGGRESSIVE/VIOLENT PATIENT

A. Law enforcement will intervene only when an individual poses a threat to others or themselves or has brought harm to others or has committed a criminal offense. LE will focus upon using the least force necessary to secure the situation and may elect to disengage from the scene. EMS responders need to treat these encounters with the understanding that their and other responder's personal safety is paramount and cannot always rely on LE backup.
B. Use all means necessary to de-escalate the situation. If restraint is necessary and safe to do so, follow Agitated Patient Management Protocol
C. If at any time the individual becomes aggressive or violent and your and/or other responder's safety is at risk, remove yourself and fellow EMS/Fire responders from the scene. Notify LE via CRESA that the individual is violent and it is unsafe to continue evaluation and treatment. Request LE assistance prior to further contact. If none is forthcoming, see Unsecured Scene below.
D. YOUR SAFETY IS PARAMOUNT. Document all encounters and reasons for leaving scene.

UNSECURED SCENE

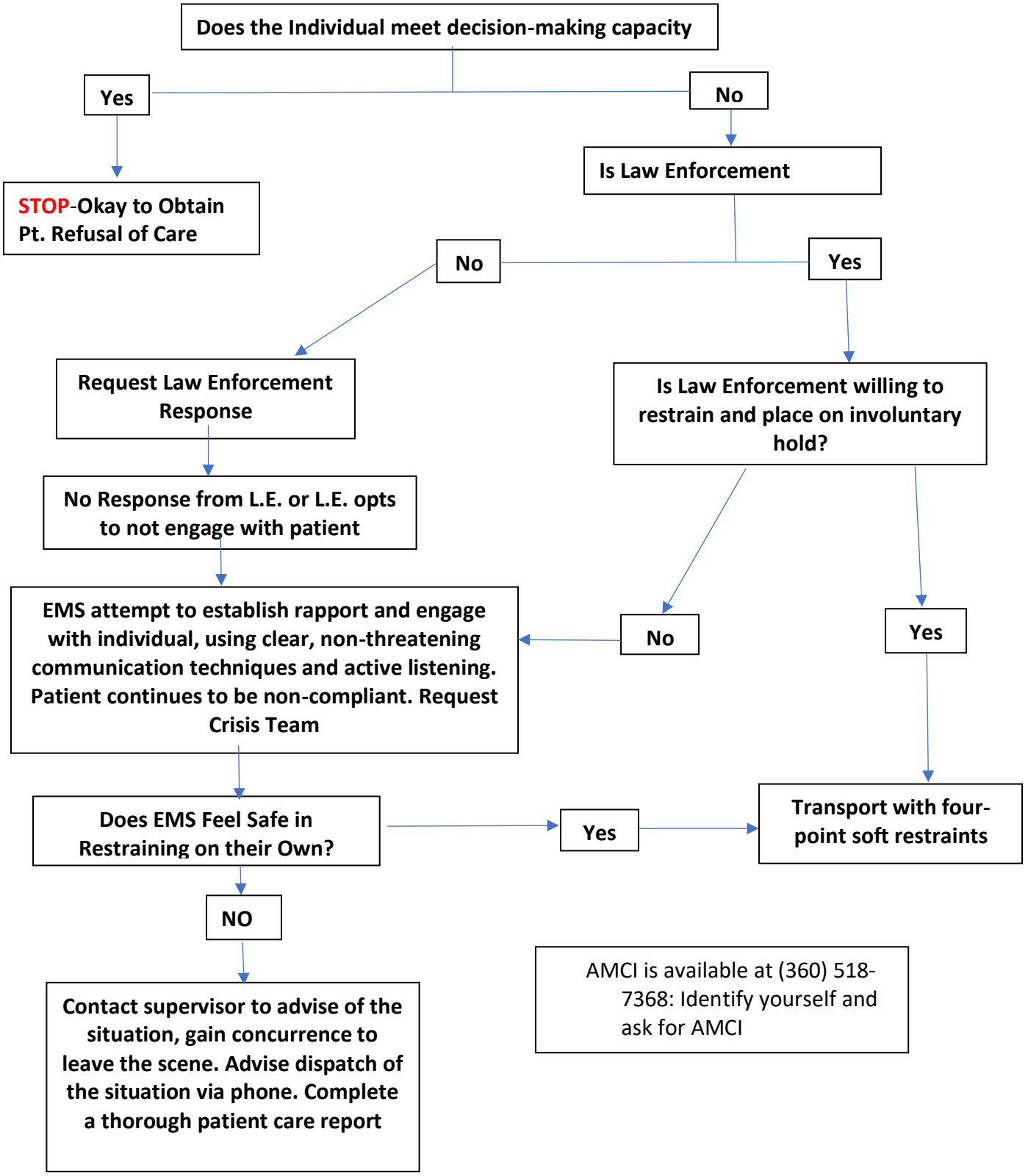
A. If law enforcement does not respond or will not engage in the incident:
    1. Contact your Supervisor or Battalion Chief (BC). Request additional resources (may include additional units, AMCI, DCR). Two-person crew will not attempt to manage incidents where safety is in doubt.
    2. Supervisor will review and confirm risk assessment and use this review to guide further actions.
B. If not already done, request a phone number from dispatch to call and ask the RP to come outside or meet EMS personnel at a location that provides a greater margin of safety. Any contact with the individual/RP (e.g., phone, verbal, etc.) will be documented as below.
C. Transport patient ONLY if safe to do so.
D. If the Supervisor/BC identifies you may not safely enter (or remain on) the scene or safely contact the individual, the Supervisor/BC will attempt to update the reporting party. Contact with the reporting party will be attempted prior to leaving the scene if no patient contact can be attempted. CRESA will be notified upon implementation of the decision to leave the scene and terminate the call. It is not necessary to notify medical control of intent to leave the situation.
E. Any response that is terminated for crew safety shall be reported to the EMS Supervisor or EMS Chief/Captain with a copy of the narrative and Behavioral Emergency Checklist. EMS Chief/Captain/Supervisor with forward these to the MPDs office for review.

DOCUMENTATION REQUIREMENTS.

A. In all cases of non-compliance with treatment and care, a complete and detailed health record will be written by the Lead EMS Provider. The minimum documentation requirements for such an encounter include:
    1. Patient Evaluation and/or Care Disposition: Patient Refused Evaluation and Care
    2. Include the following elements in the narrative of the health care record:
        a. Descriptive overview of physical characteristics of the scene (e.g., "Responded to an unconscious person in a vehicle at intersection or street name")
        b. A complete description of the danger or safety elements involved
        c. List and describe the measures used to attempt to engage the patient
        d. List and describe measure used to attempt to create safety.
        e. Describe the reasons why safety could not be established
        f. Describe specifics of the exposure to violence or threats of violence to EMS response personnel. Whenever possible include specific quotes from the individual.
        g. Specify that Law Enforcement was requested to respond. Document that Law Enforcement did not respond or responded and chose not to engage with the individual.
        h. If medical control was contacted, name of the medical control physician and time of contact.
        i. When lack of capacity is identified, specific findings that contributed to that determination will be documented in the health care record (e.g., history of dementia confirmed by family, excessive exposure to heat conditions, slurred speech due to excessive alcohol intake, etc.).

SIGNS OF IMPENDING VIOLENCE	DE-ESCALATION (IF NEEDED TO MAKE SAFE WITHDRAWAL FROM THE SCENE)
Display/threat of a weapon Clenched fists Wild/staring eyes Clenched fists Threatening posture Threatening gestures Muscle tension around jaw Gritted teeth Reddened face Bulging neck veins	Remove irritating stimuli Discuss situation calmly/establish rapport Express understanding of situation Reinforce positive aspects of situation Explore patient's feelings Convey respect, don't judge Listen Develop a solution, ask: What helped with the last crisis? What would help now? Can I step outside?

EMS – PATIENT REFUSING TO COMPLY WITH CARE & TRANSPORT RECOMMENDATION
(Restraints required or Involuntary Hold)



Brief Resolved Unexplained Event - BRUE

DEFINITION:

A. Event lasting <1 minute in an infant <1 year of age associated with at least one of the following:
    1. Cyanosis or pallor
    2. Absent, decreased, or irregular breathing
    3. Marked change in muscle tone (hypertonia or hypotonia)
    4. Altered level of responsiveness

TREATMENT:

A. Support ABCs. Follow Airway Management and Respiratory Distress protocols as needed.
B. Obtain and document any complications of pregnancy, birth date and gestational age at birth, fever or recent infection, prior BRUE episodes, underlying medical conditions.
C. Obtain and document description of event including symptoms, inciting event, any resuscitation attempts before EMS arrival.
D. Place on cardiac monitor and follow dysrhythmia protocol as needed.
E. Assess blood glucose.
F. Transport via ALS to an emergency department even if the infant currently appears in no distress.
G. OLMC contact is mandatory for any patient with a suspected BRUE where parent or guardian wishes to refuse transport.

NOTES & PRECAUTIONS:

A. BRUE is a group of symptoms, not a specific disease.
B. Many infants appear normal by the time EMS arrives.
C. Consider non-accidental trauma.
D. Serious underlying causes can include pneumonia, bronchiolitis, seizure, sepsis, intracranial hemorrhage, and meningitis.
E. BRUEs are more frequent in premature infants and infants with other health conditions such as cystic fibrosis, bronchiolitis and congenital heart disease.

Burns

TREATMENT:

A. Treat per Universal Patient Care. Apply carbon monoxide monitor, if available
   1. If SpCO > 3% treat per Carbon monoxide poisoning protocol
   2. If hydrofluoric acid burn suspected, i.e. response to MVA involving electric vehicle or burns involving lithium-ion batteries, follow HF burn management in Poisoning and Overdose protocol.

B. If systolic BP < 100 mmHg (MAP <65) follow Shock Protocol.

C. Remove jewelry and clothing that is smoldering or that which is non-adherent.

D. Burn Classifications:
   1. Superficial thickness: Epidermis only and looks like a sunburn; skin is erythematous and mildly painful.
   2. Partial thickness (superficial): Beyond the epidermis to include the superficial dermis. Blisters may occur; painful.
   3. Partial thickness(deep): Beyond the superficial dermis to include the deep dermis.
   4. Full Thickness: involves all layers of the skin and subcutaneous tissue, with involvement of underlying fascia.

E. Determine Total Body Surface Area (TBSA) involved using either Rule of Nines or the Palm Method. Do not include superficial thickness burns in TBSA.

F. If the patient has the following, prepare for transport to the Oregon Burn Center at Emanuel:
   1. Partial thickness burns > 10% total body surface area (TBSA).
   2. Burns that involve the face, hands, feet, genitalia, perineum, or major joints.
   3. Full thickness burns in any age group.
   4. Electrical burns, including lightning injury.
   5. Chemical burns.
   6. Inhalation injury.
   7. Burn injury in patients with preexisting medical disorders that could complicate management, prolong recovery, or affect mortality.
   8. Any patient with burns and concomitant trauma (such as fractures) in which the burn injury poses the greatest risk of morbidity or mortality. Transport to the closest appropriate trauma center if the underlying trauma poses the greater immediate risk. The patient may be initially stabilized at the trauma center before being transferred to the burn unit.
   9. Burn patients who require special social, emotional, or rehabilitative intervention.

G. Cool burned areas (5 mins. max) then cover with sterile dressing. Discontinue cooling if patient begins to shiver. Leave unbroken blisters intact.

H. Treat pain per Pain Management protocol.

I. Airway considerations in the burn and inhalation injury patient.
   1. Singed nasal hairs and facial burns alone are not indications for intubation
   2. Mild inhalation injuries in patients with normal O2 saturation and no respiratory distress can be safely observed.
   3. Indicators for early intubation:
      a. Signs of respiratory distress, stridor, accessory muscle use
      b. New onset of hoarseness
      c. Blisters or edema of oropharynx
      d. Deep burns to lower face or neck

J. Establish IV access
   1. Burns greater than 20% TBSA should have two large bore IVs
   2. Initial fluid rates: Lactated Ringer's preferred
      a. Less than 6 years old @125 mL/hr
      b. 6 years to 13 years old @ 250 mL/hr
      c. 14 years and older @ 500 mL/hr

K. If chemical burn:
   1. Consider Haz-Mat response; Protect yourself from contamination.
   2. Flush contaminated areas with copious amounts of water.
   3. If chemical is dry, carefully brush off prior to flushing. Do not use a neutralizer.

L. If electrical burn:
   1. Apply sterile dressings to entry and exit wounds.
   2. Treat any dysrhythmias per appropriate Cardiac Dysrhythmia protocol.
   3. Risk for rhabdomyolysis, provide adequate fluids, as above
   4. Report arc flash or contact, and voltage if known.

M. If inhalation injury:
   If Cyanide Toxicity is suspected based on location (closed space fire with plastics, wool or industrial chemicals), findings (soot in mouth, nose or oropharynx) and patient is comatose, in cardiac or respiratory arrest, or has persistent hypotension despite fluid resuscitation:
   1. **Sodium Thiosulfate** 50 mL of 25% solution IV/IO infused over 10 to 20 minutes.
   2. Treat other presenting symptoms per appropriate protocol.
   3. Initiate emergent transport to appropriate facility.
   4. Notify receiving facility of use of Sodium Thiosulfate.

PEDIATRIC PATIENTS:

A. Treat pain per Pain Management protocol.
B. Consider possibility of non-accidental cause in children.
C. If Cyanide suspected: **Sodium Thiosulfate** dose is 1.6 mL/kg IV/IO infused over 10 to 20 minutes. Do not exceed adult dosing.
D. If systolic BP is inappropriate for age, treat per shock protocol.
   Lowest normal pediatric systolic blood pressure by age:
   - < One month: > 60 mmHg.
   - One month to 1 year: > 70 mmHg.
   - > 1 year: 70 + 2 x age in year

Cardiac Arrest – INITIAL MANAGEMENT

TREATMENT:

A. Establish unresponsiveness
B. Identify absence of pulse and respirations.
C. Continuous CPR for 2 minutes if down time estimated at > 5 minutes; if < 5 minutes or if bystander CPR, do CPR until AED/Monitor applied.
    1. Apply EKG Leads/Defib Pads A/P position. Use A/L position if unable to place A/P and document reasoning.
    2. Analyze and follow AED instructions or Paramedic interpretation (Defibrillate PRN).
    3. Continuous CPR for 2 minutes; rhythm analysis:
        a. Goal in asystole/PEA: early epinephrine
        b. Goal in shockable rhythm: amiodarone after second or third shock and epinephrine after first dose of amiodarone
    4. iGel, 100% O2. Capnography throughout.
    5. IV/IO TKO with crystalloid (above the diaphragm preferred, in this order):
        a. IV in upper extremity
        b. Humeral IO (not pediatric)
        c. Distal femur IO
        d. Proximal tibia IO
D. Naloxone not indicated for the routine management of cardiac arrest. Prioritize CPR, airway, defibrillation, and medications as above.
E. Use a weight/age-based system for treatment of pediatric cardiac arrest, i.e., Handtevy.
F. Application of the LUCAS device may be accomplished AFTER at least one two-minute cycle of manual CPR. Minimize interruptions in CPR.
G. If patient not responding to treatments as follows, consider Death in the Field.

Cardiac Arrest – ASYSTOLE

TREATMENT: – Determined by the Paramedic:

A. **Epinephrine** 1 mg/10 mL IV/IO.
B. If asystole persists continue two-minute cycles of CPR and rhythm analysis.
C. Continue **Epinephrine** 1 mg/10mL IV/IO every 4 minutes.

PEDIATRIC PATIENTS:

A. Follow adult algorithm.
B. **Epinephrine** 1mg/10mL, give 0.01 mg/kg IV/IO as soon as possible after cardiac arrest is recognized. Repeat every 4 minutes. Do not exceed adult dose.

NOTES & PRECAUTIONS:

A. If unwitnessed arrest and no obvious signs of death, proceed with a nd get further information from family/bystanders.
    1. If obvious signs of death, POLST form or history of traumatic event, follow death in the field per Death in the Field protocol.
B. Minimize interruptions to CPR when securing the airway. Preferred initial airway is SGA.
C. Continuously monitor effectiveness of CPR and oxygenation. Avoid hyperoxygenation, maintain O2 sat of 94-98% if ROSC.

TREAT OTHER POSSIBLE CAUSES:

A. Acidosis: ventilate, consider **Sodium Bicarbonate** 1 mEq/kg; Peds 1 mEq/kg Max 50 mEq.
B. Cardiac tamponade: consider hospital transport.
C. Hyperkalemia: Hyperkalemia protocol. (Consider in renal failure, rhabdomyolysis, crush injury, etc.)
D. Hypothermia: Treat per Hypothermia protocol.
E. Hypovolemia: Treat with fluids per Shock protocol.
F. Hypoxia: Oxygenate.
G. Pulmonary embolus: consider hospital transport.
H. Tension pneumothorax: Needle decompression.
I. Toxins
    1. Tricyclic OR Diphenhydramine (Benadryl) overdose: **Sodium Bicarbonate** 1 mEq/kg; Peds 1 mEq/kg Max 50 mEq.
    2. Calcium Channel/Beta-Blocker overdose: **Calcium Gluconate** 3 g once

Cardiac Arrest – PULSELESS ELECTRICAL ACTIVITY (PEA)

TREATMENT: Determined by the Paramedic:

A. **Epinephrine** 1 mg/10 mL IV/IO, give as soon as possible after cardiac arrest recognized
B. If PEA persists continue two-minute cycles of CPR and rhythm analysis.
C. Continue **Epinephrine** 1 mg/10 mL IV/IO every 3-5 minutes.
D. Administer NS up to 2 L rapid infusion.

PEDIATRIC PATIENTS:

A. Follow adult algorithm.
B. **Epinephrine** 1 mg/10 mL concentration, give 0.01 mg/kg IV/IO as soon as possible after cardiac arrest is recognized. Repeat every 3-5 minutes. Do not exceed adult dose.
C. Administer NS up to 20 mL/kg bolus infusion. May repeat PRN to Max 60 mL/kg.

NOTES:

A. Continuously monitor effectiveness of CPR and oxygenation. Avoid hyperoxygenation, maintain O2 sat of 94-98% if ROSC.
B. Narrow-complex PEA is more common from mechanical causes (PE, hypovolemia). Wide-complex PEA is more common from toxic/metabolic causes. Consider calcium gluconate and sodium bicarbonate in wide-complex PEA.

TREAT OTHER POSSIBLE CAUSES:

A. Acidosis: ventilate, consider **Sodium Bicarbonate** 1 mEq/kg; Peds 1 mEq/kg Max 50 mEq
B. Cardiac tamponade: consider hospital transport.
C. Hyperkalemia: Hyperkalemia protocol. (Consider in renal failure, rhabdomyolysis, crush injury, etc.)
D. Hypothermia: Treat per Hypothermia protocol.
E. Hypovolemia: Treat with fluids per Shock protocol.
F. Hypoxia: Oxygenate.
G. Pulmonary embolus: consider hospital transport.
H. Tension pneumothorax: Needle decompression.
I. Toxins
    1. Tricyclic OR Benadryl overdose: **Sodium Bicarbonate** 1 mEq/kg; Peds 1 mEq/kg Max 50 mEq. May repeat every 5 minutes if QRS narrowing.
    2. Calcium Channel/Beta-Blocker overdose: **Calcium Gluconate** 3 g once

Cardiac Arrest – VFIB/PULSELESS VTACH

TREATMENT: – Determined by Paramedic:

A. Defibrillate.
B. Immediately continue CPR for two minutes.
C. Assess heart rhythm; Defibrillate if Vfib, pulseless Vtach.
D. Immediately continue CPR for two minutes
   1. **Amiodarone** 300 mg IV/IO (NOT in Torsades). Administer concurrently with CPR.
   2. If Amiodarone contraindicated, **Lidocaine** 1.5 mg/kg IV/IO.
   3. If multifocal WCT (Torsades) or Magnesium deficiency suspected, **Magnesium Sulfate** 2 grams bolus IV/IO (dilute in 50mL NS wide open).
E. Assess heart rhythm; Defibrillate if Vfib pulseless Vtach.
F. Immediately continue CPR for two minutes.
   1. **Epinephrine** 1 mg/10 mL IV/IO.
G. Assess heart rhythm; Defibrillate if Vfib pulseless Vtach.
   1. Change defibrillation vector (A/P to A/L) after 3rd unsuccessful shock.
H. Immediately continue CPR for two minutes.
   1. **Amiodarone** 150 mg IV/IO.
   2. If Amiodarone contraindicated, **Lidocaine** 1.5 mg/kg IV/IO.
I. If Vfib/pulseless Vtach persists, continue two-minute cycles of CPR, rhythm analysis and defibrillation.
   1. Continue **Epinephrine** 1 mg/10 mL IV/IO every 3-5 minutes.
J. Continue above until ROSC or DIF criteria apply. If ROSC, target O2 sat of 94-98%, ETCO2 of 35-45 and monitor waveform. Follow ROSC protocol.
   1. If DIF criteria, contact MC for concurrence.

PEDIATRIC PATIENTS:

A. Follow adult algorithm flow. Use the following dosing (do not exceed adult dose):
   1. BLS provider: Use pediatric pads if pt. 15kg or less w/adult AED algorithm
   2. ALS Providers: Defibrillation: 4 J/kg for the first attempt and 4 J/kg for subsequent attempts
   3. Drugs:
      a. **Epinephrine**: 1 mg/10 mL 0.01 mg/kg IV/IO
      b. **Amiodarone**: 5 mg/kg IV/IO. May repeat once with 2.5 mg/kg IV/IO
      c. **Lidocaine**: 1 mg/kg, May repeat once
      d. **Magnesium**: 50 mg/kg IV/IO. Max 2 g

NOTES & PRECAUTIONS:

A. Airway should be addressed with minimal interruption to CPR. Ventilation rate should be 8-10 breaths per minute.

B. If patient remains in persistent VF/pVT (> three shocks) reposition defibrillation force from A/P to A/L OR A/L to A/P if able.

C. **Sodium Bicarbonate** is not recommended for the routine cardiac arrest sequence but should be used early in cardiac arrest of known cyclic antidepressant or Benadryl overdose If used:

1. Administer 1 mEq/kg IV/IO. May repeat after 5 mins if improving QRS. Treatment goal is QRS 0.12.

D. If there is a delay in getting IV/IO access Epinephrine could be given in the same sequence as Amiodarone.

E. If persistent VF/pVT, after 5th shock, contact OLMC for further instructions.

Cardiac Arrest – RETURN OF SPONTANEOUS CIRCULATION (ROSC)

TREATMENT:

A. Optimize ventilation and oxygenation
1. Intubate if:
    a. ETCO2 and/or SpO2 outside target range (see below).
    b. No ROSC and patient transported.
2. Titrate oxygen to the lowest level to achieve target SpO2 between 94-98%.
3. Monitor ETCO2 (normal is 35-45 mmHg), do not hyperventilate (ideal rate is 10-12 breaths/minute).
4. If hypotensive (systolic BP < 100 mmHg or MAP <65 mmHg) follow Shock protocol. Goal is to maintain a mean arterial pressure (MAP) > 65 mmHg.
5. Perform 12-lead ECG.
6. Transport all patients with ROSC to hospital with PCI capability per local criteria.
7. Notify receiving facility if LUCAS deployed during resuscitation.

NOTES:

A. If patient has ROSC, observe briefly to ensure sustained stability prior to transport. A 5-10 minute period while packaging and loading will be adequate.

Cardiac Dysrhythmia – BRADYCARDIA

TREATMENT:

A. Treat per Universal Patient Care Protocol.
B. Obtain 12-lead ECG if feasible.
C. Observe and monitor patient.
D. Are signs or symptoms of poor perfusion caused by the bradycardia present?

1. **Atropine** 1 mg IV/IO, repeat every 2-5 minutes as needed (max 3 mg total) to maintain MAP of 65 mmHg; discontinue Atropine if chest pain increases.
2. If no response to Atropine:
   a. **Epinephrine** infusion: Start at 2 mcg/min IV/IO drip and increase 2 mcg every 5 minutes, PRN max 40mcg. (titrate to clinical response).
3. Transcutaneous Pacemaker
   a. Primary initial treatment for symptomatic high degree heart block.
   b. Do not delay transcutaneous pacer if IV access difficult.
   c. Sedate as needed with **Midazolam** 2.5 mg IV, or 5 mg IM. Max 10 mg PRN.
   d. Treat pain with Fentanyl per protocol.

PEDIATRIC

A. Ventilate and oxygenate to > 94% SaO2 and between 35-45 mmHg EtCO2 at rates normal per age.
B. If continued signs of poor perfusion due to bradycardia as above, **Epinephrine 1mg/10ml** 0.01 mg/kg IV/IO every 3-5 minutes prn.
C. If bradycardia persists, start **Epinephrine** infusion at 0.1 mcg/kg/min, titrate to a maximum of 1 mcg/kg/min.

NOTES & PRECAUTIONS:

A. Immediate TCP can be considered in unstable patients when vascular access is not available.
B. TCP is at best a temporizing measure and is not useful in asystole.
C. If TCP capture is not achieved, try repositioning pads.
D. If STEMI, refer to protocol.

Cardiac Dysrhythmia – STABLE TACHYCARDIA

CONSIDERATION:
Patient must NOT have signs or symptoms of poor perfusion caused by the dysrhythmia (AMS, ischemic chest discomfort, acute heart failure, signs of shock).

TREATMENT:

A. Treat per Universal Patient Care Protocol
B. Obtain 12 Lead
C. NARROW COMPLEX TACHYCARDIA (NCT) > 180bpm (QRS < 0.12 sec):
    1. **Regular Rhythm**.
        a. Attempt vagal maneuvers.
        b. If refractory, **Adenosine** 6 mg rapid followed by 10 mL flush IV.
        c. If refractory, **Adenosine** 12 mg rapid followed by 10 mL flush IV.
    2. **Irregular Rhythm:**
        a. Monitor patient, consider causes of NCT (sepsis, shock, dehydration, etc.).
        b. If acute onset atrial fibrillation, atrial flutter with rate >110 (symptomatic but not unstable):
            i **Diltiazem** 0.25 mg/kg IV/IO (maximum 20 mg) given slow over 2 mins. After 15 mins. may repeat at 0.35 mg/kg IV/IO (maximum 25 mg). Do not use in WPW, history of heart failure.
            ii ALTERNATIVE: **Verapamil** 5 mg IV slow over 2-3 mins. May repeat 5 mg every 15 min PRN to max of 20 mg. **Do not use in WPW, history of heart failure.**
D. WIDE COMPLEX TACHYCARDIA (WCT) (Wide complex QRS > 0.12 sec):
    1. **Regular Rhythm and QRS Monomorphic:**
        a. **Amiodarone** 150 mg IV/IO over 10 min.
        b. If no conversion, repeat **Amiodarone** 150 mg IV/IO over 10 min.
    2. **Irregular Rhythm:**
    a. Torsades give **Magnesium Sulfate** 2 grams IV/IO over 1-2 minutes
        b. If acute onset atrial fibrillation, atrial flutter rate >110 (symptomatic but not unstable):
            i **Diltiazem** 0.25 mg/kg IV/IO (maximum 20 mg) given slow over 2 mins. After 15 mins. may repeat at 0.35 mg/kg IV/IO (maximum 25 mg). Not in WPW.
            ii ALTERNATIVE: **Verapamil** 5 mg IV slow over 2-3 mins. May repeat 5 mg every 15 min PRN to max of 20 mg. Not in WPW.
            iii Calcium channel blockers contraindicated in WIDE COMPLEX TACHYCARDIA associated with WPW. Consult with Medical Control is mandatory.
        c. Other wide complex irregular rhythms, monitor patient consider causes.
E. Obtain post treatment 12-lead ECG.

Updated: March 2026

PEDIATRIC PATIENTS:

A. Treat per Universal Patient Care Protocol. Identify and treat underlying causes
B. Obtain 12-lead ECG
C. Narrow complex QRS (< 0.09 sec)
    1. Probable SVT (Compatible history Infants: HR > 220; Children: HR > 180)
        a. Attempt vagal maneuvers
        b. **Adenosine** 0.1 mg/kg Max 6 mg rapid IV
        c. If no conversion may repeat **Adenosine** once at 0.2 mg/kg Max 12 mg rapid IV
    2. Probable Sinus Tachycardia Infants: HR < 220; Children: HR < 180
        a. Monitor patient, Consider causes
D. Wide complex QRS (> 0.09 sec)
    1. If regular and QRS monomorphic, consider **Adenosine** 0.1 mg/kg Max 6 mg rapid IV
    2. Possible VTach: **Amiodarone** 5 mg/kg IV/IO Max 150 mg over 20 minutes.
        a. If no conversion, repeat **Amiodarone** 2.5 mg/kg IV/IO Max 150 mg over 10 minutes
    3. Irregular Rhythm:
    a. Torsades give **Magnesium Sulfate** 50 mg/kg IV/IO over 1-2 minutes Max 2 grams.

NOTES & PRECAUTIONS:

A. All doses of adenosine should be reduced to one-half (50%) in the following clinical settings:
    1. History of cardiac transplantation.
    2. Patients who are on carbamazepine (Tegretol) or dipyridamole (Persantine, Aggrenox).
    3. Administration through any central line.
B. **Do not use Adenosine OR Calcium Channel Blocker in patients with Wolff-Parkinson-White syndrome in atrial fibrillation with wide complex. May initiate rapid ventricular response (V Tach/V Fib)**.
C. Adenosine should be used with caution in patients with asthma as it may cause a reactive airway response in some cases.
D. In patients with tachycardia, particularly with history of AFib/AFlutter evaluate for possible causes of tachycardia, such as shock, sepsis, dehydration, hypovolemia, blood loss etc.
E. Calcium Channel blockers do not convert AFib/AFlutter but decrease ventricular rate. Consider underlying causes before using a rate reduction drug.

Cardiac Dysrhythmia – UNSTABLE TACHYCARDIA

CONSIDERATIONS:
Tachycardia is unstable if the patient has signs or symptoms of poor perfusion caused by the dysrhythmia (AMS or other signs of shock).

A. In patient with underlying atrial fibrillation consider causes of instability other than rate.
B. Rate-related symptoms are uncommon if HR < 150 bpm. Consider other causes.
C. **If any doubt if the patient has stable tachycardia or unstable tachycardia, treat for unstable tachycardia.**

TREATMENT:

A. Treat per Universal Patient Care Protocol
B. Provide synchronized cardioversion at 200 J. If patient is conscious, provide sedation.
    1. **Etomidate** 0.15 mg/kg IV/IO, max single dose 30 mg.
    2. **ALTERNATIVE: Midazolam** 2.5-5 mg IV/IO/IM.
C. Unsuccessful cardioversion:
    1. Repeat synchronized cardioversion x 2 PRN. Max 200 J per shock.
    OR
    2. **Amiodarone** 150 mg IV/IO slow push over 10 mins.
    3. If recurrent: **Amiodarone** 150 mg IV/IO over 10 mins.
    4. If multi-focal VT (Torsades): **Magnesium Sulfate** 2 g IV over 1-2 mins.
E. Successful cardioversion:
    1. Obtain 12-lead ECG.
    2. Consider contributing factors and other treatments.

PEDIATRIC PATIENTS:

A. Treat per Universal Patient Care Protocol; Identify and treat underlying causes. As a rough guide, rate is unlikely to be the primary issue unless rate is:
    1. > 220 bpm in infants
    2. > 180 bpm in children (1-12 years old)
    3. > 160 bpm in adolescents (13-17 years old)
B. Immediate synchronized cardioversion at 1 J/kg; If patient is conscious, provide sedation.
    1. **Midazolam** 0.2 mg/kg IV/IM/IO, maximum single dose 10 mg.
C. Repeat cardioversion x 1 if refractory
D. Unsuccessful cardioversion:
    1. **Amiodarone** 2.5 mg/kg IV/IO. Max 150 mg Slow push over 10 mins.
    2. Repeat synchronized cardioversion at 1 J/kg x 2 PRN.
    3. If multi-focal VT (Torsades): **Magnesium Sulfate** 50mg/kg IV/IO over 1-2 minutes. Max 2 grams.
    4. If repeatedly no conversion, rapid transport.
E. Successful cardioversion:
    1. Obtain 12-lead ECG.
    2. Consider contributing factors and other treatments.

Updated: March 2026

Chest Pain/Acute Coronary Syndrome

TREATMENT:

A. Treat per Universal Patient Care Protocol.
B. Administer oxygen if needed to achieve a SpO2 between 94 – 98%.
C. Obtain 12-lead ECG. This may be done concurrently with other treatment.
D. **Aspirin** 324 mg PO. Contraindicated in known allergy, active bleeding ulcer, severe liver failure or severe systemic disease.
E. If systolic BP > 110 and suspected ACS:
    1. **Nitroglycerin** 0.4 mg. May repeat x 2 every 3-5 minutes.
        a. Caution in right-sided myocardial infarction (positive changes in V3R or V4R).
        b. Contraindicated in patient taking phosphodiesterase inhibitor [such as Sildenafil (Viagra), tadalafil (Cialis), vardenafil (Levitra), avanafil (Stendra)] in the past 48 hours.
        c. Vascular access should be obtained prior to giving Nitroglycerin.
    2. **Fentanyl** 1 mcg/kg IV, IO, IM max 100 per dose (q 5-10 mins to 300 mcg total PRN).
F. If hypotensive, follow Shock protocol.

IF ACUTE MI SUSPECTED SEE STEMI EARLY RESPONSE PROTOCOL

Childbirth

TREATMENT:

A. Treat per Universal Patient Care Protocol. Start O2 in all abnormal deliveries.
B. Transport third-trimester females in left lateral decubitus (protect spine if indicated).
C. If multiple or precipitous delivery request additional resources.

NORMAL CHILDBIRTH:

A. Use sterile or clean technique. Guide/control but do not retard or hurry delivery.
B. Delivery:
    1. Check for cord around neck and gently remove if found.
    2. Apply gentle counterpressure to baby's head as it delivers.
    3. Assist delivery of shoulders and rest of body.
C. After delivery, assess infant per Neonatal Resuscitation protocol. If no resuscitation needed, proceed as below.
D. Wipe nose and mouth if copious secretions.
E. Briefly dry infant and place on mother's chest, in skin-to-skin contact. Cover both with a clean, dry blanket.
F. Assess infant using APGAR at one minute and five minutes after delivery. (Documentation will describe infant using criteria rather than giving a numerical score).
G. At 30 to 60 seconds after delivery, clamp and cut the umbilical cord about 6 inches from infant. If resuscitation is needed, cord may be clamped and cut as soon as necessary.
H. Do not delay transport to deliver the placenta. After the placenta has delivered, gently externally massage uterus to encourage contraction and prevent bleeding.
I. If mother has significant postpartum hemorrhage (> 500 mL), continue uterine massage, treat for shock, and update receiving facility.
J. Unless infant needs treatment, keep on mother's chest for transport.
K. Monitor vital signs of mother and infant during transport.

ABNORMAL CHILDBIRTH:

A. General Considerations
    1. Transport to nearest appropriate hospital, notify early.
    2. Transport in left lateral decubitus position
    3. Altered Mental Status protocol for newborn.
B. Breech Presentation:
    1. Allow mother to push - do not pull the baby - gently extract.
    2. Support delivered body and extremities on your hand and arm.
    3. If head not delivered, place gloved hand in vagina to form a "V" around baby's mouth and nose should it begin to breathe.
C. Prolapsed Cord:
    1. Place mother in knee-chest position or extreme Trendelenburg.
    2. Insert gloved hand into vagina and gently lift head/body off cord.
    3. Observe cord for pulsations and continue until relieved by hospital staff.
    4. Rapid transport.

D. Cord Wrapped Around Neck
   1. With two fingers behind baby's neck, try to slip cord forward, over baby's upper (anterior) shoulder and head. If unsuccessful, attempt to slip under lower shoulder and over the head.
   2. If unsuccessful, clamp cord with two clamps, cut between clamps, and carefully unwrap cord from around neck.

E. Abruptio Placentae
   1. Occurs in the third trimester of pregnancy when the placenta prematurely separates from the uterine wall leading to intrauterine bleeding.
   2. The patient experiences lower abdominal pain and the uterus becomes rigid. Shock may develop without significant vaginal bleeding.
      a. Treat per Shock protocol
      b. Rapid transport

F. Placenta Previa
   1. Occurs when the placenta covers the cervical opening, which can result in vaginal bleeding and prevents delivery of the infant through the vagina.
      A. Rapid Transport

POST-PARTUM HEMORRHAGE

A. Evaluate for cause of bleeding
   1. If bleeding directly from a perineal laceration, apply direct pressure to the laceration
   2. Otherwise, apply firm pressure to uterus (lower abdomen)

B. If estimated blood loss > 500 mL, SBP < 90, or HR > 120:

1. **TXA** 1 g IV over 20 minutes.

Drowning

TREATMENT:

A. Universal Patient Care protocol.
B. Protect cervical spine if diving accident.
C. Remove patient from the water first unless trained in in-water rescue.
D. Establish and maintain airway
    1. Provide positive pressure ventilation, including PEEP as necessary even if patient in cardiac arrest.
    2. Advanced Airway management PRN.

GENERAL CONSIDERATIONS:

A. Protect against and/or treat hypothermia per protocol
B. Focus of treatment should be rapid correction of hypoxia.

Geriatric Falls

INTRODUCTION:

A. Geriatric falls can be the presenting chief complaint for serious medical illness, including sepsis, stroke and cardiac issues.
    1. Abnormal vital signs (including temperature) can help the clinician have higher index of suspicion for life-threatening illness.
    2. Vital sign abnormalities such as tachycardia, hypotension and temperature derangements should prompt consideration of serious medical illness.

ASSESMENT:

A. Assess for the following and manage accordingly.
    1. Symptoms prior to the fall:
        a. Dizziness/weakness
        b. Chest pain and/or palpitations
        c. Lightheadedness
    2. Perform Stroke assessment
B. Have a higher index of suspicion for bleeding with patients on anticoagulant and/or anti-platelet medications who have fallen.
C. Assessment of Ambulation:
    1. Screen for whether the patient is at their baseline ambulation status, including use of any assistive devices used by the patient prior to the fall (e.g. walker, cane, etc.) and whether the patient can get from sitting to standing independently.
    2. Evaluate the patient's ability to remain at home safely.

TREATMENT:

A. Use Spinal motion restriction when indicated.
    1. Patients over 65 are at higher risk for significant spinal trauma with ground level falls.
B. Pain management should be started prior to patient movement/transport .

Heat Syndromes

TREATMENT:

A. Treat per Universal Patient Care Protocol. Obtain temperature if possible.
B. Heat Cramps, Heat Exhaustion
   1. Move to cooler environment, remove excess clothing. Cold packs to forehead, neck, groin, axilla.
   2. Oral fluids, if possible.
   3. Initiate IV with crystalloid, if unable to take oral fluids or if hypotensive.
   4. Transport as necessary.
C. Heat Stroke
   1. Symptoms
      a. AMS, Seizure
      b. Hot, dry, or wet skin
      c. Core (rectal) temperature > 40.5°C (104.9°F)
      d. Severe tachycardia, hypotension
   2. Treatment
      a. Move to cooler environment, remove clothing, prioritize cooling over transport.
      b. Rectal temperature if available: Monitor rectal temperature continuously, stop active cooling at 38.9°C (102°F).
      c. Rectal temperature if not available: Initiate treatment on scene for up to 20 minutes or until improvement of symptoms (e.g. mental status) or until shivering occurs.
      d. IV bolus (chilled if available).
      e. Cooling methods if available and feasible (in order of preference):
         i. Cold-Water Immersion (CWI) – Immerse the patient in a tub/basin of cold water. Agitate water continuously until patient core temperature reaches 38.9°C (102°F).
         ii. Tarp-Assisted Cooling with Oscillation (TACO) – Wrap the patient in a tarp or bag, add ice water, and oscillate to enhance skin contact.
         iii. Continual deluge/dousing with cold water from hose or other cold-water source.
         iv. Rotating ice water-soaked towels or sheets.
   3. **Midazolam** 2.5 mg IV/IM q 5 min PRN for significant shivering when cooling.
   4. Treat cardiac dysrhythmias per protocols.
   5. Altered mental status protocol, as indicated.
   6. Shock Protocol, as indicated.

PEDIATRICS

A. **Midazolam** 0.2 mg/kg IV, maximum single dose 2 mg, may repeat once in 10 minutes OR 0.2 mg/kg IN/IM, maximum single dose 10 mg PRN to control shivering.
B. IV crystalloid 20 mL/kg for fluid resuscitation.

Hemorrhage Control

TREATMENT:

A. Treat per Universal Patient Care Protocol.
B. External bleeding - Control with direct pressure and elevation.
    1. If direct pressure not effective or practical, apply commercially available tourniquet
        a. Apply tourniquet as per manufacturer's recommendation.
        b. Note time and date on the tourniquet label.
        c. Do not remove tourniquet prior to arriving at definitive care.
    2. Utilize improvised tourniquets only if commercially designed tourniquets unavailable.
    3. Remove and/or replace improvised tourniquets as time allows.
    4. If direct pressure and tourniquet application ineffective or impractical, i.e. junctional wound/bleeding, follow procedure for wound packing.
    4. If amputation, follow Amputation Protocol.
    5. If shock, follow Shock Protocol.

Hyperkalemia

RECOGNITION, SIGNS & SYMPTOMS:

A. Suspect in known renal failure or dialysis patient.
B. Other patients who are predisposed to hyperkalemia are those who have muscular dystrophy, paraplegia/quadriplegia, crush injury, prolonged immobilization or patients who have sustained serious burns > 48 hours.
C. Obtain a 12-lead ECG.
D. Signs/symptoms of significant hyperkalemia:
    1. Tingling, numbness, paresthesia, flaccid weakness
    2. EKG changes:
        c. Wide QRS > 0.12 sec
        d. Prolonged QTc (Male > 0.440 sec, Female > 0.460 sec), PVCs, Bigeminy, VT, VF

TREATMENT:

A. Treat per Universal Patient Care Protocol.
B. Threshold for treatment is QRS > 0.12 sec OR hemodynamically significant arrythmias.
C. Establish (2) IV/IO (Fluid of choice is NS and NOT LR)
    1. **Calcium Gluconate** 1 g slow IV/IO over 2-5 minutes. Flush tubing. May repeat x2 if patient still meets treatment threshold.
    2. **Albuterol** 5 mg via continuous Med Neb, Max 20 mg.

    ALTERNATIVE **DuoNeb**

    ALTERNATIVE **Levalbuterol** 2.5 mg
D. Follow protocols for dysrhythmias.

PEDIATRICS:

A. Universal Patient Care Protocol, recognition and IV/IO as for adults above
B. **Calcium Gluconate** 20 mg/kg IV/IO over 2-5 min. Do not exceed adult dose
C. **Albuterol** - Patient weight <15kg 2.5-5 mg. If >15kg 5-10 mg via Nebulizer.
    ALTERNATIVE **DuoNeb** 1.5 mL– may repeat PRN
    ALTERNATIVE **Levalbuterol** 1.25 mg.

Hypertensive Disorders of Pregnancy and up to 6 weeks Postpartum Eclampsia

TREATMENT:

A. Treat per Universal Patient Care Protocol.
B. Transport third-trimester females in left lateral decubitus (protect spine if indicated). If in cardiac arrest, manually displace uterus to the left.
C. Manual blood pressure recommended to determine treatment thresholds.

PRE-ECLAMPSIA, HTN EMERGENCY and ECLAMPSIA:

A. Moderate to Severe Pre-Eclampsia (third trimester or up to 6 weeks post-partum) any of the following:
    1. Hypertension: ≥ 140 systolic or ≥ 90 diastolic
    2. Headache; Cerebral disturbances (changes in behavior)
    3. Visual disturbances (flashes of light)
    4. Epigastric pain
    5. Dyspnea/Cyanosis
    6. If hypertensive as above with ANY listed symptoms:
        a. **Magnesium Sulfate** 4 g IV/IO over 20 minutes. If IV Unsuccessful give 10 g IM (5 g in each buttock). Mix with 1 ml of 2% Lidocaine to reduce discomfort.
B. Hypertensive emergency
    1. ≥ 160 systolic or ≥ 110 diastolic
    2. Magnesium Sulfate as above
    3. If persistent >15 mins **Labetalol** 20 mg over 2 mins. If BP elevated as above after 10 mins give Labetalol 40 mg over 2 mins. If BP remains elevated as above after 10 mins give Labetalol 80 mg over 2 mins. May repeat 80 mg every 10 mins if BP elevated to max 300 mg total dose.
    4. Transport red acuity, preferably without lights and sirens.
C. Eclampsia: any one of the above plus seizure or post-ictal.
    1. Seizure treatment
        a. **Magnesium Sulfate** 4 g IV/IO over 20 minutes. If no IV, may give 10 g IM (5 g in each buttock). Mix with 1 ml of 2% Lidocaine to reduce discomfort.
        b. If status seizures lasting 5 minutes or more, **Midazolam** 5 mg IV OR 10 mg IM every 5 min until seizure stops.
    2. IF the patient goes into cardiac arrest while **Magnesium Sulfate** is infusing:
        a. Stop **Magnesium Sulfate**
        b. Give **Calcium Gluconate** 1 g IV/IO rapid bolus may repeat x2 q 5min prn to max 3

Hypothermia/Cold Exposure

TREATMENT:

A. Treat per Universal Patient Care Protocol.
B. Gently remove wet clothes and protect patient from further environmental exposure.
C. Assess ABCs. Allow up to 60 seconds to confirm respiratory arrest, pulseless cardiac arrest or bradycardia that is profound enough to require CPR.
D. Obtain oral or axillary temperature.

PATIENT PERFUSING:

A. Monitor ECG and pulse oximetry. Handle patient gently to avoid VF.
B. Institute rewarming procedures:
    1. O2 warmed and humidified, warm packs, heated blankets, warmed ambulance, etc.
    2. Truncal rewarming:
        a. Warmed IV fluids (200 – 300 mL); avoid over-hydration
        b. Heat packs to groin, axilla

CARDIAC ARREST:

A. Begin CPR, Treat per Cardiac Arrest Guidelines.
    1. The hypothermic heart may be unresponsive to cardiovascular drugs, pacer stimulation or defibrillation. **Rewarming is paramount**.
    2. If temperature ≤30^{o} C consider no more than 3 defibrillation attempts prior to rewarming. The interval for medication administration should be doubled until normothermic.
B. Continue rewarming procedures during transport.

OTHER TREATMENT CONSIDERATIONS:

A. Unconscious patient:
    1. Altered Mental Status and Coma protocol.
B. Frostbite present:
    1. Protect with dry dressings, do not rub frost-bitten areas, and permit only gradual warming by room temperature out of hospital.
C. At-risk groups for hypothermia include trauma victims, alcohol and drug abuse patients, homeless people, elderly, low-income families, infants and small children, and entrapped patients.
D. Hypothermia may be preceded by other disorders (alcohol, trauma, OD) look for and treat any underlying conditions while treating the hypothermia.
E. If death in the field is suspected, online Medical Control will be consulted prior to DIF determination.

Newborn Resuscitation

TREATMENT:

A. Prevent heat loss from the infant.
   1. Quickly dry infant, remove wet linens from contact with the infant.
   2. Maintain warm environment, place in mother's arms if condition warrants.
B. Airway.
   1. Wipe nose and mouth if needed.
C. Breathing Control:
   1. Stimulate respirations by gently flicking heels, rubbing spine.
   2. Face mask with 6L O2 or Blow-by O2
   3. Positive pressure ventilation for:
      a. Apnea or gasping respirations, APGAR score 5 or less, or HR <60.
   4. Airway management for persistent apnea, HR <60, or APGAR < 5 after 10 minutes.
D. At 30 to 60 seconds after delivery, clamp and cut the umbilical cord about 6 inches from infant. If resuscitation is needed, cord may be clamped and cut as soon as necessary.
E. CPR if heart rate <60 bpm at ratio of 3:1 compressions to ventilations.

FURTHER CONSIDERATIONS

A. Persistent bradycardia (rate < 60) or asystole despite PPV
   1. **Epinephrine** 0.01 mg/kg IV, IO.
B. Neonatal fluid resuscitation: 10 mL/kg crystalloid.

POST RESUCITATION CARE:

A. Continue to provide assisted ventilation as needed.
B. Closely monitor respiratory effort, heart rate, blood glucose and pulse oximetry.
C. Keep newborn normothermic. Hypothermia significantly increases risk of morbidity.

Nosebleed – Epistaxis

HISTORY:

A. Prior history of epistaxis, severity, frequency and duration of current event
B. Potential causes:
    1. Trauma
    2. Medications (e.g. anticoagulation, currently on chemotherapy)
    3. Underlying diseases such as hematological malignancy (e.g. leukemia, liver disease)
    4. Bleeding disorder (e.g. hemophilia, Von Willebrand Disease)

TREATMENT:

A. If systolic blood pressure is < 90 mmHg (MAP < 65 mmHg), follow Shock protocol.
B. Treat per Universal Patient Care, place patient in position of comfort and have them tilt their head forward.
C. Compress the nose with direct pressure. If bleeding controlled with direct pressure, monitor patient.
D. If bleeding NOT controlled with direct pressure:
    1. Have patient blow nose to expel clots
    2. **Oxymetazoline** (Afrin) 2 sprays to each affected nostril followed by direct pressure for 20 minutes without stopping.
    3. If bleeding still not controlled, and TXA available:
        a. **Tranexamic Acid** (TXA) 0.5 g via mucosal atomization device (MAD) Contraindicated with suspected CVA, MI or PE.

NOTES/PRECAUTIONS:

A. Bleeding may also occur posteriorly. A posterior nasal bleed will continue to bleed despite direct pressure. In many cases, examining the back of the throat or asking the patient if bleeding “has slowed or stopped” is also helpful.
B. Posterior epistaxis is a true emergency and may require advanced ED techniques such as balloon tamponade or interventional radiology. Do not delay transport. Be prepared for potential airway issues.
C. Detailed medication history should be obtained to include Coumadin and newer anticoagulation agents (direct oral anticoagulants (DOAC’s) such as apixaban, rivaroxaban, dabigatran), aspirin, NSAIDS, antiplatelet agents that may contribute to bleeding.
D. For patients on home oxygen via nasal cannula, place the cannula in the patient’s mouth while the nares are compressed for active bleeding.

Pain Management (Acute)

INDICATIONS FOR ACUTE PAIN MANAGEMENT:

A. Indicated to reduce acute pain and facilitate patient movement.

CONSIDERATIONS FOR THE ADMINISTRATION OF PAIN MANAGEMENT:

A. The primary goal of out-of-hospital pain management is to reduce a patient's pain, thereby improving comfort, reducing anxiety, and facilitating necessary patient assessment and treatment.
B. Pain management should be a routine component of patient care, not withheld due to concerns over masking a diagnosis, particularly in cases of clear injury.
C. There is strong evidence that combining treatment methods (multimodal pain management) is more effective that single methods or single agents for acute pain.
D. Non-pharmacological measures should be considered first for mild-to-moderate pain and always used in conjunction with pharmacological interventions for severe pain.

ASSESSING PAIN:

A. To appropriately assess pain, it is important to assess the patient’s severity on a validated scale, gather a comprehensive history, perform a focused exam, and obtain a complete set of vital signs.
B. Standardized tools offer a consistent way to measure pain, though the patient's own description remains the "gold standard". Adopt, and document OPQRST:
    1. Onset:
    2. Provocation and palliation
    3. Quality
    4. Region and Radiation
    5. Severity
    6. Time

ADULT PAIN SCALE:

PEDIATRIC PAIN SCALE:

TREATMENT (NON-PHARMACOLOGICAL)

A. All providers should consider and adopt where clinically indicated, the following non-pharmacological treatments:
    1. Reassurance and active communication
    2. Distraction strategies
    3. Immobilization and splinting
    4. Positioning
    5. Cold therapy
    6. Controlled breathing

TREATMENT (PHARMACOLOGICAL)

A. Overarching principle for all pharmacological interventions:
    1. Consider the following pharmacological interventions after excluding any identified contraindications.
    2. Monitor EtCO2 and SpO2 if the patient becomes somnolent or has depressed respirations.
    3. If using fentanyl and/or ketamine monitor EtC02 and Sp02 for repeat doses.

NON-INVASIVE PHARMACOLOGICAL

A. Acetaminophen
B. Nitrous Oxide (if available)

INVASIVE PHARMACOLOGICAL

A. Ketorolac
B. Fentanyl
C. Ketamine

NON-INVASIVE PHARMACOLOGIC INTERVENTION

A. Mild to Moderate Pain
    1. **Acetaminophen** (Tylenol) 1000 mg ODT/PO
B. Severe Pain
    1. **Nitrous Oxide**
        a. See Nitrous Oxide protocol for specific permissions.
C. Establish IV access if there is ongoing pain warranting further treatment or non-invasive intervention not appropriate and administer one of the following agents IM, IV or IO:

INVASIVE PHARMACOLOGIC INTERVENTION – Treatments above not effective

A. Mild to Moderate Pain
    1. **Ketorolac** (Toradol) 15 mg IV or 30 mg IM. DO NOT REPEAT.
        a. Not for cardiac chest pain OR Trauma System patient.
        b. Use in patients 2-64 years of age. Contraindicated in pt. w/ known renal/liver disease, allergy to ASA/NSAID, possible pregnancy, anticoagulant use, bleeding disorder, Trauma System Entry or altered mentation
    2. **Acetaminophen** (Tylenol)
        a. 1000 mg slow IV drip over 5 minutes
B. Severe Pain
    1. **Fentanyl** 1 mcg/kg IV/IO/IN/IM max 100 mcg per dose (q 5-10 mins to up to 300 mcg every 2 hours as needed for pain)
        a. Rapid injection may cause respiratory arrest or chest rigidity – administer slowly, over 30-60 seconds.
    2. **Ketamine** Recommend giving 200 mcg of fentanyl prior unless contraindications.
        a. 0.3 mg/kg IV/IO over 2-3 minutes. Max single dose 30 mg. May repeat every 10 mins x2 PRN to control pain UNLESS pt develops nystagmus, agitation, or ventilatory compromise.
        b. Precautions: In adults treat emergence reaction side effects with **Midazolam** 2.5 mg IV/IM.
        c. Do not use Ketamine for pain control if supplies are limited. Use Fentanyl as above.

ASSOCIATED NAUSEA/VOMITING DUE TO PAIN OR OPIOID ADMINISTRATION:

A. See Vomiting/Significant Nausea Protocol

PEDIATRIC PATIENTS:

A. **Ketorolac** (age 2-16 years) – 0.5 mg/kg IM to a max of 30 mg or 0.5 mg/kg IV to a max of 15 mg. Do not repeat.
B. Acetaminophen (not to exceed 750mg) 15 mg/kg IV/PO/PR
C. **Fentanyl** (not to exceed adult dose) - 1 mcg/kg max 25 mcg (IN preferred)
D. MODERATE TO SEVERE PAIN
    1. If immediate pain management needed for movement, may give fentanyl 1 mcg/kg IN
    2. If additional pain medication required, may:
        a. If no contraindications, give ketorolac IV/IO/IM. (Preferred for flank, low back, musculoskeletal pain)

   b. May repeat fentanyl 1 mcg/kg for up to 3 doses total prn
   c. Give ketamine 0.3 mg/kg IV/IO for Peds >1 year old, not open for patients <1 year old.

E. MILD PAIN
   1. Acetaminophen 15 mg/kg IV/PO/PR unless contraindications

CONTRAINDICATIONS

A. Acetaminophen
   1. Therapeutic dose in last 6 hours
   2. More than 3 g in last 24 hours
B. NSAIDS (ketorolac)
   1. Age < 1 or >65
   2. Bleeding risk
      a. Trauma entry
      b. Anticoagulants, antiplatelets, bleeding disorder
      c. Head injury or altered mental status
      d. Known or suspected GI bleeding
   3. Pregnancy
   4. Kidney issues
      a. Dehydration
      b. Renal transplant or chronic kidney disease
C. Ketamine
   1. Age < 1 or > 65
   2. Altered mental status is a relative contraindication
D. Fentanyl
   1. Not indicated for chronic pain
   2. Not indicated for atraumatic headaches

Poisoning and Overdose

TREATMENT:

A. Treat per Universal Patient Care Protocol.
B. Treat shock per Shock Protocol as needed.
C. If patient has decreased mentation, treat per Altered Mental Status protocol.
D. Manage airway per the Airway Management protocol.
E. Contact OLMC as necessary for treatment guidance. Washington Poison Center (800) 709-0911 may be used as needed for advice with stable patients. WPC cannot provide online medical control. Document OLMC/WPC instructions in your narrative.

SPECIFIC POISONING/OVERDOSE TREATMENTS:

A. Aspirin or Acetaminophen:
   1. **Activated Charcoal** (Actidose) 50 g PO only if recommended by Poison Center or Medical Control
B. Beta Blocker/Calcium Channel Blocker:
   1. **Calcium Gluconate** 3 g IV/IO over 15 minutes
   2. Treat Bradycardia and/or Shock per protocol.
D. Carbon Monoxide:
   1. CO poisoning suspected (e.g., AMS w/ multiple patients and/or sick pets at same location):
      a. 100% O2 NRB or CPAP if possible.
      b. Determine CO level w/ commercial device.
      c. SpCO between 3% and 25% with neurologic symptoms (HA, dizziness, nausea, syncope, LOC, seizures, coma) – treat and transport to ED.
      d. Treat symptoms per protocol (12 lead indicated to r/o ischemia).
E. Cyanide:
   1. Signs of poisoning: AMS, seizures/coma, tachypnea/apnea, shock, vomiting
      a. **Sodium Thiosulfate** 50 mL of 25% solution IV/IO infused over 10 to 30 minutes. Reduce infusion rate if patient hypotensive due to medication.
F. Hydrogen Fluoride: (Synonyms include HF, fluoric acid, hydro fluoride, hydrofluoric acid, and fluorine monohydride)
   1. Maintain rescuer safety and consult HAZMAT. HF is water soluble.
      a. HF inhalation injury can result from HF gas exposure, also with exposure to smoke from and off-gassing of lithium-ion batteries involved in fire or thermal runaway.
   2. Observe for signs of hypocalcemia and contact OLMC regarding treatment with Calcium Gluconate.
      a. ECG–prolonged Q-T or QRS or ventricular dysrhythmias.
      b. Other–Muscular tetany.
   3. Inhalation injury:
      a. Administer 2.5% **Calcium Gluconate** by nebulizer. Mix 1 mL of 10% Calcium Gluconate with 3 mL of Normal Saline.
      b. **Albuterol** 5mg nebulizer per protocol for wheezes.

4. Minor Burns:
    a. **Calcium Gluconate** 3 g mixed with 5 oz water soluble lubricant and applied to burn.
    b. Continue this procedure until pain is relieved or hospital arrival.
5. Hand Exposure
    a. Hand burns require expert assistance; consider transport to burn center.
    b. Place **calcium gluconate gel** into an exam glove and place the glove on the affected hand.
6. Optical Exposure
    a. **Calcium gluconate** (10 ml of 10% solution in 90 ml of sterile saline in IV set with burrette chamber). Irrigate exposed eyes with a 1% aqueous solution using a nasal cannula.
        i. Up to 500 ml over 1 - 2 hours may be used.
        ii. If calcium gluconate is not available, use normal saline for irrigation.

F. Hyperadrenergic (Cocaine, Methamphetamine, MDMA, etc.):
1. Hyperadrenergic induced arrhythmias
    a. **Midazolam** 2.5-5 mg IV/IM q 5 min PRN
    b. Stable V-tach: **Amiodarone** 150 mg/10 minutes
    c. V-fib: treat per protocol, limit Epi to 1 mg every 5 min

G. Opioid Toxidrome with Respiratory Depression
1. If BLS provider OR difficult IV access, give **Naloxone** 2 mg IM/IN every 5 mins up to 8 mg.
2. **Naloxone** 0.5 - 2 mg IV. May repeat every 3-5 minutes up to 2 mg titrating to respiratory rate. If no improvement, repeat **Naloxone** 2 mg every 3-5 minutes up to a maximum of 8 mg total. Consult medical control if patient is responding but more than 8 mg required

H. Organophosphates/Nerve Agent:
1. Titrate dosing to improved respiratory function and decreased bronchial secretions.
2. Treatment:
    a. **Atropine** - 2 mg IV bolus. May give IM if IV unavailable.
    b. Repeat with 4 mg IV bolus. May give IM if IV unavailable.
    c. Repeat by doubling the previous dose every 3–5 minutes until clinical improvement
    d. EMT's with IM medication administration training may give IM Atropine if scene situation warrants.

I. Phenothiazine – Dystonic Reaction and/or Akathisia:
1. **Diphenhydramine** 1 mg/kg IV/IM max 50 mg, usually complete relief in 1-2 minutes IV and 15-20 minutes IM.

J. Riot Control Agents – (Mace, pepper spray, tear gas, lacrimators):
1. Move affected individuals from contaminated environment into fresh air if possible.
2. Irrigation with water or saline for decontamination of dermal and ocular exposure.
3. Treat for Respiratory Distress as appropriate.
4. Symptoms are self-limited and are best treated by removing patient from ongoing exposure. Symptoms frequently decrease over time (15-45 minutes).
    a. Individuals persistently symptomatic warrant transport for further intervention.

K. Tricyclic Antidepressant and/or Benadryl:
   1. If hypotension or QRS > 0.12 **Sodium Bicarbonate** 1 mEq/kg slow IV push. May repeat after 5 mins if improving QRS. Treatment goal is QRS 0.12.
   2. If Refractory arrythmias: **Magnesium Sulfate** 2 g IV over 15 minutes or push in cardiac arrest.
   3. If Seizures: **Midazolam** 5 mg IV, IM q 5 min PRN for seizure.

PEDIATRIC PATIENTS:

A. **Activated Charcoal** 1 g/kg max 50g per MC or Poison Center concurrence
B. **Atropine** 0.02 mg/kg Max 2 mg for bradycardia in calcium channel/Beta blocker OD and Organophosphate poisoning.
C. **Diphenhydramine** 1 mg/kg Max 25 mg for dystonia.
D. **Calcium Gluconate** 60 mg/kg max 3 g for calcium channel blocker OD with hypotension.
   1. Contact OLMC or WPC for dosing in Hydrogen Fluoride exposure.
E. **Magnesium Sulfate** 50 mg/kg for TCA/Benadryl OD after Sodium Bicarbonate
F. **Naloxone** 0.1 mg/kg IV/IO/IM/IN every 3-5 minutes to a maximum of 2 mg per dose. Max total dose 8 mg. Do not give to newborns.
G. **Sodium Thiosulfate** 1.6 mL/kg slow IV over 10 minutes
H. **Midazolam** 0.2 mg/kg IV/IO/IM/IN for hyperadrenergic syndrome or seizure due to poisoning.
I. Consider possibility of neglect/abuse.

SPECIAL CONSIDERATIONS:

A. Symptoms of dystonic reaction include the following:
   1. Contractions of face, neck, back.
   2. Protrusion/fasciculations tongue common.
   3. Oculogyric crisis (eyes looking upwards).
   4. Laryngospasm sometimes present.
   5. Akathisia (agitation, distress, twitching, excitement

Respiratory Distress (Asthma, COPD, Arrest, Pulmonary Edema)

TREATMENT:

A. Treat per Universal Patient Care Protocol.
B. Follow appropriate Airway Management or Cardiac Dysrhythmia protocol if indicated.

CLINICAL IMPRESSION:

A. Upper Airway Obstruction
   1. Partial Obstruction
      a. Sit patient up and have him/her cough.
      b. Transport if obstruction is not cleared or if suspicious of aspiration.
   2. Complete Obstruction
      a. AHA protocol for complete obstruction.
      b. Laryngoscopy in unconscious with attempt to remove with Magill forceps.
      c. If obstruction not removed and unable to ventilate, consider cricothyroidotomy (or needle jet insufflation in pediatric).

B. Asthma
   1. If known asthmatic having recurrent attack:
      a. **Albuterol** 5 mg with **Atrovent** 0.5 mg via Nebulizer. May repeat Albuterol only PRN.
      ALTERNATIVE **DuoNeb** 3 mL– may repeat PRN
      ALTERNATIVE **Levalbuterol** 1.25-2.5 mg with **Atrovent** 0.5 mg; may repeat Levalbuterol only x 2 q 20 minutes PRN (max 7.5 mg).
      b. **Methylprednisolone** 125 mg IV. ALTERNATIVE **Dexamethasone** IV/IM/PO 10 mg.
      c. Status asthmaticus: **Epinephrine** 2-40 mcg/min
         i. If patient deteriorating and unable to start IV, **Epinephrine** 1 mg/mL 0.3 - 0.5 mg IM. May repeat once in 5-15 minutes if patient is still in extremis. Consider using lower dose (0.3 mg) for patients > 40 years old or known coronary artery disease.
      d. Status asthmaticus: **Magnesium Sulfate** 2 g in 50-100 mL over 20 min IV.
      e. Consider CPAP/BiPAP per protocol.

C. COPD
   1. If cyanotic or severe respiratory distress: high flow oxygen by mask. Be prepared to assist respiration.
   2. Consider CPAP/BiPAP per protocol.
   3. **Albuterol** 5 mg with **Atrovent** 0.5 mg via Nebulizer. May repeat Albuterol only PRN.
   ALTERNATIVE **DuoNeb** 3 mL– may repeat PRN
   ALTERNATIVE **Levalbuterol** 1.25-2.5 mg with **Atrovent** 0.5 mg; may repeat Levalbuterol only x 2 q 20 minutes (max 7.5 mg).
   4. **Methylprednisolone** 125 mg IV. ALTERNATIVE **Dexamethasone** IV/IM/PO 10 mg.

D. Insufficient Respiration Or Respiratory Arrest
   1. Rule out obstruction. Ventilate with bag-valve mask.
   2. **Naloxone** 0.5-2.0 mg IV, 2 mg IN/IM if narcotics possible.

E. Pulmonary Edema
1. Sit patient up if possible; dangle legs.
2. If patient in extremis: CPAP 100% FiO2. Use PEEP valve if assisting ventilation.
3. If systolic BP > 110:
   a. **Nitroglycerine** 0.4 mg sublingual every 3-5 minutes PRN
   b. Caution in Right Sided Myocardial Infarction
   c. Contraindicated in patient taking phosphodiesterase inhibitor [such as Sildenafil (Viagra), tadalafil (Cialis), vardenafil (Levitra), avanafil (Stendra)]
4. If suspected MI with chest pain treat per protocol.

PEDIATRIC PATIENTS:

A. Upper Airway
1. Audible stridor at rest
   a. **Racemic Epinephrine** 0.05 mL/kg Max 0.5 mL in 5 mL NS by nebulizer and mask.
   ALTERNATIVE: 0.5 mg/kg Max 5 mg **Epinephrine** (1 mg/mL) via nebulizer.
2. Croup (barky cough) + URI: **Dexamethasone** 0.6 mg/kg IV/IM/PO (max dose 10 mg)
   a. Pt may also have stridor (**Racemic Epinephrine** as above)**.**
3. Treat anaphylaxis and foreign body obstruction per adult guidelines.
4. If the child deteriorates, ventilate with a BVM.
5. If you cannot effectively ventilate with BVM perform intubation.
6. If complete obstruction is present and you cannot effectively BVM ventilate the patient consider needle cricothyrotomy.

B. Asthma
1. **Albuterol** - Patient weight < 15kg 2.5-5 mg. If > 15kg 5-10 mg with **Atrovent** 0.5 mg via Nebulizer for wheezes.
   ALTERNATIVE **DuoNeb** 1.5 mL– may repeat PRN
   ALTERNATIVE **Levalbuterol** 1.25 mg with **Atrovent** 0.5 mg; may repeat Levalbuterol only X 2 q 20 minutes (Max 3.75 mg)
2. **Methylprednisolone** 2 mg/kg (Max 125 mg). ALTERNATIVE **Dexamethasone** 0.6 mg/kg IV/IM/PO (Max 10 mg).
3. **Magnesium Sulfate** 50 mg/kg. Max 2 grams
4. **Epinephrine** 0.1 mcg/kg/min IV for status asthmaticus
   a. If patient deteriorating and unable to start IV **Epinephrine** 0.01 mg/kg IM (Max 0.5 mg).

C. Insufficient Respiration or Respiratory Arrest
1. Rule out obstruction. Ventilate with bag-valve mask.
2. **Naloxone** 0.1 mg/kg Max 2 mg IV/IO/IM if opioid toxicity suspected.

D. Acute Bronchiolitis (< 2 years old)
   1. Mild-moderate respiratory distress:
      a. O2 via blow-by, nasal cannula or mask to keep SpO2 > 92%. Monitor ETCO2.
      b. If wheezing, **Albuterol** 2.5 mg via neb. If improvement may use every 10 mins.
         ALTERNATIVE **Levalbuterol** 1.25 mg
   2. Severe respiratory distress.
      a. If wheezing, trial of **Albuterol** 2.5 mg via nebulizer. If improvement may use every 10 mins.
         ALTERNATIVE **Levalbuterol** 1.25 mg
      b. Prepare for positive pressure ventilation with BVM and intubation for apnea, ETCO2 > 55 or inability to maintain SpO2 > 85%.

NOTES AND PRECAUTIONS:

A. Aggressive airway management is appropriate for the patient who does not respond to treatment or is rapidly deteriorating.
B. Hyperventilation may be a response to an underlying medical problem and should only be considered after these other causes have been excluded. Do not treat hyperventilation by rebreathing CO2. Reassurance and oxygen via mask are appropriate.
C. Considerations for all Patients:
   1. Capnography- combine with patient presentation to ascertain ventilatory status.
      a. EtCO2 normal range is 35-45 mm/Hg.

b. Baseline EtCO2 may be higher in COPD patient.

Seizures

TREATMENT:

A. Treat per Universal Patient Care protocol.
B. If patient is in status seizure (continuous seizure or repetitive seizures without regaining normal mental status):
1. **Midazolam** 5 mg IV/IO. Repeat every 5 minutes until seizure stops.
2. If no IV access, **Midazolam** 10 mg IM. Repeat every 5 minutes until seizure stops.
3. Monitor patient's respiratory status closely after midazolam administration.
C. Check blood glucose and treat per Altered Mental Status protocol.
D. Place patient in the recovery position for transport.
E. Administer oxygen (high flow if neurological deficits or altered mental status)
F. All first-time seizure patients should be evaluated by a physician.

PEDIATRIC PATIENTS:

A. If patient is in status seizure (continuous seizure or repetitive seizures without regaining normal mental status):
1. **Midazolam** 0.2 mg/kg IV/IO/IM/IN. Repeat every 5 minutes until seizure stops.
2. Monitor patient's respiratory status closely after midazolam administration.
B. If fever > 38° C (100.4° F) treat seizure as above:
1. Cool patient and give **Acetaminophen** 15 mg/kg PR suppository.
C. If, on arrival, the patient is not actively seizing (post-ictal) an IV is not required.
D. All hypoglycemic or first-time pediatric seizure patients should be transported.

ECLAMPSIA:

A. **Magnesium Sulfate** 4 g IV/IO over 20 mins. May give 10 g IM (5 g each buttock if no IV/IO access) then **Midazolam** as above. See Hypertensive Disorders of Pregnancy Eclampsia protocol.

CONSIDERATIONS:

A. BE PREPARED TO MANAGE RESPIRATORY DEPRESSION.
B. Seizures that self-terminate in known epileptic may not require treatment or transport.
C. Seizures may be a sign of cerebral hypoxia from cardiac arrest.
D. Seizures may be caused by dysrhythmias.

Sepsis

TREATMENT:

A. Treat per Universal Patient Care Protocol.
B. Maintain O2 sat above 95%.
C. Known or suspected infection with two or more of the following:
    1. Temperature > 38° C (100.4° F) OR < 36° C (96.8° F)
    2. Respiratory rate > 20 breaths/min
    3. Heart rate > 100 beats/min
    4. ETCO2 ≤ 25 mmHg
D. If two or more of the above AND:
    1. SBP < 90 (MAP < 65)

    OR

    2. Altered Mental Status

    Notify receiving facility of "Septic Shock Alert" Transport Acuity Red.
E. Give up to 2 liters fluid (Lactated Ringer's preferred) as rapidly as possible or until:
    1. MAP > 65.
    2. Neck vein distention develops.
    3. Pulmonary rales develop.
F. If not responding to fluid and SBP < 90 (MAP <65):
    1. **Norepinephrine** 4 mcg/min. If no response, increase every 5 minutes in 4 mcg/min increments to max of 12 mcg/min. Goal is MAP >65.
    2. ALTERNATIVE **Epinephrine** 2-40 mcg/min IV/IO infusion.
G. If patient normotensive and not altered, transport Acuity Yellow and notify hospital personnel of possible sepsis.

Shock

TREATMENT:

A. Hypovolemic Shock, e.g. severe dehydration (not hemorrhagic)

1. Give 1 L IV fluid until:
   a. SBP > 90 mmHg (MAP >65)
   b. Normal mentation
   c. Neck vein distention and/or pulmonary rales

B. Hemorrhagic Shock :

1. Control external bleeding PRN. Give up to 1 L IV fluid until mental status improves.
2. Give TXA as per below.
   a. TXA contraindicated in GI bleed

C. If Head Injury and Shock:

1. Fluid challenge as above. Target SBP 110 mmHg (MAP > 80)
2. Maintain normal ventilation rate, Target ETCO2 35 mmHg.

D. Distributive (sepsis, neurogenic):

1. If septic use Sepsis protocol
2. Begin 500- 1,000 mL fluid challenge to maintain a systolic BP of > 90 mmHg (MAP >65) Repeat to max of 2000 mL if signs of shock and no pulmonary edema.
3. **Low dose epinephrine** 10-20 mcg q 2-5 minutes as needed to maintain SBP >90 (MAP >65) as a bridge to:
4. **Norepinephrine** 4 mcg/min IV/IO infusion. If no response, increase every 5 minutes in 4 mcg/min increments to max of 12 mcg/min. Goal is a systolic blood pressure of > 90 mmHg (MAP >65). ALTERNATIVE **Epinephrine** 2-40 mcg/min IV/IO infusion.

E. Cardiogenic (STEMI, cardiomyopathy):

1. Follow appropriate dysrhythmia protocol.
2. **Low dose epinephrine** 10-20 mcg q 2-5 minutes as needed to maintain SBP >90 (MAP >65)
3. Give 250 - 500 mL fluid challenge to maintain a systolic BP of > 90 mmHg. Repeat once if continued signs of shock and no pulmonary edema. Max of 1,000 mL.
4. **Norepinephrine** 4 mcg/min IV/IO infusion. If no response, increase every 5 minutes in 4 mcg/min increments to max of 12 mcg/min. Goal is a systolic blood pressure of > 90 mmHg (MAP >65). ALTERNATIVE **Epinephrine** 2-10 mcg/min IV/IO infusion.

F. Hypoadrenal Shock (Addisonian Crisis):

1. Known Hypoadrenal state (Medic Alert, Parent or caregiver).
2. Suspected: patient on high dose, chronic steroid.
3. **Low dose epinephrine** 10-20 mcg q 2-5 minutes as needed to maintain SBP >90 (MAP >65)
4. Fluid challenge as above
5. **Methylprednisolone** 125 mg. ALTERNATIVE **Dexamethasone** 10 mg IV/IM/PO.
6. Consult medical control if persistent hypotension after fluid challenge and steroid.

PEDIATRIC PATIENTS:

A. Treat per Universal Patient Care protocol and prepare for rapid transport.
B. General shock treatment as above:
1. **Low dose epinephrine** 1 mcg/kg (0.1 mL/kg) every 2-5 minutes as needed to maintain perfusion. Maximum single dose 20 mcg (2 mL)
2. Pediatric fluid challenge 20 mL/kg repeat x 1 PRN to appropriate BP for age or sx of pulmonary edema.
3. **Norepinephrine** 0.1 mcg/kg/min. May increase by 0.1 mcg/kg/min every 5 mins PRN to max of 0.4 mcg/kg/min**.** ALTERNATIVE **Epinephrine** 0.1mcg/kg/min IV/IO infusion.
4. **Methylprednisolone** 2 mg/kg IV (max 125 mg) ALTERNATIVE **Dexamethasone** 0.6 mg/kg IV/IM/PO (Max 10 mg).

TRANEXAMIC ACID (TXA)

A. Adult trauma patients; not for patients < 15 years (50 kg and above if age unknown)
B. Penetrating or Blunt Trauma < 3 hours from injury, if:
1. SBP < 90 mmHg (MAP < 65), HR > SBP, or both
OR
2. GCS between 3 and 12 with reactive pupil
3. **TXA** 2 g in 50 mL NS, administer over 10 – 20 minutes
C. Obstetrical hemorrhage:
1. If estimated blood loss > 500 mL, SBP < 90 (MAP < 65), or HR > 120:
a. **TXA** 1 g IV over 20 minutes.
D. Administer TXA through separate line, not through blood tubing.

GENERAL CONSIDERATIONS:

A. IV large bore (Two lines recommended for trauma/sepsis) above the diaphragm preferred, in this order
1. Arm vein, antecubital
2. Humeral IO (not pediatric)
3. IO Tibial or Femoral (pediatric)
B. Tachycardia is first sign of shock. Pulse pressure often narrows prior to decrease in systolic BP.
C. Changing level of consciousness important clue.
D. Always document time and amount of fluid given.
E. Reduce fluid infusion to TKO when administering blood products

Stroke – CVA

TREATMENT:

A. Treat per Universal Patient Care protocol.
B. For suspected stroke, CBG indicated as soon as practical and no later than 10 minutes after patient contact. If CBG is low, treat per Altered Mental Status guidelines.
C. Conduct Stroke evaluation as per the following. If BEFAST positive, do LAMS:

BE-FAST ASSESSMENT – Positive Findings:	
BALANCE	Sudden loss of balance or coordination - Unstable gait - Truncal ataxia – unstable standing or sitting - Finger to nose test - Heel to shin test
EYES	Loss of vision in one or both eyes - Extraocular movement - New onset vision loss
FACE	Lack of facial symmetry when smiling - Close eyes tight, note symmetry - Smile, note symmetry
ARMS	Arm drift or falling when holding arms outstretched - Test arms outstretched for 10 seconds - While sitting, test holding legs up for 10 seconds
SPEECH	Not able to repeat simple phrase without slurring or memory loss - "No ifs, ands, or buts"
TIME	Note time last known well.

LOS ANGELES MOTOR SCALE (LAMS)			Total: _____
Facial droop	Absent 0	Present 1	
Arm drift	Absent 0	Drifts down 1	Falls rapidly 2
Grip strength	Normal 0	Weak grip 1	No grip 2

D. If bleed suspected, maintain normal ventilation rates and target ETCO2 of 35 mmHg
E. Titrate O2 at lowest level to achieve SpO2 94–98%. Maintain ETCO2 35-45 mmHg
F. Reassure patient if conscious; patient may understand and hear all conversation even though he/she appears comatose or confused.
G. Transport Acuity Red if the patient meets the following criteria:
    1. ANY positive BE-FAST findings < 24 hours
    2. Critical: profound paralysis, aphasia, comatose.
    3. Notify receiving facility of Stroke Alert via Pulsara, transport acuity RED.
    4. Note contact information of caregiver/family in Pulsara.
H. Patients meeting stroke/CVA criteria will be transported as follows:
    1. Comprehensive Stroke Center (PHSW)
        a. ANY pt. with LAMS 4 or 5
            i. Always check facility status (via OCS or after entering patient into Pulsara) for availability of Neurointerventionalist.

   ii. If unavailable, divert to closest appropriate facility Emanuel, Providence Portland, Kaiser Sunnyside or OHSU.
   iii. Contact OLMC if divert not practical due to traffic, etc.
  b. Symptoms more than 3 hours but < 24 hours.
  c. Suspected intracranial hemorrhage.
  d. Signs of profound paralysis, aphasia, or patient comatose.
2. Closest Stroke Center
  a. Symptoms 3 hours or less, above criteria not met.
  b. TIA patient with resolving symptoms. Transport Acuity RED.

GENERAL CONSIDERATIONS:

A. Ensure family or caregiver available to Stroke Team by phone or in person at hospital

STROKE CHECKLIST

IMMEDIATE TASKS

- CBG. If low, treat per altered mental status.
- Assess BEFAST. If positive do LAMS.

Facial droop	Absent 0	Present 1	
Arm drift	Absent 0	Drifts down 1	Falls rapidly 2
Grip strength	Normal 0	Weak grip 1	No grip 2

- Target SpO2 94–98% ETCO2 35-40 mmHg.
- Establish time last known well (LKW).
- Document next of kin (NOK) contact number.
- Limit scene time <15 minutes.

KEY CONSIDERATIONS

* Check hospital stroke status.
* Transport Acuity **RED** if:
  - + BEFAST <24 hours.
  - Paralysis, aphasia, or comatose.
  - TIA with resolving symptoms.
* Destination PHSW:
  - LAMS 4 or 5.
  - Symptoms > 3 hours but < 24 hours.
  - Suspected ICH, paralysis, aphasia, or comatose.
* Destination closest Stroke Center:
  - Symptoms ≤ 3hours.
  - TIA with resolving symptoms.
* Activate STROKE to receiving facility utilizing Pulsara.
* Add LKW and NOK contact number in Pulsara.
* Negative BEFAST/LAMS do not exclude possibility of stroke.

Syncope

DEFINITION:

A. Syncope is loss of consciousness and postural tone, resolving spontaneously without medical interventions. Laypersons describe as “fainting”.
B. Typically, is abrupt in onset and resolves quickly. May find the patient awake and alert on initial evaluation.
C. Presyncope is the prodromal symptoms of syncope, described by the patient as “nearly blacking out” or “nearly fainting.”

TREATMENT:

A. Patient with identified underlying cause for syncope, treat per specific protocol.
    1. Continued neurologic derangement consider Stroke protocol.
    2. If ongoing mental status changes or coma, should be treated per the Altered Mental Status protocol.
B. Treat per Universal Patient Care Protocol
C. Should be directed at abnormalities discovered in the physical exam or on additional examination and may include management of cardiac dysrhythmias, cardiac ischemia/infarct, hemorrhage, shock, etc.
    a. Manage airway as indicated
    b. Oxygen as appropriate
    c. Evaluate for hemorrhage and treat for shock if indicated
    f. Cardiac monitor
    g. 12-lead EKG
    d. Establish IV access
    e. Fluid bolus if hypotensive
    h. Monitor for and treat arrhythmias (if present refer to appropriate guideline)

NOTES AND CAUTIONS:

A. Syncope is medically complex, and refusal of transport will generally be against medical advice.
B. High-risk causes of syncope include the following:
    1. Cardiovascular
        a. Myocardial infarction
        b. Aortic stenosis
        c. Hypertrophic cardiomyopathy
        d. Pulmonary embolus
        e. Thoracic aortic dissection
        f. Lethal dysrhythmia
        g. Symptomatic anemia
    2. Neurovascular
        a. Intracranial hemorrhage

   b. Transient ischemic attack or stroke
3. Other
   a. Syncope during exertion or while supine
   b. Electrolyte imbalance
   c. Medication induced
   d. Family history of sudden cardiac death

Vomiting/Significant Nausea

TREATMENT:

A. Treat per Universal Patient Care Protocol
B. Fluid challenge if hypotensive. Treat per Shock protocol.
C. **Ondansetron** 8 mg PO orally dissolving tablets (Zofran ODT)
D. If unable to tolerate oral route and IV available **Ondansetron** 8 mg
E. If continued vomiting/severe nausea 15 minutes after Ondansetron consider:
    1. **Droperidol** 1.25 mg IV/IO/IM
        a. 0.625 mg IV/IO/IM in patient > 65 or other concerns

PEDIATRIC PATIENT WITH SIGNIFICANT VOMITING:

A. **Ondansetron** 0.1 mg/kg IV/IM. Children over 6 months only. If child < 15 kg max 2 mg. If child > 15 kg max 4mg.
B. May give **Ondansetron** ODT 2mg only if < 15 kg; 4 mg only if >15kg.
C. Contact OLMC for significant vomiting in pediatric patients under 6 months of age.

SPECIAL CONSIDERATIONS:

A. Obtain history and consider underlying cause.
    1. Head injury/Increased intracranial pressure.
    2. Shock/hypotension.
    3. Stroke.
B. Consider offering patient an **Isopropyl Alcohol** swab and allowing the patient to self-administer the swab by inhalation. Emphasize slow deep inhalation. May be repeated up to 2 times (total of 3 administrations).
C. **Droperidol** may cause somnolence, especially in older people.

Weakness/Dizziness Without Clear Cause

INTRODUCTION:

A. Weakness and dizziness complaints have a broad differential and can be the presenting chief complaints for sepsis, stroke, and acute coronary syndrome, especially in the geriatric population. Abnormal vital signs (including temperature) can give key information regarding differential diagnosis.

EVALUATION:

A. Complete full set of vitals to include temperature.
B. Perform the following based on patient history and key information from the vital sign evaluation:
    1. Conduct BEFAST/LAMS as per Stroke protocol.
    2. Perform blood glucose determination.
    3. Assess for Acute Coronary Syndrome including ECG.
C. If BLS unit, can obtain 12 lead EKG and send to OLMC via Pulsara.

TREATMENT:

A. Treat as per Universal Patient Care protocol.
B. If abnormal BEFAST and/or posterior stroke exam follow Stroke protocol.
C. If known or suspected infection and vital sign abnormalities, treat as per Sepsis protocol.
D. If abnormal glucose, treat as per Altered Mental Status protocol.
E. If signs or symptoms of ACS including dyspnea, chest pain, abdominal pain and/or EKG abnormalities treat as per Acute Coronary Syndrome guidelines.
F. Appropriate evaluation if patient is refusing care includes:
    1. Evaluate as above
    2. Evaluate patient's ability to walk
    3. Consider consult with OLMC

TRAUMA - Amputation

TREATMENT:

A. Universal Patient Care
B. Treat hemorrhage via Hemorrhage Control Protocol
C. Stump
    1. Cover with sterile dressing, saturate with sterile saline.
    2. Cover with dry dressing.
D. Severed Part
    1. Rinse gently with sterile saline to remove debris.
    2. Wrap severed part with moistened gauze; place in airtight bag.
    3. Place bag in ice water.
E. Partial Amputation
    1. Cover with sterile dressing, saturate with sterile saline.
    2. Cover with dry dressing.
    3. Splint in anatomical position, avoid torsion and angulation (reduce torsion into anatomical position).
F. Treat pain per Pain Control Protocol

GENERAL CONSIDERATIONS:

A. Do not use dry ice or put severed part in direct contact with ice.
B. Do not neglect total patient care in favor of caring for the amputation.
C. Time is of the greatest importance to assure viability.
D. Amputation above wrist or ankle meets trauma system entry criteria.

TRAUMA - Blast Injuries

TREATMENT CONSIDERATIONS:

A. Manage hemorrhage per protocol.
B. Secure airway per protocol.
    1. If thermal or chemical burn to airway is suspected, early airway control is vital.
C. Breathing:
    1. Administer oxygen as appropriate with a target of achieving 94-98% saturation.
    2. Assist respirations as needed
    3. Cover any open chest wounds with semi-occlusive dressing
    4. If patient has evidence of tension pneumothorax, perform pleural decompression.
D. Circulation:
    1. Establish large bore IV access, treat Shock per protocol.
E. Disability:
    1. Treat traumatic brain injury and immobilize the spine as needed.
    2. Manage amputation per protocol.

NOTES/KEY CONSIDERATIONS:

A. Scene safety is of paramount importance when responding to an explosion or blast injury.
B. Patients sustaining blast injury may sustain complex, multi-system injuries including: blunt and penetrating trauma, shrapnel, barotrauma, burns, and toxic chemical exposure.
C. Consideration of airway injury, particularly airway burns, should prompt early and aggressive airway management.
D. Consider potential for barotrauma including tension pneumothorax and tympanic membrane perforation.
E. Blast injury patients will be transported to a trauma center.
F. Injury patterns include primary injury from over-pressurization. Can include tympanic membrane rupture, pulmonary damage and hollow viscus injury. Secondary injury from projectiles includes blunt and penetrating trauma. Tertiary includes injuries from displacement of victim by the blast wind. Quaternary injuries are all other injuries from the blast including crush injuries, burns, asphyxia, toxic exposures, exacerbations of chronic illness.

TRAUMA - Crush Injury/Entrapment

TREATMENT:

A. Treat per Universal Patient Care Protocol.
B. Spinal Motion Restriction if indicated and feasible.
C. Consider pain management.
D. Evaluate degree of entrapment and viability of extremities (absent pulse, blanched skin, capillary refill, diminished sensation, extremely cold to the touch).
E. During extrication, administer 1000 - 2000 mL fluid bolus (NS preferred), then maintain at 500 mL/hr.
F. Monitor cardiac rhythm for signs of hyperkalemia throughout patient contact as feasible. If present, treat per Hyperkalemia protocol.
G. Wound care:
    1. Remove all restrictive dressings (clothing, jewelry, etc.).
    2. Monitor distal pulse, motor and sensation in involved extremity.
    3. Bandage all open wounds (irrigate if needed).
    4. Stabilize all protruding foreign bodies (impaled objects).
    5. Splint/immobilize injured areas.
    6. For suspected pelvic crushing injuries, follow the Pelvic Immobilization procedure if indicated.

TRAUMA - Traumatic Brain Injury

TREATMENT:

A. Treat per Universal Patient Care Protocol.
B. Patient evaluation should include GCS to help categorize injury severity.
    1. Mild injury GCS of 13-15.
    2. Moderate GCS 9-12.
    3. Severe GCS 8 or less.
C. Avoid hypoxia. Goal is SPO2 94-98%.
D. Prevent hypotension (Goal SBP ≥110 mmHg [MAP ≥80 mmHg]).
    1. Begin fluid challenge to maintain a systolic BP of > 110 mmHg (MAP > 80 mmHg). Repeat to max of 2 L if continued signs of shock and no pulmonary edema.
    2. TBI with signs of herniation (GCS ≤ 8, blown pupil, posturing)
        a. **Sodium bicarbonate** 1 mEq/Kg once.
    3. If SBP < 90 after 2 L fluid follow shock protocol.
E. Follow Advanced Airway protocol if patient unable to protect airway.
F. If the patient has an airway placed, carefully manage ventilations to minimize hyperventilation.
    1. Monitor ETCO2 with goal of 35 mmHg.
    2. If signs of herniation (blown pupil, posturing) maintain ETCO2 35mmHg.

TRANEXAMIC ACID (TXA):

A. Adult trauma patients only; Not for Patients <15 (50kg and above if age unknown)
B. Penetrating or Blunt Trauma <3hr from injury
    1. SBP < 90 mmHg (MAP < 65), HR >SBP or both

    OR

    2. GCS between 3 and 12 with reactive pupil
C. **TXA** 2 g in 50 mL NS, administer over 10 – 20 minutes

TRAUMA – Arrest/Traumatic Death In The Field

Unwitnessed traumatic arrest is almost uniformly fatal while EMS witnessed arrest due to severe hypovolemia, hypoxia, or tension pneumothorax may respond to resuscitation.

A. **HAT** Resuscitation: Treatable causes of witnessed traumatic arrest.
   1. **Hypovolemia**: Control external bleeding, apply pelvic binder/wrap if pelvic trauma, Administer 1000 mL of Lactated Ringer's.
   2. **Airway**/Oxygenation: Ensure airway patency and effective oxygenation.
   3. **Tension** Pneumothorax: Perform bilateral needle chest decompression if indicated.
B. Trauma patients who are pulseless and apneic on EMS arrival are considered dead in the field unless there are extenuating circumstances (e.g. hypothermia, medical cause).
C. For patients found in VF or Pulseless VT on EMS arrival, suspect a medical event and treat per the VF/pulseless VT protocol.
D. For patients who deteriorate to PEA or asystole on scene, begin CPR while instituting HAT resuscitation (CPR should not interfere with HAT procedures):
   1. If ROSC is obtained, transport to trauma center.
   2. If ROSC is not achieved:
      a. If < 10 minutes from witnessed arrest to trauma center for blunt trauma, or < 15 minutes for isolated penetrating trauma, initiate transport.
      b. If the above criteria are not met, declare death in the field.
      c. If transport initiated, continue treatment and transport until care transferred to hospital team.
E. If the mechanism of injury appears inconsistent with the patient's condition and not severe enough to induce traumatic arrest, consider a primary medical cause for the patient's cardiac arrest and treat accordingly.

DOCUMENTATION:

A. All patient encounters will be recorded on an EHR with time and procedures documented.
B. All conversations with Medical Control to be documented, to include time, physician's name, and instructions.
C. Law Enforcement will be notified by the PIC on all cases of DIF. Clark County Medical Examiner must be contacted prior to Paramedic leaving the scene.
   1. The ME may choose not to respond to the scene and allow for decedent retrieval by a local funeral home. In such cases, document who was spoken to at the ME's office (must be the ME or Deputy ME) to include name and phone number. This information releases the body to the funeral home. Provide this information to the family and/or law enforcement.

PRECAUTIONS:

A. All hypothermic patients, possible drug overdose, victims of electrocution, lightning, and drowning should have resuscitative efforts begun.
B. Consider the needs of survivors when discontinuing a code.
C. If any doubt exists about the resuscitation of a patient, consult Medical Control.

PROCEDURE – Airway Management Overview

INDICATIONS:

A. Airway control and protection.
B. Inadequate ventilation and/or oxygenation.

OXYGENATION, MAINTENANCE OF AIRWAY AND VENTILATION:

A. Supplemental oxygen:
    1. A Nasal cannula is useful for small amounts of supplemental oxygen.
    2. Partial Rebreather masks (PRB) are recommended when higher flow and concentrations of oxygen need to be delivered.
    3. Blow-by oxygen should be used for infants and toddlers.
B. Nasopharyngeal Airway (NPA) or Oropharyngeal Airway (OPA) should be used for patients who are unable to maintain their own airway.
C. A Bag-Valve-Mask (BVM) should be used when inadequate ventilation is present.
D. CPAP should be considered for MEDICAL patients complaining of moderate to severe respiratory distress meeting ALL the criteria described in Continuous Positive Airway Pressure (CPAP) procedure.
E. End-tidal CO2 shall be utilized on all intubated patients.
F. PEEP valve should be considered when mechanically ventilating a patient with COPD or CHF.

NOTES & PRECAUTIONS:

A. Trauma patients: airway maintenance with cervical spine control is the primary concern. If unable to establish or maintain an airway, transport the patient to the closest hospital. This includes patients entered into the Trauma System.
B. If unable to control the airway and/or oxygenation via the above methods, follow the Advanced Airway protocol

PROCEDURE – Advanced Airway - Intubation/DSI

INTUBATION FOR PATIENT ADULT/CHILD WITH A PULSE:

PLAN

A. Assess scene safety issues.
B. Analyze risks of the procedure
C. Establish 360-degree access to the patient.
D. Assess and document the patient's vital signs including GCS and neurologic exam prior to administration of sedatives or paralytics.

PREPARE

A. Monitoring and Equipment:
   1. Pulse oximetry AND capnography
   2. Cardiac monitor
   3. BP on arm opposite to medication injection site. Cycle every 2 minutes
   4. If available two O2 tanks and regulators with nasal cannula
   5. IV/IO secured and flushes easily
   6. Treat as per Shock protocol to achieve and maintain SBP >90 (MAP >65)
   7. Prepare low dose epinephrine
   8. Prepare induction agent and paralytic, verify doses
   7. Suction, BVM with PEEP valve set to 5, CPAP
   8. ET tubes, bougie or rigid stylet, iGel, surgical airway equipment
B. Treat hypotension. **Achieve goal of MAP>65 mmHg OR SBP >90 mmHg for 3 minutes prior to proceeding with intubation**.
C. Positioning: ear at level of sternal notch, face parallel to floor/ceiling, head of gurney elevated to 15 degrees.

PRE-OXYGENATION:

A. Induction medications:
   1. **Ketamine** 1 mg/kg IV/IO slow push over 2 mins, maximum single dose 200 mg. May repeat x 1 if dissociation not achieved.
      IF KETAMINE UNAVAILABLE: Etomidate 0.3 mg/kg, maximum 60 mg.
      a. PATIENT BREATHING ADEQUATELY: NIPPV to achieve **target SpO2 ≥94% for three minutes prior to intubation**.
      b. PATIENT NOT BREATHING ADEQUATELY: use a BVM at 25 L/min O2 with NPA/ OPA/iGel. For mask, perform 2 person BVM to obtain seal. **Must achieve SpO2 ≥94% for three minutes prior to intubation. If not, use iGel only.**
      c. If unable to achieve preoxygenation goals, adjust positioning and increase PEEP to 10.
      c. If SpO2 ≥94% for three minutes, proceed to intubation
      d. If contraindications to effective mask seal (facial injuries, copious bleeding/vomit), use clinical judgment for establishing oxygenation.
      e. IF UNABLE TO ACHIEVE SpO2 ≥94%: use iGel with or without paralytic.

PERFORM DELAYED SEQUENCE INTUBATION:

A. **Rocuronium** 1.5 mg/kg IV/IO, maximum single dose 300 mg.
   1. **If neurologic exam needed (e.g., status epilepticus, head injury, new stroke): Succinylcholine** 1.5 mg/kg IV push maximum single dose 300 mg. Contraindicated if suspected hyperkalemia, myasthenia gravis, etc. If contraindications, use rocuronium.

B. Intubation procedure:
   1. Nasal cannula or mask at flush rates for apneic oxygenation once paralytic given.
   2. Apply jaw thrust while awaiting paralysis (if no NPA or OPA in place)
   3. Prepare for continuous suction.
   4. If using Rocuronium, wait 30 seconds before proceeding as there will be no fasciculations. If using Succinylcholine, after fasciculations stop (or ~30 seconds), begin intubation.
      a. If relaxation inadequate in 60 seconds:
         i. Ensure oxygenation: NC or mask running at 15L/min with jaw thrust, NPA, or OPA.
         ii. Verify patency of IV/IO.
         iii. Give **Rocuronium** 1.5 mg/kg max 300mg.
   5. Visualize the epiglottis.

C. Forced to act/crash airway
   1. If persistent inability to oxygenate or ventilate (such as SpO2 <88% or SpO2 inadequate and falling) with iGel despite positioning > 30 degrees, PEEP 15 cm H20, and paralysis may consider a single rapid oral intubation attempt prior to cricothyrotomy.

D. If intubation unsuccessful on second attempt:
   1. Insert iGel and ventilate.
   2 Perform cricothyroidotomy if unable to oxygenate or ventilate patient, or no other means of airway management appears possible (severe facial trauma, blast, burns, angioedema, etc). Needlejet if patient < 12 years.

D. Treat bradycardia : Temporarily halt intubation, ventilate with BVM and 100% O2 PEEP 15 cm H20. **Atropine** per protocol if needed.

E. Upon successful intubation, confirm ET tube placement by waveform capnography and secure. Ventilate with BVM and 100% O2, titrate to EtCO2 35-45 mmHg.

F. If no EtCO2 reading or deteriorating waveform, check the clinical status of the patient (i.e. pulses, rhythm on monitor, etc.), then verify tube placement by repeat laryngoscopy. If any doubt exists that the tube is in the trachea, pull it and manage airway as above.

G. Post-intubation
   1. Document a repeat set of vital signs including RASS as soon as tube is confirmed and secured.
   2. ANALGESIA:
      a. **Fentanyl** 1 mcg/kg IV/IO every 5-10 mins prn for one hour.
   3. SEDATION:
      a. **Ketamine** 1 mg/kg slow push over 2 mins. Begin no later than 15 minutes after induction dose. Repeat every 15 minutes PRN sedation. Max 200 mg single dose. ALTERNATIVE if ketamine not available: **Midazolam** 5 mg IV/IO for post intubation sedation every 15 mins for 4 doses, then every 15 minutes PRN sedation.

ALTERNATIVE: **Midazolam** 0.05 mg/kg IV bolus x 1, then midazolam 0.1 mg/kg/hr via pump.

H. Ventilation Rates:
   1. Once intubated, O2 via Bag-valve-ET at 10-12 per minute (assist peds at normal ventilation rates per age). Maintain SPO2 between 94% - 98%. For the patient with closed head injury maintain SBP 110 (MAP > 80) and ETCO2 35 mmHg.

INTUBATION – Patient in Cardiac Arrest:

A. Initial management as per Pit Crew protocol with an iGel.
B. **Majority of patients transported in cardiac arrest or have achieved ROSC may be managed with an iGel.**
C. A decision to intubate may be made due to need for further airway control, oxygenation/ventilation, ROSC, etc. DO NOT INTERRUPT CPR:
   1. Apneic oxygenation with nasal cannula in place at 15L/min
   2. Direct or video laryngoscope
   3. Suction
   4. Bougie or rigid stylet
   5. Endotracheal tube and size smaller - Syringe for cuff
   6. Tube holder
   7. BVM with ETCO2
D. If the patient has trismus, may administer **rocuronium** 1.5 mg/kg IV/IO**.**
   1. Should the patient achieve ROSC or become responsive after intubation, give analgesia and sedation immediately per post-intubation guideline.

LONG-ACTING PARALYTIC

A. Need for long term paralytic defined:
   1. Unable to ventilate patient due to chest rigidity.
   2. Patient successfully intubated (confirmed by capnography), not responding to maximum sedation/pain medication and risk of losing patent airway exists.
B. **Rocuronium** 0.5 mg/kg IV (Duration of Action 20-30 minutes)

ALTERNATIVE IF ROCURONIUM NOT AVAILABLE: **Vecuronium** 0.1 mg/kg IV (Duration of Action 45-65 minutes)

C. Use post intubation sedation guidelines as above
D. Notify receiving physician of long-acting paralytic use.

NOTES & PRECAUTIONS:

A. If unable to establish and/or maintain an adequate airway and ventilations, transport ANY patient (including trauma) to the nearest hospital for definitive airway control.
B. If intubation unsuccessful on **first** attempt (defined as intubating device inserted past the teeth):
   1. Change operator and/or positioning
   2. If unsuccessful on second attempt: Place SGA and ventilate

C. Continuously monitor vital signs, cardiac rhythm, perfusion, end-tidal CO2, and ease of bagging.
D. If glottic visualization sub-optimal then do the following to improve view:
    1. Perform extra laryngeal manipulation (ELM).
    2. Change operator position or height of the stretcher.
    3. Change patient position or elevate head off the bed with intubator's right hand.
    4. Use better suction where secretions or blood block the view
    5. The laryngoscope can be inserted deeply and slowly withdrawn until identifiable anatomy is seen.
    6. Change laryngoscope blade size or type
    7. Change operator
    8. Video Laryngoscope with stylet or bougie.
E. Recheck and document ET tube placement after every patient move or change in vital signs.
F. **Paralytics do not affect the level of consciousness and should always be used with analgesia and sedation.**
G. Etomidate not to be used for post intubation sedation in DSI.
H. Long-acting paralytic procedure is not to be used for patient in Status Seizures.
I. Documentation
    1. Visualization of the cords (if applicable).
    2. Number of attempts.
    3. 5-point check and equal chest expansion.
    4. ETCO2 numeric value and capnograph.
    5. Reconfirmation of placement via capnography after patient movement.
    6. GCS and neurologic exam prior to RSI
J. If C-spine precautions are necessary then the patient should have manual cervical in- line stabilization with the cervical collar open during laryngoscopy.
    1. C-spine precautions are not a contraindication to appropriate positioning as described above.

INTUBATION –DSI CHECKLIST

IMMEDIATE ACTION ITEMS

Monitor vitals **SET BP to q 2 mins**, NIPPV 100% FiO2

SpO2 ≥94% for 3 minutes.

If **NO:**

- BVM with PEEP @ 10. Continue until SpO2 ≥94% then start 3-minute timer.

MAP>65 mmHg or SBP ≥90 for 3 minutes.

If **NO:**

- Treat hypotension with fluid/low dose Epi PRN.

If **YES:**

- **Ketamine** 1mg/kg, wait 3 minutes

- **Rocuronium** 1.5 mg/kg IVP max single dose 300mg, wait 1 minute

- Intubate with VL and bougie, secure tube.

KEY CONSIDERATIONS

* iGel If unable to intubate.
* Cricothyroidotomy if unable to oxygenate/ventilate and severe anatomic abnormality. Needlejet in peds <12.
* ALTERNATE PARALYTIC **Succinylcholine** 1.5 mg/kg (need for neurologic exam).

POST INTUBATION

IMMEDIATE ACTION ITEMS

- **Fentanyl** 1 mcg/kg IV/IO every 5-10 mins prn
- **Ketamine** 1 mg/kg slow push every 15 mins prn, max 200 mg per dose.
- ALTERNATE SEDATION: Midazolam 5 - 10 mg q 15 min PRN.

KG	KETAMINE	ETOMIDATE	ROC	SUX	VERSED	FENTANYL
	1MG/KG	0.3MG/KG	1.5MG/KG	1.5MG/KG	0.2MG/KG	1MG/MCG
2	2MG	0.6MG	3MG	3MG	0.4MG	2MCG
4	4MG	1.2MG	6MG	6MG	0.8MG	4MCG
8	8MG	2.5MG	12MG	12MG	1.5MG	8MCG
10	10MG	3MG	15MG	15MG	2MG	10MCG
12	12MG	3.5MG	18MG	18MG	2.5MG	12MCG
15	15MG	4.5MG	22.5MG	22.5MG	3MG	15MCG
20	20MG	6MG	30MG	30MG	4MG	20MCG
30	30MG	9MG	45MG	45MG	5MG	25MCG
40	40MG	12MG	60MG	60MG	6MG	25MCG
50	50MG	15MG	75MG	75MG	5-10MG	50MCG
60	60MG	20MG	90MG	90MG	5-10MG	50-100MCG
70	70MG	20MG	105MG	105MG	5-10MG	50-100MCG
80	80MG	25MG	120MG	120MG	5-10MG	50-100MCG
90	90MG	30MG	135MG	135MG	5-10MG	50-100MCG
100	100MG	30MG	150MG	150MG	5-10MG	50-100MCG
110	110MG	30MG	165MG	165MG	5-10MG	50-100MCG
120	120MG	30MG	180MG	180MG	5-10MG	50-100MCG
130	130MG	30MG	195MG	200MG	5-10MG	50-100MCG
140	140MG	30MG	210MG	200MG	5-10MG	50-100MCG
150	150MG	30MG	225MG	200MG	5-10MG	50-100MCG

RED Max dose

PROCEDURE – Advanced Airway – Tracheostomy/Stoma Management

DEFINITIONS:

When present, either of the following serves as the patient's primary airway.

A. Tracheostomy - surgical opening of the tracheal lumen. Used when a tracheal tube is needed for a prolonged or even permanent timeframe. There is usually a tracheal tube in place.

B. Laryngectomy - permanent surgical removal of the larynx. Trachea is brought to the skin surface as a stoma. Patients may have a surgically created tracheoesophageal fistula with insertion of a voice prosthesis so that they may speak.

RECOGNITION:

A. Cardiopulmonary arrest often results from obstruction of the surgical airway.
   1. Obstruction may be due to thick secretions/mucous plug, blood clot(s), a foreign body, or kinking or dislodgement of the tracheal tube.
   2. Early warning signs of obstruction include tachypnea, tachycardia, and hypoxia. Late signs are cyanosis, bradycardia and apnea.

EMERGENT TRACHEOSTOMY MANAGEMENT

A. If patient breathing, apply high flow O2 over face and tracheostomy. If the patient is not breathing, begin ventilation.

B. Assess patency of tracheostomy. Remove speaking valve or cap if present.
   1. Pass suction cath and provide suction as above. If the patient is not breathing provide ventilation via tracheostomy.
   2. If unable to pass suction cath deflate the cuff and assess.
      a. If patient not ventilating remove tracheostomy tube and assess.
      b. If still not breathing begin ventilation with BVM (cover stoma with gloved hand or dressing) or BVM with peds mask over stoma.
      c. Attempt oral intubation with end of endotracheal tube past stoma.
      d. Attempt intubation of stoma with 6.0 endotracheal tube. Consult pediatric guide for peds patient. Use bougie.
      e. Intubation of the stoma may be done with a replacement tracheostomy tube if available from the patient/caregiver. May assist caregiver in placement of the device.

EMERGENT LARYNGECTOMY MANAGEMENT

A. Laryngectomy patients must be ventilated via their stoma. Use above procedure but omit attempts to BVM via the mouth/oropharynx.

TRACHEAL SUCTIONING

A. Tracheal suctioning indications:
   1. Audible or visual signs of secretions in the tube/ostomy.

2. Signs of respiratory distress.
3. Suspicion of blocked or partially blocked tube.
4. Inability to clear the tube by coughing out the secretions.
5. Increases in required ventilation pressures (in ventilated patients).
6. Request by patient for suction.

B. Tracheal suctioning procedure:
1. Inform pt of intended action.
2. Maintain appropriate PPE throughout procedure.
3. Assemble suction equipment and power on suction device.
4. Instill 1-2 mL sterile normal saline into the tracheostomy tube (if needed) for thick or dry secretions. Excessive use of saline is not recommended. Use saline only if the mucus is very thick, hard to cough up or difficult to suction.
5. Gently insert catheter into the tracheal tube/ostomy without applying suction.
6. Put thumb over opening in catheter to create suction and twirl catheter between thumb and index finger while withdrawing the catheter so that the mucus is removed well from all areas. Avoid suctioning longer than 10 seconds because of oxygen loss. Suction normal saline from a container if needed to clear catheter.
7. For tracheostomy tubes with cuffs, it may be necessary to deflate the cuff periodically for suctioning to prevent pooling of secretions above tracheal cuff.
8. Let patient rest and breathe, then repeat suction if needed until clear (trying to allow about 30 seconds between suctioning).
9. Oxygenate/ventilate as needed.

PROCEDURE – Agitated Patient Management

PURPOSE:

A. Should only be used if the patient is a danger to self or responders.
B. Use all other means available to de-escalate the situation. Consider reversible causes of combativeness (such as hypoglycemia or post-ictal phase).
C. Document a Richmond Agitation Sedation Scale (RASS).

PSYCHOTIC SYMPTOMS OR MILD AGITATION – RASS +1:

A. If patient has psychotic symptoms or mild agitation and willing to take an oral agent, **Olanzapine** 10 mg ODT.
    1. Only in ages 18-65.
    2. May administer prior to transport to alternative mental health facility.

PHYSICAL RESTRAINT:

A. Use the minimum level of restraint required to ensure patient care and safe transport. Call for law enforcement as necessary. Do not endanger yourself or your crew.
B. Avoid placing restraints that preclude evaluation of the patient's medical status.
C. Physical Restraint Procedure:
    1. Place patient face up on LBB or gurney, NOT PRONE. Monitor respiratory status.
    2. Secure ALL extremities (ankles then wrists/arms) to LBB or gurney with soft restraints. NO Handcuffs/Chains unless police in attendance.
    4. Secure LBB onto gurney using additional straps if necessary.
    5. ALWAYS evaluate respiratory and cardiac status. Monitor SpO2 and EtCO2 as soon as able.
    6. DO NOT tighten chest straps to the point that they restrict breathing.

SEDATION FOR MODERATE AGITATION – RASS +2:

A. Evaluate the personnel needed to safely restrain the patient.
B. Treat medical causes of combativeness.
C. If cause of patient's agitation is unknown or suspected to be psychiatric:
    1. **Droperidol** 5 mg IM (2.5- 5 mg IV); may repeat q 15 min to total 10 mg max. ALTERNATIVE: **Haloperidol** 2.5 - 5 mg IV/IM. May repeat q 15 min to total 10 mg max.
D. If cause of agitation is drug ingestion, withdrawal or postictal state:
    1. **Midazolam** 2.5–5.0 mg IV/IM. May repeat PRN to max 10 mg.
E. If 10 minutes after administration of the maximum dose of droperidol, haloperidol, or midazolam, and the patient remains a danger to self or others, administer a different class of sedative medication as described above.
F. **Do NOT use haloperidol and droperidol concurrently.**
G. Record and monitor vitals and EKG after administration every 5 minutes.
H. Treat EPS with **diphenhydramine** 1 mg/kg IV/IM Max 50 mg.

SEVERE AGITATION – RASS +3 or +4

A. **Droperidol** 10 mg IM with 5 mg **midazolam** IM to achieve and maintain sedation.
   1. **Haloperidol** 10 mg IM may be substituted for droperidol.
B. Institute full cardiopulmonary monitoring as soon as possible.
C. Treatment for Severe Agitation CAN NOT be directed by law enforcement.
D. Notify agency supervisor and MPD about case after hospital transfer.

PEDIATRIC PATIENTS:

A. Follow above guidelines for management of combative patients.
B. **Droperidol** 0.1 mg/kg IM Max 5 mg.
   OR haloperidol 0.1 mg/kg IM Max 5 mg.
D. **Midazolam** 0.2 mg/kg IV/IO/IM/IN Max 10 mg.
E. **Diphenhydramine** 1 mg/kg IV/IM Max 25 mg.

NOTES:

A. All patients who receive IV, IO, or IM pharmacological sedation must be fully monitored with cardiac monitor, SpO2 and EtCO2 as soon as possible after administration of medications.
B. Goal of therapy is RASS 0 or RASS -1

Richmond Agitation Sedation Scale (RASS)

Score	Term	Description
+4	Combative	Overtly combative and violent; immediate danger to EMS
+3	Very agitated	Aggressive; verbally and physically uncooperative towards EMS
+2	Agitated	Frequent non-purposeful movement; agitated when touched or moved
+1	Restless	Anxious but movements not aggressive or dangerous to EMS or self
0	Alert and calm	
-1	Drowsy	Not fully alert, but has sustained awakening (eye opening/eye contact) to voice (≥ 10 seconds)
-2	Light Sedation	Briefly awakens with eye contact to voice (< 10 seconds)
-3	Moderate sedation	Movement or eye opening to voice (but no eye contact)
-4	Deep sedation	No response to voice but movement or eye opening to physical stimulation
-5	Unarousable	No response to voice or physical stimulation

PROCEDURE – ALS Assist

EMT ASSISTANCE WITH ALS PROCEDURES:

A. Properly trained EMTs are allowed to assist Paramedics with performance of the following procedures while on scene:
    1. Placement of 12 Lead ECG monitoring electrodes
        a. EMT may notify responding Paramedic of the monitor 12 lead interpretation.
    2. Insertion of drip tubing into fluid resuscitation bags
    3. Performance of blood glucose determination via finger stick
    4. SGA supraglottic airway
    5. **Narcan** Intranasal/Intramuscular (IN/IM)
    6. **Epinephrine** IM for Anaphylaxis; draw from vial to syringe.
B. These procedures may be performed by EMTs after MPD approved training has occurred.
C. Usually, a Paramedic will be present during these procedures, but this is not required in emergent situations.
D. **Any EMT administering medication will verify the correct medication prior to administration**.

PROCEDURE – Automated External Defibrillator (AED)

TREATMENT:

A. Establish unresponsiveness
B. Identify absence of pulse and respirations.
C. Continuous CPR for 2 minutes if down time estimated at > 5 minutes; if < 5 minutes or if bystander CPR, do CPR until AED/Monitor applied.
    1. Apply EKG Leads/Defib Pads.
    2. Analyze and follow AED instructions or Paramedic interpretation (Defibrillate PRN).
    3. Continuous CPR for 2 minutes; rhythm analysis:
        a. SGA, 100% O2. Capnography throughout.
        b. IV TKO with crystalloid.
D. Use a weight-based system for treatment of pediatric cardiac arrest, i.e. Broselow Tape

DEFIBRILLATION SEQUENCE:

A. If shock advised, defibrillate.
    1. Continuous CPR for 2 minutes then Analyze.
    2. Defibrillate as prompted.
B. Continuous CPR for 2 minutes then Analyze
    1. Defibrillate as prompted.
C. Repeat CPR, analyze, defibrillate sequence until “No Shock Advised” or arrival of ALS personnel.

ROSC:

A. If the patient regains pulse or pulse present during the above sequence:
    1. Assess vital signs.
    2. Support airway and breathing, follow ROSC protocol.

OTHER CONSIDERATIONS:

A. “No Shock Advised” and no pulse present
    1. Resume CPR and Re-Analyze after 2 min.
B. If patient not responding to treatment for cardiac arrest, consider Death in the Field.

SUBMIT RECORD TO THE MPD’S OFFICE.

PROCEDURE – Blood Draws of Impaired Driver

REQUEST FOR BLOOD DRAW:

A. Blood for legal alcohol, marijuana, or other drug determination may be drawn at request of law enforcement:
    1. When the officer has reasonable grounds to believe that the person is in violation of RCW 46.61.502 or 46.61.504: driving or being in actual physical control of a motor vehicle while under the influence of intoxicating liquor and/or drugs.
    2. The Officer may request blood be drawn pursuant to:
        a. A search warrant
        b. Valid waiver of the warrant (patient consent)
        c. Exigent circumstances to be articulated by Officer

PROCEDURE FOR BLOOD DRAW:

A. Requesting Officer will provide the blood draw kit:
    1. Utilize universal precautions as per OSHA.
    2. The law enforcement officer will remove the parts of the kit and hand them to the Paramedic as needed.
    3. The Paramedic drawing the blood will swab the site with betadine and allow to air dry for one minute.
        a. Draw appropriate tubes of blood for testing.
        b. When done doing blood draw apply gauze until hemostasis obtained.
    4. Hand the vials back to the Law enforcement officer as they are filled.
    5. Label tubes with patient name, DOB and current date. Document blood draw on ePCR.

SPECIAL CONSIDERATIONS:

A. Patient care needs are the first priority when considering a blood draw per request of Law Enforcement. Do not delay necessary patient care and/or transport to draw blood.

PROCEDURE – Cardiopulmonary Resuscitation (CPR)

CONTINUOUS CPR DEFINED:

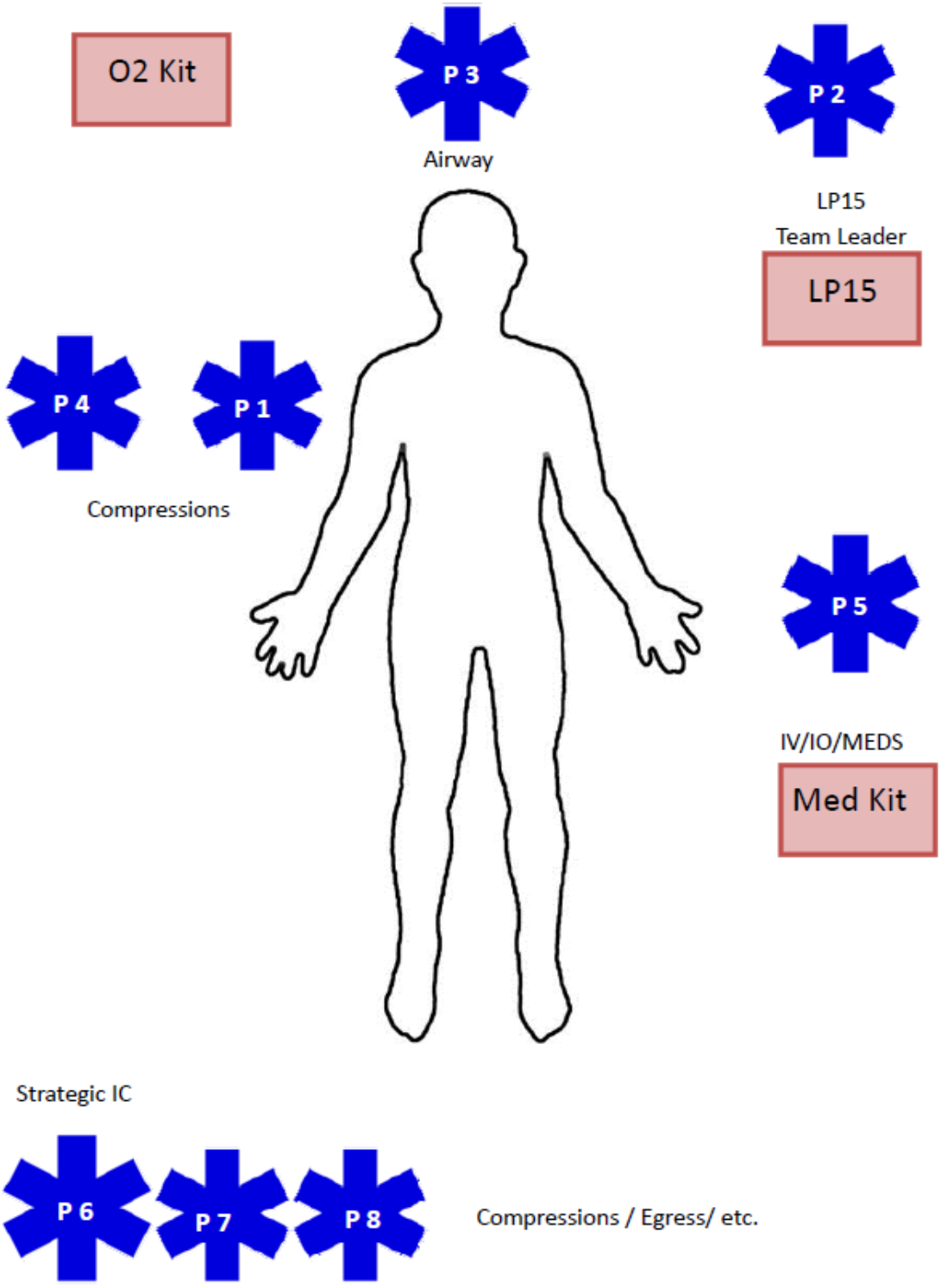
A. 110 compressions per minute for two-minute cycles.
   1. Minimize interruptions off chest for analysis and changing rescuers.
   2. Ensure adequate depth of compressions and full chest recoil.
   3. Interpose ventilations, do not interrupt compressions.
   4. Ensure EKG MONITOR in "paddles" mode for proper CPR process recording.

PIT CREW CPR MODEL (Pending enough personnel):

A. Each position is assigned tasks that are listed by priority. If arrival of personnel delayed, the tasks will be accomplished by fewer personnel but in the same order.
   1. Position 1 (Compressions):
      a. Determine cardiac arrest, Expose chest, Begin compressions
      b. Announce compression 200, 210, 220 or use 2-minute timer.
         i. At least one complete cycle of CPR should be done prior to LUCAS application.
   2. Position 2 (Monitor/Defibrillator):
      a. Turn on the Monitor/Defibrillator to time stamp the beginning of CPR. Ensure leads are set to Paddles mode.
      b. Start metronome; Apply defibrillation patches.
      c. Monitor compression quality, speed and time intervals
      d. If 2-person crew, place nasal cannula at 10 LPM. Do not delay CPR or defibrillation
      e. Charge the monitor at compression 210
      f. Interpret rhythm and shock if indicated after compression 220. Dump charge if shock NOT indicated.
      g. Alternate doing compressions if needed until additional resources arrive
   3. Position 3 (Airway):
      a. Place a nasal cannula at 10LPM if not already done
      b. Set Up BVM and begin ventilation after the 1st defibrillation
         i Insert an SGA after the 1st or 2nd defibrillation
         ii Provide ventilations on the upstroke
      c. Attach ETCO2 monitoring
      d. Provide suctioning as needed
      e. Intubation should only be done if required for airway control or after ROSC.
   4. Position 4 (Compressions):
      a. Alternate compressors every 220 compressions (2min cycles).
   5. Position 5 (IV/IO/Meds):
      a. Establish IV or IO access
      b. One IV attempt should be made prior to IO insertion. IO insertion can be done 1st if IV success is unlikely. IV/IO should be placed above the diaphragm.
      c. Administer any required medications
   6. Position 6 (Strategic IC):
      a. Safety
      b. Liaison with family and/or other agencies

c. Develop egress plan

7. Position 7 – (Back up):
   a. Assigned as needed
8. Position 8 – (Backup):
   a. Assigned as needed. Additional personnel will be assigned as needed.



PROCEDURE – Non-Invasive Positive Pressure Ventilation (CPAP/BiPAP)

INDICATIONS:

A. Congestive heart failure/Pulmonary edema
B. Noncardiogenic pulmonary edema of any cause
C. Respiratory insufficiency, e.g., Asthma/COPD/Pneumonia/CO poisoning.
D. Submersion injury with hypoxia, shortness of breath, respiratory insufficiency.
E. Pre-oxygenation for DSI.
F. May use in Peds if able to cooperate and tolerate the procedure

CONTRAINDICATIONS:

A. Absolute: Respiratory arrest, agonal respirations, unconscious, known or suspected pneumothorax, facial anomalies preventing mask seal, facial trauma
B. Relative: Decreased LOC, claustrophobia, patient intolerance to equipment, tracheostomy if lacking the adaptor), pediatric patients unable to tolerate procedure, non-respiratory organ failure (Sepsis)

HAZARDS:

A. Gastric distension, corneal drying, hypotension, pneumothorax
B. Asthmatic patients do not respond predictably to CPAP;
    1. Higher risk of pneumothorax – frequently assess lung sounds.
    2. Increased intra-thoracic pressure with resultant hypotension – reduce ventilation rate/volume. In asthma should not exceed 5 cm pressure.

PROCEDURE:

A. Place facemask and apply O2 device as per manufacturer recommendation.
B. Pressure should be set at 5 cm H2O and adjusted PRN. Do not exceed 10 cm H2O unless preparing for DSI.
C. Reassess patient every 5-10 minutes.
D. Consider mild sedation PRN if patient has difficulty tolerating device.
    1. **Midazolam** 2.5 mg (preferred in the elderly or history of CHF/CAD).
    OR
    2. **Ketamine** 0.3 mg/kg once. Max 30 mg.
E. If unable to maintain SPO2 > 90%, administer PPV via BVM and PEEP valve.
F. Remove face mask for suctioning and/or nitroglycerine administration.
G. May use with med-neb attachment for bronchodilator administration

OPTION FOR BiPAP IF AVAILABLE:

A. May be used if no significant clinical improvement in ventilation after CPAP for 10 minutes, or difficulty tolerating CPAP. As compared to CPAP, BiPAP can improve ventilation but will not improve oxygenation, and so is more likely to be beneficial for patients with COPD.
    1. Set the mode to NPPV.
    2. Set the IPAP (Pressure Support) to 10 cm H2O and titrate up. Max 20 cm H20.
    3. Set FiO2 to 100% and titrate down SP02 to >90%

4. Set the EPAP (PEEP) to 5 cm H2O. May increase if inadequate oxygenation.

NOTES:

A. EMT may institute treatment with CPAP as per the above guidelines after MPD approved training and agreement with agency Training Administrator.

PROCEDURE – Gastric Decompression

INDICATIONS OG/NG TUBE:

A. Inability to adequately ventilate due to gastric distension, ETT or SGA in place.
B. Contraindications
    1. Head/face injured trauma patient – orogastric decompression only
    2. Anatomic anomalies preventing correct placement

PROCEDURE:

A. Determine correct size and depth of tube.
    1. Size
        a. Pediatric size consult length-based reference.
        d. Adolescents/Adults 14-18 Fr
    2. Depth
        a. Nasogastric: Tip of nose, over ear to xyphoid process
        b. Orogastric: lip, around angle of mandible to xiphoid process
B. Insert tube
    1. Nasogastric:
        a. Pass lubricated tube along nasal floor into stomach.
        b. Instill air into tube w/ 20mLsyringe and auscultate epigastrium.
        c. Secure tube.
    2. Orogastric:
        a. Visualize posterior pharynx, pass lubricated tube over tongue into stomach.
        b. Instill air into tube w/ 20 mL syringe and auscultate epigastrium.
        c. Secure tube.
C. Aspirate/suction stomach contents until patient can be adequately ventilated.

PRECAUTIONS/COMPLICATIONS

A. In head trauma patient where gastric decompression would benefit ventilation, gastric tube placement will be through the mouth.
B. Complications associated with NG tube placement
    1. Epistaxis
    2. Intracranial placement
C. Complications associated with NG/OG tube placement
    1. Bronchial placement
    2. Pharyngeal perforation, esophageal obstruction or rupture
    3. Bronchial or alveolar perforation
    4. Pneumothorax
    5. Gastric or duodenal rupture

PROCEDURE – Intraosseous (IO) Access

DEFINITION:

A. IO cannulation is an alternative for establishing vascular access in critical adult or pediatric patients when peripheral IV access is difficult or time sensitive.

INDICATIONS:

A. If a peripheral IV cannot be established after two attempts or within 60–90 seconds of elapsed time and in:
   1. Cardiac arrest.
   2. Hemodynamic instability.
   3. Imminent respiratory failure.
   4. Status epilepticus > 10 minutes, and refractory to IM anticonvulsants.
   5. Toxic conditions requiring immediate vascular access for antidote.
B. Humeral IO placement may be considered prior to peripheral IV attempts in cases of cardiac arrest and critical trauma to prevent delay of life-saving fluids or drugs.

EZ-IO™ PROCEDURE:

A. Determine patient's weight.
B. Assemble all necessary equipment
   1. The 25 mm blue needle can be utilized for patients who weigh > 3kg.
   2. The 45 mm yellow needle can be used for adult insertions (larger individuals) where the blue needle is not adequate. Should be used for all humeral IOs.
   3. EZ-Stabilizer should be used to secure the needle.
C. Site Selection
   1. Proximal Humerus is preferred in adult patients to achieve the following:
      a. Increased flow rates
      b. Decreased pain
      c. Closer access to central circulation during cardiac arrest and for resuscitation.
   2. Distal Femur – preferred site in pediatric patients. Adults, similar flow rates as proximal tibia, 2nd choice if proximal humerus not available
   3. Proximal Tibia – not effective in cardiac arrest
   4. Distal Tibia – not effective in cardiac arrest
D. Site Landmarks
   1. Proximal Humerus (contraindicated in children <16 years)
      a. Ensure that the patient's hand is resting on the abdomen and that the elbow is adducted (close to the body).
      b. Insertion site is located directly on the most prominent aspect of the greater tubercle. Slide thumb up the anterior shaft of the humerus until you feel the greater tubercle, this is the surgical neck. Approximately 1 cm (depending on patient anatomy) above the surgical neck is the insertion site.

2. Distal Femur
    a. With the leg straightened and centered in the anterior plane, 2 cm proximal to the patella, and 1 to 2 cm medially.
3. Proximal Tibia
    a. Palpate the landmarks at the proximal tibia (patella and tibial tuberosity).
    b. Insertion site should be approximately one finger width (2cm) medial to the tibial tuberosity, along the flat aspect of the tibia.
4. Distal Tibia
    a. Two finger widths proximal to the medial malleolus along the tibial midline.

E. Needle Insertion
1. Prep the surface with antimicrobial agent and wipe dry with a sterile gauze pad.
2. Stabilize patient's extremity and begin insertion from a 90-degree angle to the insertion site. Push the needle set through the skin until the tip touches the bone.
3. With the needle tip against the bone, assure adequate needle length by ensuring at least one black line (5 mm) is visible outside the skin.
4. Gently advance the needle set into position–do not force. Stop when you feel the "pop" or "give" on smaller patients.
5. When needle is in proper position, remove stylet, place the EZ-Stabilizer on the hub, but do not secure EZ-Stabilizer yet.
6. Connect tubing, primed with saline, to IO hub.
7. Rapid bolus or "power" flush with approximately 10 mL normal saline
    a. If the procedure is performed on a conscious patient, immediately following placement of the IO needle, administer **Lidocaine** 40 mg over 2 minutes. Wait approximately 30–60 seconds before flushing with normal saline.
    b. If fluids do not flow freely, flush IO site with an additional 2-3 mL normal saline.
8. Confirm the catheter position
    a. Catheter is stable at a 90-degree angle to the bone, able to aspirate blood, and fluids flow without evidence of extravasation.
    b. If insertion fails, leave the needle in place and clamp the EZ-Connect; do not attempt second insertion on same extremity.
9. Secure the EZ-Stabilizer when patency is confirmed.
10. Consider additional bolus of saline if flow rates slower than expected.
11. Utilize a blood pressure cuff or pressure bag around the IV bag to help infuse fluids.
12. Monitor for patency frequently.

PEDIATRIC EZ-IO™ PROCEDURE

A. Assemble all equipment
1. The 15 mm Pink needle should be used for patients who weigh < 3kg (approximately 6 lb.). Primarily used for newborns and neonates.
2. The 25 mm Blue needle can be utilized for pediatric patients who weigh > 3 kg when the 15 mm Pink is deemed inadequate.
3. EZ-Stabilizer should be used to secure the needle.

B. Site Selection
    1. Distal Femur
        a. Preferred site for pediatrics. Secure the selected leg in the outstretched position to ensure the knee does not bend.
        b. Identify the patella by palpation.
        c. The insertion site is just proximal to the patella (maximum 1 cm) and approximately 1-2 cm medial to the midline.
    2. Proximal Tibia
        a. Palpate the landmarks at the proximal tibia (patella and tibial tuberosity).
        b. Insertion site should be one finger width below and one finger width medial of the tibial tuberosity.
C. Needle Insertion
    1. Prep the surface with antimicrobial agent and wipe dry with a sterile gauze pad.
    2. Stabilize patient's leg and begin insertion from a 90-degree angle to the plane of the bone. Push the needle set through the skin until the tip touches the bone.
    3. With the needle tip against the bone, assure adequate needle length by ensuring at least one black line (5 mm) is visible outside the skin.
    4. Gently advance the needle into position. Stop when you feel the "pop" or "give".
    5. When needle is in proper position, remove stylet, place the EZ-Stabilizer on the hub, but do not secure EZ-Stabilizer yet.
    6. Connect tubing, primed with saline, to IO hub.
    7. Rapid bolus or "power" flush with approximately 5 mL normal saline.
    8. Confirm the catheter position:
        a. Catheter is stable at a 90-degree angle to the bone, able to aspirate blood, and fluids flow without evidence of extravasation.
        b. If insertion fails, leave the needle in place and clamp the EZ-Connect; do not attempt second insertion on same extremity.
    9. Secure the EZ-Stabilizer when patency is confirmed.
    10. Consider additional bolus of saline if flow rates slower than expected, no more than 2-3 mL normal saline.
    11. Consider a blood pressure cuff or pressure bag to help infuse fluids.
    12. Monitor for patency frequently.
D. Pain Management
    1. If the procedure is performed on a conscious patient, immediately following placement of the IO needle, administer **Lidocaine** 0.5 mg/kg slowly over 2 minutes, not to exceed adult dose of 40 mg. Wait approximately 30–60 seconds before flushing with normal saline.
    2. If fluids do not flow freely, flush IO site with an additional 2-3 mL normal saline.

CONTRAINDICATIONS:

A. Suspected fracture of the bone selected for IO insertion.
B. Prior prosthetic joint replacement involving bone selected for IO insertion.
C. Previous significant orthopedic procedures (IO within 48 hours, surgery, etc.).
D. Infection at the site of insertion.
E. Excessive tissue at insertion site with the absence of landmarks.
F. Tibial placement in patients with suspected pelvic fractures.

NOTES & PRECAUTIONS:

A. Osteomyelitis, growth plate injury (in pediatric patients), and extravasation of fluid with compression of popliteal vessels or the tibial nerve may occur.
B. Airway and breathing should be established first in accordance with other protocols.
C. Do not perform more than one attempt in each tibia.
D. Any ALS medication may be administered IO.

PROCEDURE - LUCAS Chest Compression Device

INDICATIONS:

A. The LUCAS device may be used in patients who have suffered non-traumatic cardiac arrest, where manual CPR would otherwise be used. Notify receiving facility if LUCAS deployed.
B. Application of the LUCAS device can be accomplished AFTER at least one two-minute cycle of manual CPR.

CONTRAINDICATIONS:

A. Patients who do not fit within the device.
    1. Too small patient: If LUCAS alerts with 3 fast signals when lowering the SUCTION CUP, and you cannot enter the PAUSE mode or ACTIVE mode.
    2. Too large patient: If you cannot lock the upper part of LUCAS to the backplate without compressing the patient's chest.
B. Traumatic arrest.
C. Pregnancy.
D. Ventricular Assist Device patients.

USING THE LUCAS DURING RESUSCITATION:

A. Rhythm Analysis
    1. Push the PAUSE BUTTON. Pause should not be > 10 seconds. There is no need to interrupt chest compressions other than to analyze the rhythm.
B. Defibrillation
    1. Defibrillation can be performed with the LUCAS device in place and in operation. There is no need to stop LUCAS to deliver a shock.
C. Pulse Checks/Return of Spontaneous Circulation (ROSC)
    1. Pulse checks should occur intermittently while compressions are occurring.
    2. Pause the LUCAS device and evaluate the patient if there is a change in rhythm, the patient becomes responsive, or pulses are noted, assess the patient for ROSC and treat appropriately. If the pulse disappears, immediately restart the LUCAS device.
D. Disruption or Malfunction of LUCAS Device
    1. If disruption or malfunction of the LUCAS device occurs, immediately revert to manual CPR.

2 PERSON LUCAS PIT CREW

#1 Compressor

Expose chest

Begin Compressions

#2 Paramedic/Lead Provider

Turn on monitor in paddles mode, start metronome

Place anterior pad

Place O2 via NC

Turn on LUCAS, prepare equipment

Together

Evaluate patient movement options

Move patient* sitting patient up is preferred

Place LUCAS plate

Place posterior pad

Resume CPR

Attach LUCAS

Analyze ECG (AED or Manual)

Shock/No Shock

Begin Lucas

IGEL/CO2/SPO2/Filter

Evaluate LUCAS Placement/Adjust/Neck Strap

IV/IO Access

4+ PERSON LUCAS PIT CREW

#1 Compressor

Expose chest

Begin Compressions

#2 PIC

Turn on monitor, start metronome

#3 LUCAS Tech

Cut off remainder of torso clothing

Place anterior pad

Turn on LUCAS, prepare equipment

#4 Airway Tech

IGEL/Fr. Suction/CO2/SPO2/Filter

Together

Evaluate patient movement options

Move patient* sitting patient up is preferred

Place LUCAS plate

Place posterior pad

Resume CPR

Attach LUCAS

Analyze ECG

Shock/No Shock

Begin Lucas

Evaluate LUCAS Placement/Mark Placement/Adjust/Neck Strap

"PULSE, PRINT, PAUSE, PLAY"

2 Minute Rhythm/Pulse Check Manual Monitor

PIC

Press Print on Monitor

LUCAS Tech

Find carotid pulse that matches LUCAS

Press Pause

Count to 4

If pulse is still present assess patient for ROSC move to ROSC protocol

If no Pulse press Play

PIC

Stop print 2-3 seconds after play is resumed, determine if shockable rhythm

Charge and defibrillate if indicated

2 Minute Pulse Check AED

LUCAS Tech

Find carotid pulse that matches LUCAS

Press Pause

If Pulse is present with Pause check for ROSC

PIC

Once LUCAS is Paused Analyze via AED

Once analysis is complete follow AED commands for defibrillation

Start LUCAS if no PULSE palpated after AED analysis

PROCEDURE: - Low-Dose Epinephrine

PREPARATION

A. Take a 10 mL NS flush and waste 1mL of NS, so that you are left with 9mL.
B. With this syringe of 9mL NS, draw up 1mL of Epi 1 mg/10 mL from the prefilled syringe.
    1. You now have 10mL of Epi with a concentration of 10 mcg/mL.
C. Administer 1-2 mL IV/IO (10-20 mcg) every 2-5 minutes as needed to maintain perfusion.
    1. Titrate to maintain SBP > 90mmHg (MAP > 65 mmHg)
    2. Onset: 1 minute
    3. Duration: 5-10 minutes.

PEDIATRIC DOSING

A. Use same preparation
B. Dose is 1 mcg/kg (0.1 mL/kg) every 2-5 minutes as needed to maintain perfusion. Maximum single dose 20 mcg (2 mL).

INDICATIONS

A. To temporarily correct hypotension from a reversible cause
B. As a bridge to an infusion
C. For instability (anaphylaxis, severe shock, severe asthma) with concern for imminent respiratory or cardiac arrest.

PROCEDURE - Mechanical Ventilation

INDICATIONS

A. Intubated patients ≥ 15 years of age or 5 ft tall.
    1. For patients 1 to 15 years of age, during interfacility transfer only. Begin with pre-established ventilator settings and any instructions from transferring facility.

CONTRAINDICATIONS

A. Patient without a pulse

PRECAUTIONS

A. Barotrauma: pneumothorax, subcutaneous emphysema, pneumomediastinum

PROCEDURE

A. Lung-protective strategy (for any patient that does not have active obstructive lung disease)
    1. Set mode: Volume-Assist Control
    2. Alveolar protection: Set tidal volume to 6 mL/kg based on patient height (see table below). If plateau pressure ≥ 30 cm H20g, decrease tidal volume by 1 mL/kg until plateau pressure ≤ 30 cm H_20)
    3. Patient comfort: Set I:E ratio to 1:2. May adjust E time as needed for comfort.
    4. Titrating ventilation: set RR to patient's previous respiratory rate. If the patient was apneic, begin at RR 16. Titrate to EtCO2 35-45 mmHg.
    5. Titrating oxygenation: Start at 100% FiO2 and PEEP 8 cm H20. For patients that have just been intubated, after 5 minutes, drop FiO2 to 40% and titrate FiO2 and PEEP using the table below.

Table 1. FiO_2 and PEEP scale from ARDSnet ARMA trial.

FiO_2	0.3	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.7	0.8	0.9	0.9	0.9	1.0	1.0	1.0
PEEP	5	5	8	8	10	10	10	12	14	14	14	16	18	20	22	24

B. Obstructive strategy (for asthma or COPD)
    1. Priority is to avoid intubation wherever possible by using medications and non-invasive positive pressure ventilation.
    2. When intubation is unavoidable, the priority is to allow time for exhalation.
        a. Set mode: Volume-Assist Control
        b. Alveolar protection: Set tidal volume to 8 mL/kg based on patient height (see table below).
        c. Patient comfort: Set I:E ratio to 1:3. May adjust as needed.
        d. Titrate ventilation to allow adequate time for exhalation: Set RR to 8 breaths/min.
        e. Titrate oxygenation. Titrate FiO2 to achieve SpO2 88-92%. Start with PEEP 0 cm H20. If FiO2 100% and SpO2 <88%, may increase PEEP to 5 cm H20.
        f. If plateau pressure ≥ 30 cm H20, decrease RR.

C. Interfacility transfers
    1. Understand what ventilator strategy is being used and why.
    2. Begin with settings established by sending facility.

3. Adjust as described above

REFERENCE TABLES:

	Lung-protective strategy	Obstructive strategy
Mode	Volume assist control	Volume assist control
Tidal Volume	Start at 6 mL/kg PBW, adjust to achieve plateau pressure ≤ 30 cm H20	8 mL/kg PBW
I:E ratio	I:E ratio 1:2, adjust for comfort	I:E ratio 1:3
Respiratory Rate	Start at RR prior to intubation, or 16 breaths/min for apneic patients; titrate to EtCO2 35-45 mmHg	RR 8 breaths/min. Can allow hypercapnia
FiO2	Start at 100% FiO2, titrate down after 5 minutes	Titrate to FiO2 88-92%
PEEP	Start at 8 cm H20; adjust with FiO2 according to table	Start with PEEP 0 cm H20. If FiO2 100% and SpO2 <88%, can increase to PEEP 5 cm H20
Check for safety	If plateau pressure ≤ 30 cm H20, decrease tidal volume	If plateau pressure ≤ 30 cm H20, decrease respiratory rate

NIH PREDICTED BODY WEIGHT (PBW) / TIDAL VOLUME CHART

MALES								FEMALES							
HEIGHT		PBW	4	5	6	7	8	HEIGHT		PBW	4	5	6	7	8
Feet	Inches	Male	ml/kg	ml/kg	ml/kg	ml/kg	ml/kg	Feet	Inches	Female	ml/kg	ml/kg	ml/kg	ml/kg	ml/kg
4' 10"	58	45.4	180	230	270	320	360	4' 7"	55	34	140	170	200	240	270
4' 11"	59	47.7	190	240	290	330	380	4' 8"	56	36.3	150	180	220	250	290
5' 0"	60	50	200	250	300	350	400	4' 9"	57	38.6	150	190	230	270	310
5' 1"	61	52.3	210	260	310	370	420	4' 10"	58	40.9	160	200	250	290	330
5' 2"	62	54.6	220	270	330	380	440	4' 11"	59	43.2	170	220	260	300	350
5' 3"	63	56.9	230	280	340	400	460	5' 0"	60	45.5	180	230	270	320	360
5' 4"	64	59.2	240	300	360	410	470	5' 1"	61	47.8	190	240	290	330	380
5' 5"	65	61.5	250	310	370	430	490	5' 2"	62	50.1	200	250	300	350	400
5' 6"	66	63.8	260	320	380	450	510	5' 3"	63	52.4	210	260	310	370	420
5' 7"	67	66.1	260	330	400	460	530	5' 4"	64	54.7	220	270	330	380	440
5' 8"	68	68.4	270	340	410	480	550	5' 5"	65	57	230	290	340	400	460
5' 9"	69	70.7	280	350	420	490	570	5' 6"	66	59.3	240	300	360	420	470
5' 10"	70	73	290	370	440	510	580	5' 7"	67	61.6	250	310	370	430	490
5' 11"	71	75.3	300	380	450	530	600	5' 8"	68	63.9	260	320	380	450	510
6' 0"	72	77.6	310	390	470	540	620	5' 9"	69	66.2	260	330	400	460	530
6' 1"	73	79.9	320	400	480	560	640	5' 10"	70	68.5	270	340	410	480	550
6' 2"	74	82.2	330	410	490	580	660	5' 11"	71	70.8	280	350	420	500	570
6' 3"	75	84.5	340	420	510	590	680	6' 0"	72	73.1	290	370	440	510	580
6' 4"	76	86.8	350	430	520	610	690	6' 1"	73	75.4	300	380	450	530	600
6' 5"	77	89.1	360	450	530	620	710	6' 2"	74	77.7	310	390	470	540	620
6' 6"	78	91.4	370	460	550	640	730	6' 3"	75	80	320	400	480	560	640

PROCEDURE - Nitrous Oxide (Nitronox)

CAMAS AND NORTH COUNTRY EMS ORDERS ONLY

INDICATIONS:

A. Pain control to include:
   1. Trauma patients: fractures, burns, abrasions and contusions, etc.
   2. Renal colic (kidney stone)
   3. Pain not contraindicated as below

CONTRAINDICATIONS:

A. Will include, but may not be limited to:
   1. Patient unable to self-administer
   2. Shock state, or likely possibility of shock
   3. Impaired consciousness (head injury, intoxication with alcohol or other drugs)
   4. Chest injuries, blunt or penetrating - possible pneumothorax
   5. COPD
   6. Decompression sickness
   7. Pregnant patients
   8. Cardiac chest pain
   9. Unable to make a good seal (maxillofacial injuries, young Peds, etc.)

PROCEDURE:

A. Advise patient that the gas is an analgesic and explain the procedure.
B. The patient will hold the mask in one hand.
C. Have the patient breathe the gas until pain is relieved.
D. Repeat the procedure if the pain returns.
E. Discontinue the administration if the patient is unable to self-administer the gas (e.g., becomes stuporous).
F. Monitor vital signs frequently (e.g., every 10 minutes).
G. Nausea and vomiting may occur.
H. If patient supine, instruct patient to remove mask to exhale.

PROCEDURE - Pelvic Immobilization

PURPOSE:
The initial reduction of an unstable pelvic fracture (to lessen ongoing internal bleeding and to ease the pain by splinting the fracture) using either a specifically applied sheet or another approved device.

INDICATIONS:

A. To be applied in all trauma patients who have appropriate mechanism(s) of injury and who present with pelvic instability.
B. Consider pelvic wrap in trauma patients who have appropriate mechanism(s) of injury and who are in shock.

PELVIC SLING PROCEDURE (SAM Pelvic Sling):

A. Remove objects from patient's pocket or pelvic area. Place SAM Pelvic Sling gray side up beneath patient at level of trochanters (hips).
B. Place BLACK STRAP through buckle and pull completely through.
C. Hold ORANGE STRAP and pull BLACK STRAP in opposite direction until you hear and feel the buckle click. Maintain tension and immediately press BLACK STRAP onto surface of SAM Pelvic Sling to secure.

PELVIC WRAP PROCEDURE:

A. Fold the sheet smoothly lengthwise to about 9 inches wide (do not roll) and apply underneath the pelvis, centered on the greater trochanters. Assure the patient's pockets are empty to avoid placing pressure on the objects into the patient.
B. Tighten the sheet around the pelvis and adjust the tension to try to return the pelvis to normal anatomical position.
C. Secure using a knot or clamps if available.

NOTES & PRECAUTIONS:

A. Always re-check the position of the sheet (in terms of up and down). You should still be able to feel the anterior superior iliac spines after placement. If not, the sheet may be too high on the pelvis and must be repositioned.
B. If the pelvis is unstable on initial exam, do not repeat the exam.
C. Blood loss in a pelvic fracture can be significant. Monitor closely and treat per Shock Protocol.
D. Consider placing prior to extrication from a vehicle if feasible.
E. **The pelvic sling/wrap is contraindicated for suspected isolated hip or lateral pelvic fractures, i.e., ground level falls.**

PROCEDURE – Peripherally Inserted Central Line (PICC) Access

BACKGROUND:
A PICC line is a common method of maintaining long term venous access in select patients. PICC lines are typically inserted into the antecubital fossa and then threaded into central circulation. PICC lines are flushed with heparin to maintain patency and therefore it is imperative to aspirate 5 mL of blood from
the line prior to use.

INDICATIONS:

A. PICC lines may be accessed when there is a need for drug or fluid administration, and traditional means of venous access are unsuccessful.
B. Patient or patient's caregiver requests use of PICC line.

CONTRAINDICATIONS:

A. Inability to aspirate or infuse through the catheter.
B. Catheter located in any place other than the patient's upper arm.
C. Need for rapid fluid resuscitation.

PROCEDURE:

A. Use clean gloves and maintain sterility as much as possible.
B. If there is a needleless type port on the distal end of the catheter, perform the following:
    1. Scrub the port with an alcohol pad for at least 15 seconds and allow to dry for at least 5 seconds.
    2. Attach a 10 mL syringe (without saline) to the port.
    3. Unclamp if necessary (needleless port may not have a clamp).
    4. Attempt to aspirate at least 5 mL of blood. Blood should draw freely. If it does not, remove the syringe and DO NOT use the catheter for access.
    5. If blood aspirates freely, remove the 10 mL syringe with blood and discard.
    6. Attach a 10 mL syringe with NS and gently flush the line. Never use a smaller syringe. If line does not flush, remove the syringe and DO NOT use the catheter for access.
    7. If line flushes, remove the syringe and attach the catheter to the end of the IV tubing and begin infusion of NS or LR. Adjust the rate to the needs of the patient within the limits of the catheter.
    8. Administer medications though IV tubing port if indicated.
C. If there is a capped needle-type port on the distal end of the catheter, perform the following:
    1. Scrub the cap with an alcohol pad for at least 15 seconds and allow to dry for at least 5 seconds.
    2. Clamp the catheter tubing using ONLY the existing clamp on the catheter and then remove the cap. Never allow a central line to be open to air.
    3. Attach a 10 mL syringe on the catheter end.
    4. Unclamp the catheter.

5. Attempt to aspirate at least 5 mL of blood. Blood should draw freely. If it does not, re-clamp the line and remove the syringe. DO NOT use the catheter for access.
6. If blood aspirates freely, clamp the catheter again.
7. Remove the 10 mL syringe with blood and discard.
8. Attach a 10 mL syringe with NS.
9. Unclamp and gently flush the line. Never use a smaller syringe. If line does not flush, re-clamp the line and remove the syringe. DO NOT use the catheter for access.
10. If line flushes, re-clamp and remove the syringe.
11. Attach the catheter to the end of the IV tubing.
12. Unclamp the catheter and begin infusion of NS or LR. Adjust the rate according to the needs of the patient within the limits of the catheter.
13. Administer medications though IV tubing port if indicated.

NOTES & PRECAUTIONS:

A. Do not administer medications, flush, or aspirate with less than a 10-mL syringe. Smaller size syringes generate too much pressure and can damage the catheter.
B. Do not attempt to reinject aspirated blood as it may contain clots.
C. The maximum flow rates for a PICC line is 125 mL/hr for less than size 2.0 French, and 250 mL/hr for catheters over 2.0 size French.
D. Keep patient's arm straight to avoid kinking the PICC line and obstructing flow.
E. Ensure all line connections are secure.
F. PICC lines access the patient's central circulation, and the risk of infection is high. Avoid contamination to ports and connections while accessing.
G. Do not administer the following medications through a PICC line:
    1. Adenosine - The line may rupture during rapid infusion due to over pressurization.
    2. Dextrose 50% – The catheter can be damaged due to the viscosity of the fluid.

PROCEDURE – Pleural Decompression

INDICATION:

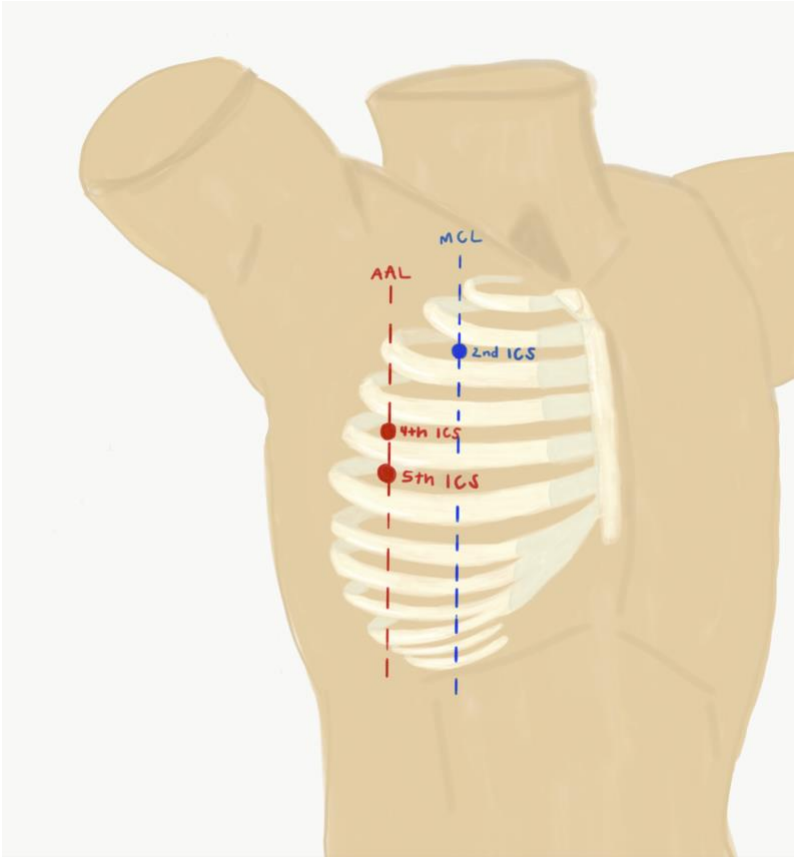
A. Rapidly deteriorating patient with history of:
   1. Chest trauma, COPD, Asthma with shock AND any of the following:
      a. Decreased or absent breath sounds.
      b. Distended neck veins.
      c. Asymmetrical movement on inspiration.
      d. Hyper-expanded chest on affected side.
      e. Hyperresonance to percussion.
      f. Increased resistance to positive pressure ventilation, especially if intubated.

MANAGEMENT:

A PREFERRED: 2nd intercostal space, midclavicular line in average adults and pediatrics.
ALTERNATE: 4th or 5th Intercostal space, anterior axillary line.

B. Insert large bore, at least 4-inch OTN catheter over superior rib margin, remove needle and leave catheter inserted.

C. This procedure to be used only in life-threatening situations.



PROCEDURE – Positive End Expiratory Pressure (PEEP)

INDICATIONS:

A. Hypoxia, pre-or post-intubation despite appropriate positive pressure ventilation with 100% O2.
B. Apply PEEP in preparation for intubation unless there are contraindications.
C. Resuscitation of drowning patient.

CONTRAINDICATIONS:

A. Tension pneumothorax
B. Hypovolemic shock
C. Facial/Airway trauma

PROCEDURE:

A. Apply PEEP device to bag valve device
    1. Dial PEEP to 5 cm H2O and bag as usual; may increase by 5 cm every 3-5 minutes until hypoxia resolves. MAX: 15 cm H2O
B. Max in asthmatic and pediatric patients 5cm H2O.
C. Maintain MAP >65

PRECAUTIONS:

A. Hyperventilation will result in increased intrathoracic pressure and hypotension.
B. PEEP at low levels (5 cm H20) may be of benefit in hypoxic cardiac arrest.
C. PEEP increases expiratory phase of breathing, monitor patient for breath stacking and allow patients to fully exhale.
D. Prevent increased intrathoracic pressure when using PEEP

PROCEDURE – Spinal Motion Restriction Algorithm

PATIENT SELECTION:

A. Appropriate patients for full Spinal Motion Restriction:
    1. Blunt trauma with altered level of consciousness
    2. Spinal pain/tenderness
    3. Neurologic complaint
    4. Anatomic spinal deformity
    5. High energy MOI with any of the following:
        a. Intoxication
        b. Inability to communicate
        c. Distracting injury
B. Spinal motion restriction is NOT indicated in isolated penetrating trauma.

PATIENT ASSESSMENT:

A. Patient mentation:
    1. Altered level of consciousness?
    2. Evidence of intoxication?
    3. Loss of consciousness Involved?
B. Subjective assessment:
    1. Cervical, thoracic, lumbar spinal pain?
    2. Numbness/tingling/burning/weakness?
C. Objective assessment:
    1. Cervical, thoracic or lumbar deformity or tenderness?
    2. Other severe and/or distracting Injury?
    3. Pain with cervical range of motion?
D. **IF YES TO ANY, IMMOBILIZE.**
E. If no to all, may treat/transport without full Spinal Motion Restriction.

MODIFIED SPINAL PRECAUTIONS:

A. Consider Spinal Precautions with C-collar and immobilization to the gurney without LBB:
    1. Ambulatory at scene.
    2. Long transport, i.e., interfacility
    3. LBB not otherwise indicated
B. **MINIMIZING MOVEMENT AND ATTENTION TO SPINAL PRECAUTIONS IS STILL PARAMOUNT!**

PROCEDURE – Surgical Airway

SEVERE FACIAL TRAUMA AND/OR UNABLE TO OXYGENATE/VENTILATE AN ADULT:

A. Cricothyroidotomy
   1. Life-threatening upper airway obstructions where other measures to establish an airway and ventilation have failed and endotracheal intubation is not feasible.
   2. Management:
      a. Identify cricothyroid membrane with non-dominant hand, incise skin with a vertical incision.
      b. Make a small (1 cm) horizontal incision through the cricothyroid membrane, insert gloved little finger into incision to dilate incision; insert bougie into trachea.
      c. Place appropriately sized Trach Tube over bougie into trachea.
      d. Confirm tube placement as per advanced airway protocol.
      e. Maintain normal ventilation rates with BVM.
      f. NOT TO BE USED IN PEDIATRIC PATIENT!
   3. This procedure to be used only in life-threatening situations.
   4. Complications include hemorrhage, false passage, etc.

SEVERE FACIAL TRAUMA AND/OR UNABLE TO OXYGENATE/VENTILATE IN A CHILD <12 YRS:

A. Needle Jet Cricothyroidotomy
   1. Identify cricothyroid membrane, direct 10-14 gauge over the needle catheter caudally into the trachea.
   2. When the needle is through the membrane, stop and aspirate for air to ensure tracheal entry.
   3. Attach to high-flow O2 source with BVM or on/off control device.
   4. This procedure to be used only in life-threatening situations.
   5. Complications include hemorrhage, false passage, etc. Temporizing airway maneuver. CAN BE USED ONLY IN PEDIATRIC PATIENTS.

PROCEDURE – Taser Dart Removal

DEFINITION:

A. A non-lethal neuromuscular interruption weapon deployed by law enforcement officers designed to create temporary motor skill dysfunction to a violent, combative subject.
   1. A taser works by firing two wire-attached darts that can strike a suspect from up to 15 feet or more. It delivers 50,000 volts of electricity but is not harmful to vital body functions such as heart rhythm, pacemaker function or respirations. However, it should instantaneously incapacitate the person. Each electric discharge can last a total of 5 seconds or more and is controlled by the officer who fires the device.

PROCEDURE:

A. To be done only upon request by law enforcement officers:
   1. Ensure cartridge has been removed from the weapon or wires are cut.
   2. Place one hand on the patient where the probe is embedded and stabilize the skin surrounding the puncture site.
   3. Place your other hand gripping the probe and in one quick, fluid motion pull the probe straight out of the puncture site.
   4. Check probe to make sure entire probe was removed and repeat procedure with remaining probes.
   5. Darts are a sharps hazard – treat as contaminated needle and dispose in sharps container or taser cartridge.
B. CONTRAINDICATIONS to field removal:
   1. Probes embedded in the face, neck, groin or female breast should not be removed in the field. Transport for removal.

SPECIAL CONSIDERATIONS:

A. Transport patients demonstrating any of the following:
   1. Evidence of severe agitation See Agitated Patient Management protocol for treatment.
   2. Persistent, abnormal vital signs.
   3. Abnormal subjective complaints including chest pain, shortness of breath, nausea or headaches.
B. Burn Hazard -- When a Taser is used in the presence of flammable liquid or vapor (e.g., pepper spray), there is a burn hazard. Electrical arcing from imperfect (but effective) dart contact can ignite the propellant.

PROCEDURE – Transcutaneous Pacing

INDICATIONS:
Primary initial treatment for symptomatic high degree heart block. Consider in bradycardia with evidence of inadequate perfusion, (e.g. altered mental status, chest pain, hypotension, other signs of shock).

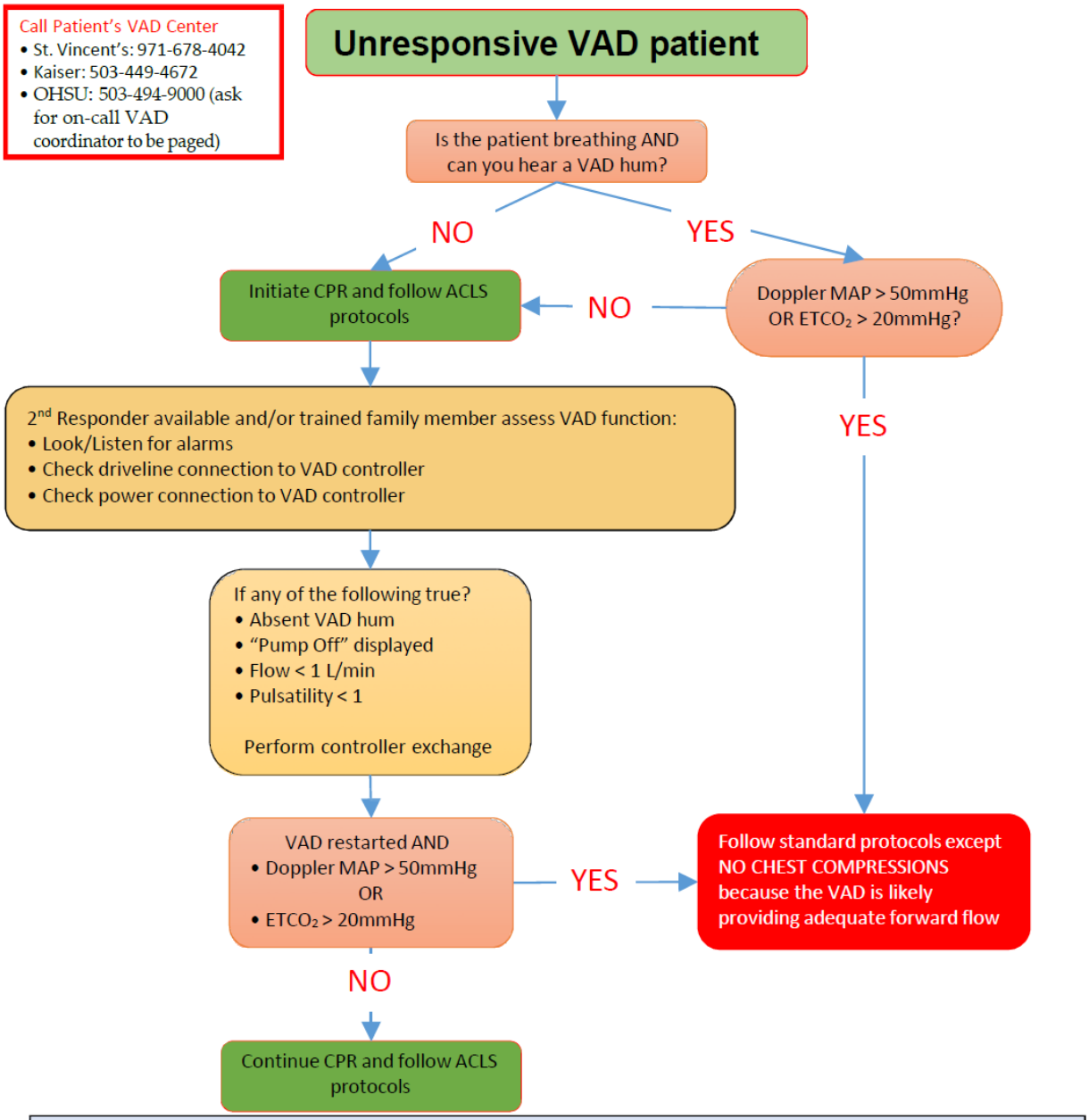
PROCEDURE:

A. Ensure ECG electrodes are attached and monitor displays a rhythm.
B. Attach pacing pads to anterior and posterior chest just to the left of the sternum and spinal column.
    1. Alternatively, pads may be placed in the standard anterior and lateral position as with defibrillation.
    2. If there is difficulty in obtaining capture, try alternative position.
C. Begin pacing at a rate of 80 beats per minute and 30mA current output.
    1. Increase current by increments of 10mAs while observing monitor for evidence of electrical capture.
    2. Confirm mechanical capture by checking pulses and BP.
D. **Midazolam** 2.5-5 mg IV/IM q 5mins PRN.
    1. May give Midazolam prior to pacing if IV already established and Midazolam readily available. Do not delay pacing for Midazolam administration.
    2. Treat pain with Fentanyl per protocol.
E. If the patient remains unconscious during pacing, assess capture by observing the monitor and evaluating pulse and blood pressure changes.
    1. In the event of electrical capture and no pulses, follow PEA protocol.

NOTES & PRECAUTIONS:
Transcutaneous pacing should not be used in the following settings:

A. Asystole.
B. Patients meeting Death In The Field criteria.
C. Patients in traumatic cardiac arrest.

PROCEDURE –Ventricular Assist Device (VAD)



- DO NOT USE MECHANICAL CPR.
- The 2 most common causes of pump failure are disconnection of the power and failure of the controller.
- Transport VAD patient in circulatory arrest to the nearest VAD hospital; otherwise transport the patient to their designated VAD center.
- Patients on VAD support frequently do not have a palpable pulse or recognizable BP yet have adequate perfusion.
- In the non-invasive assessment of the BP, use a manual BP cuff, with ETCO2 as the second option.
- Assess and treat non-VAD pathology:
  - 5 H's: Hypovolemia, hypoxia, hydrogen ion (acidosis), hypo/hyperkalemia, hypothermia
  - 5 T's: Toxins, tamponade, tension pneumothorax, thrombosis-heart, thrombosis-lung
- Keep all back-up equipment with the patient during transport!

PROCEDURE – Wound Packing

INDICATIONS:

A. To be used when conventional methods for hemorrhage control have failed, i.e. direct pressure, pressure dressing, tourniquet placement.
    1. May be the most effective method for controlling junctional bleeding (groin, axilla).
    2. Wounds of Head (scalp), Back and Extremities may be gauze-packed.
    3. Neck, Chest, Abdomen and Pelvis should not be gauze-packed.

PROCEDURE:

A. Use direct pressure to stop bleeding:
    1. Gauze roll
    2. Weighted pressure with hand, elbow or knee.
    3. Insert gloved hand into wound to tamponade bleeding source.
B. If not already done, insert gloved hand into wound and apply pressure.
    1. Be cautious in head or extremity injuries if bony fragments possible.
C. Begin packing wound with roll or Z-fold gauze (Combat gauze preferred but not absolute):
    1. Pack gauze around finger and exert force to tightly fill the wound.
    2. Continue packing gauze into wound until wound is filled or bleeding stopped.
D. Apply direct pressure to wound:
    1. Use the remainder of the roll gauze as a bolster to localize pressure to the wound.
E. Bleeding controlled?
    1. Yes: place pressure wrap and continue transport to trauma center.
    2. No: continue packing or apply greater pressure with hand, elbow or knee; continue transport to surgical intervention.

NOTES/PRECAUTIONS:

A. Appropriate PPE is mandatory:
    1. Gloves
    2. Face/Eye protection
    3. Gown
B. If wound continues to bleed or ooze, continue packing and exerting direct pressure.
C. Note the number of gauze rolls used for wound packing and inform the receiving physician.

COPS - Abandoned Newborns

INTRODUCTION:

A. RCW 13.34.360 allows for the relinquishment of newborn children at hospitals or fire stations. The key provisions of this law include:
    1. Protecting parental anonymity.
    2. Gathering the medical history of the parents and child.
    3. Providing referral information to the parent about adoption options, counseling, medical and emotional aftercare services, domestic violence, and the legal rights of the transferring parent.
    4. Notifying and releasing the newborn to child protective services (CPS).
        a. Newborn defined as < 72hours old.
        b. Safety of Newborn Children Law

PROCEDURE:

A. If delivery has not occurred and appears imminent follow Emergency Delivery protocol. Provide appropriate care to mother per protocol. Follow agency SOP.
B. If EMS is presented with a newborn child in extremis:
    1. Follow NEWBORN RESUSCITATION protocol.
C. Patient not in immediate need for medical care:
    1. Ascertain child's medical history as appropriate:
        a. History of birth including complications, date, time, etc.
        b. Known congenital anomalies.
    2. Paternal/Maternal medical history
        a. Prenatal care.
        b. Drug use during pregnancy.
        c. Other factors influencing child's health.
D. Transport to local hospital.
    1. Notify staff en route of need for CPS referral.
E. Maintaining parent confidentiality is paramount. Ascertain as much history as appropriate while providing a non-judgmental environment.
F. Provide the following referral information to the parent(s) as time allows (patient care is the priority).
    1. Medical and emotional aftercare (i.e., TIP, Chaplaincy, etc.).
    2. CPS.

COPS - Acute MI Suspected; STEMI Early Response Protocol:

PATIENT SELECTION

A. Active chest pain thought to be cardiac in nature.
B. 12 lead EKG w/ ST elevation (1 mm or greater) in @ least 2 contiguous leads – ST Elevation MI (STEMI)
C. No LBBB or paced rhythm – EXCEPTION: LBBB with concordance in 1 or more leads

TREATMENT

A. Notify ED of Acute MI ASAP
B. Provide above care PRN including ASA, NTG, and analgesia per Chest Pain protocol.
C. Transport Acuity Red to closest PCI-capable hospital for emergent cath lab capability.
    1. Always check facility status (via OCS or after entering patient into Pulsara) for availability to accept suspected STEMI patient.
    2. If Clark County hospitals are unavailable, divert to the closest appropriate facility: Emanuel, Providence Portland, Portland Adventist, Kaiser Sunnyside, or OHSU.
    3. Contact MC if divert not practical due to traffic, etc.
D. If initial 12 lead negative or inconclusive, repeat every 3-5 min if symptoms persist.
E. If 12 lead indicates inferior MI (ST elevation in II, III, and aVf), **do V3r and V4r to evaluate for Right Sided MI.**

COPS - Alternative Mental Health Facility Triage and Transport

PURPOSE:

A. The purpose of this protocol is to help patients get the care they need in the most efficient manner possible. There is no substitute for clinical judgement.

PROCEDURE:

A. Perform a full assessment.
B. Ask patient if transport to alternative destination is acceptable.
C. Contact the receiving facility, ask if they can receive an EMS patient.
D. If alternative transport is refused, transport to ED.

INCLUSION CRITERIA:

A. Mental Health Alternate Destinations
    1. Must meet all the above, PLUS:
        a. Age > 17 and < 55
        b. Temperature > 36°C (96.8 °F) and <38°C (100.4°F)
    2. Must NOT have:
        a. New-onset mental illness.
        b. Overdose, except isolated opioid OD treated with naloxone and/or buprenorphine.
        c. Have impending childbirth, pregnancy with complications, or suspected to be in third trimester pregnancy.
        d. Evidence of an acute medical or traumatic problem.
        f. Loss of consciousness or seizure in the last 24 hours.
    3. If disagreement among providers, consult online medical control.

EXCLUSION CRITERIA:

A. Subjective Complaints:
    1. Chest pain
    2. Shortness of breath
    3. Complaints that might suggest acute coronary syndrome
    4. New altered mental status or focal weakness
    5. Impending childbirth, pregnancy with complications, or suspected to be in third trimester pregnancy.
B. Objective Findings:
    1. Cool, clammy skin
    2. Pulse < 50 or > 110 at rest.
    3. Respiratory rate < 10 or > 25, or shallow or labored breathing at rest.
    4. Blood pressure < 100 systolic if symptomatic due to BP.
    5. New neurologic deficits
    6. BGL < 70 or > 300

COPS – BLS Transport Unit Response to and Transport of 911 Calls

APPROVED RESPONSE DETERMINANTS

A. Only those calls prioritized as 5 or 6 that have been pre-approved by the Office of the MPD.
B. Interfacility transfers, not prioritized 1 through 4
C. See BLS Unit Response Call Types reference for complete list

SCOPE OF PRACTICE

A. A BLS Transport Unit will be staffed by tenured, experienced personnel with, at minimum, EMT certification. An EMT with IV and/or SGA endorsement will provide care at the EMT scope of practice. See Scope of Practice by Certification Level with questions.
B. BLS staff may institute care as per protocol.

PATIENT ASSESSMENT

A. Requires ALS evaluation:
    1. Subjective Complaints:
        a. Chest pain
        b. Shortness of breath
        c. Complaints that might suggest acute coronary syndrome
        d. New altered mental status or focal weakness
        e. Impending or recent childbirth, including care of a neonate.
    2. Objective Findings:
        a. Cool, clammy skin
        b. Pulse < 50 or > 110 at rest, in adults, or more than 10 beats per minute outside normal limits for pediatric patients.
        c. Respiratory rate < 10 or > 25, or shallow or labored breathing at rest, or more than 5 breaths per minute outside normal limits for pediatric patients.
        d. Blood pressure < 100 systolic if symptomatic due to BP, or outside of normal limits for pediatric patients.
        e. New neurologic deficits
        f. BGL < 70 or > 300
    3. Other Criteria:
        a. Medication overdose or adverse reaction resulting in ALS symptoms, requiring ALS intervention or decompensation expected to occur.
        b. Crew judgement

TRANSPORT

A. If patient meets BLS criteria as above, transport patient as per the following:
    1. Universal Patient Protocol
    2. Interfacility Transport
    3. Prehospital Communications
    4. Receiving Hospital

DOCUMENTATION OF CARE

A. Independent care by BLS providers prior to arrival of ALS providers will be documented within the EHR. It may be expanded to include the elements of a full SOAP note. This directive is also met by the BLS provider completing a separate EHR in the case when the providers are from a separate agency.

REQUESTING ALS RESPONSE

A. Should patient meet any of the above ALS criteria, crew will immediately summon ALS via CRESA,
    1. If ALS first response already on scene, the BLS crew will follow direction of the Paramedic in charge of patient care
B. Begin treatments as necessary:
    1. Administration of O2 and any necessary airway adjuncts
    2. Provision of any lifesaving intervention as per scope of practice
        a. If cardiac arrest, see Cardiac Arrest Initial Management
C. Prepare to provide complete report to arriving ALS crew(s) including reasons for activating.
D. Arriving Paramedic, after report and patient evaluation, determines need for ALS care and transport.
    1. If the Paramedic determines patient does not require further ALS treatment or care, the Paramedic may ask the BLS crew to transport. The BLS crew will transport, per above guidelines.
    2. Clear documentation of reasons for determining BLS transport will be done, and the incident will be forwarded to the agency training department for review. A full assessment will be completed in the Paramedic's EHR.
E. If patient condition warrants imminent transport and the ALS Ambulance is delayed, the first response Paramedic will maintain patient care and transport in the BLS ambulance.
    1. Notification to Supervisor or Battalion Chief shall be made as soon as possible.

TRANSPORTING FIRE MEDIC DOCUMENTATION REQUIREMENTS

A. Should a Fire Medic transport in a BLS unit they are required to do the following:
    1. Chart all EHR functions of the call on the Fire tablet.
    2. Assist BLS Ambulance provider with information input into Pulsara or HEAR report.
    3. Upon arrival at destination, Fire Medic will provide a verbal patient transfer report
    4. Upon completion of the transport merge Fire EHR chart via Mobile to Mobile with ambulance provider's tablet.
B. Both the Fire Medic and BLS ambulance providers shall complete a detailed narrative in their respective EHR's. Disposition should be transported.

ALS DOWNGRADE TO BLS TRANSPORT – DOCUMENTATION REQUIREMENTS

A. When an ALS provider has evaluated the patient and determined it is appropriate to downgrade the patient to BLS care and transport, a brief note from the ALS provider shall be completed within the EHR.
B. This must include an evaluation and rationale for such downgrade to BLS status and MUST include a statement as to why ALS level of care and transport is not warranted. It may be expanded to include the elements of a full SOAP note.
C. In these circumstances, the BLS provider shall add "ALS Assessment" from the Critical Care tab in the flowchart section, designating the provider that performed the ALS assessment and the time performed.
D. The ALS provider shall document the brief note mentioned above either in the comments section of the ALS Assessment field prior to the record being locked or as an addendum to the narrative after the record has been locked. This directive is also met by the ALS provider completing a separate EHR as will be the case when providers are from separate agencies. 12-lead ECG and rhythm strips will be attached the EHR regardless of its origin

SPECIAL CONSIDERATIONS – BLS TRANSPORT UNIT

A. Death in the field Hospice patient. Should the BLS Transport Unit encounter a death in the field (patient pulseless and apneic):
    1. Determine if patient has a valid POLST and is enrolled in a Hospice program.
    2. Verify patient pulseless and apneic
    3. Consult Medical Control (MC), inform MC physician patient is pulseless/apneic, has a valid POLST and is in Hospice.
        a. MC should honor patient's wishes and allow for DIF declaration. Follow guidelines for Death In The Field to include notification of Law Enforcement and the Medical Examiner.
    4. If any of the above not applicable, begin treatment and summon ALS.

REQUESTING BLS TRANSPORT AMBULANCE

A. If an ALS first responder arrives first and determines that the patient meets BLS Transport Unit Response criteria, they can ask AMR dispatch (channel D4) if there is a BLS ambulance available, if so, AMR dispatch would cancel the ALS ambulance and send a BLS ambulance.

COPS – Crime Scene Response

PROCEDURE:

A. Response and Arrival
   1. Be conscious of physical and weather conditions around the site. Tire tracks of suspect vehicles are often located in or adjacent to a driveway.
   2. Limit the number of personnel allowed onto the scene. Consult with law enforcement to direct placement of vehicles and route of personnel onto the scene.

B. Access and Treatment
   1. Select a single route to the victim. Maintaining a single route decreases the chance of altering or destroying evidence or tracking blood over a suspect's footprints.
   2. Note the location of furniture, weapons, and other articles, and avoid disturbing them. If they need to be moved, someone should note the location the article was moved from, by whom it was moved, and where it was placed.
   3. DO NOT Remove from the scene any EMS generated debris that is contaminated with blood or body fluid.
   4. Be conscious of any statements made by the victim or other persons at the crime scene. Write down what these statements were and report to the investigating officers.
   5. Note the specific garments worn by the patient at the time of treatment. It is also important not to tear the clothing off or cut through any holes.
   6. The victim should be placed on a clean sheet when ready for transport. At the hospital, please try to obtain the sheet once the victim is moved off of it, fold it carefully in on itself, and give it to the investigating officers. This is especially important in close contact crimes such as rape, serious assault and death cases.
   7. Provide your name, agency and contact information to the investigating officer.

C. Documentation
   1. A detailed report is important in case you are later called to testify in court. An incident report should be completed and should cover your observations, conversations with family or witnesses, location of response vehicles and equipment, furniture, weapons, clothing that has been moved, items that were handled and your route to the victim.
   2. An Incident Report may be helpful for you to complete. This is a protected document and if you are called to court may be used by you to refresh your memory of aspects of the call that are not included in the Patient Care Report.
   3. Do not offer your opinions or evaluations about the crime scene.

REMINDER:

A. Any location can be, or become, a crime scene. When responding, and upon arrival, if something does not appear to be right, notify police. If you suspect a crime scene and law enforcement is not present, secure area and document what you see.

COPS – Death In The Field

WITHHOLD RESUSCITATION IF:

A. POLST, DNR, Living Will, HOSPICE:
   1. There is a POLST form present (Photocopies are authorized per WSMA). Oregon patients will be in the Oregon POLST Registry and can be confirmed by calling (1-888-476-5787)
   2. The patient is in a skilled nursing facility and there is a DNR order signed by a physician.
   3. There is a signed and notarized Living Will present, and consultation has occurred with Medical Control.
   4. Patient in HOSPICE in cardiac arrest is considered DNR, withhold resuscitation.

B. Obvious Sign of Death:
   1. Rigor mortis, decomposition, decapitation, dependent lividity, evisceration of heart or brain, or incineration.
   2. Cardiac arrest in field due to blunt force trauma, unless transport time to trauma center < 10 minutes from scene.
   3. Cardiac arrest in field due to isolated penetrating trauma, unless transport time to trauma center < 15 minutes from scene.
   4. Underwater submersion for 2 or more hours consult medical control if cold (freezing) water

C. Limited Resources:
   1. The patient is a pulseless, apneic victim of a multiple casualty incident where resources of the EMS system are required for stabilization of other patients.

MEDICAL DEATH IN THE FIELD:

A. If the initial ECG shows asystole or agonal rhythm confirmed in 3 leads, and the patient, in the Paramedic's best judgment would not benefit from resuscitation:
   1. The Paramedic may determine death in the field, OR
   2. Begin BLS procedures, and contact Medical Control with available patient history, current condition, and with a request for advice regarding discontinuing resuscitation.

B. If after the airway is established and the asystole protocol has been exhausted the patient persists in asystole (confirmed in 3 leads) the Paramedic may determine the patient to be dead in the field.

C. Death in the field may be determined with EtCO2 of 10 or less in patients with PEA after 30 minutes of ACLS resuscitation. For patients with EtCO2 greater than 10 either continue resuscitation or contact Medical Control to stop resuscitation.

D. Patients in VF should be treated and transported.

TRAUMATIC DEATH IN THE FIELD:

See Traumatic Death in the Field protocol.

DOCUMENTATION:

A. All patient encounters will be recorded on an EHR with time and procedures documented.
B. All non-resuscitation and termination of resuscitation will have an ECG strip documenting cardiac rhythm with time and date recorded on the strip. (Exception: traumatic arrest and/or obvious death as noted above).
C. All conversations with Medical Control to be documented, to include time, physician's name, and instructions.
D. Law Enforcement will be notified by the on scene crew on all cases of DIF. Clark County Medical Examiner must be contacted prior to Paramedic leaving the scene.
    1. The ME may choose not to respond to the scene and allow for decedent retrieval by a local funeral home. In such cases, document who was spoken to at the ME's office (must be the ME or Deputy ME) to include name and phone number. This information releases the body to the funeral home. Provide this information to the family and/or law enforcement.

PRECAUTIONS:

A. All hypothermic patients, possible drug overdose, victims of electrocution, lightning, and drowning should have resuscitative efforts begun.
B. Consider the needs of survivors when discontinuing a code.
C. If any doubt exists about the resuscitation of a patient, consult Medical Control.

CONSIDERATIONS FOR CHILD/INFANT DEATH SCENES:

A. In addition to noting the Suspicions for Child Abuse:
    1. Notify appropriate agencies if not already on-scene including law enforcement and the Medical Examiner.
B. Document the following:
    1. Position of infant when originally found
    2. Where infant originally found, i.e., crib, waterbed, bassinet, etc.
    3. Position of face and was it covered by blankets/bedding, etc.
    4. Was infant/child sleeping alone
    5. Any airway obstruction or secretions in airway
    6. Any secretions noted on child's bedding (purge)
    7. Treatments rendered PTA including CPR, etc.
C. Be very cognizant of evidence preservation. RESUSCITATION ATTEMPTS TAKE PRECEDENCE. Take special care to document all attempts at invasive procedures including IVs, intubations, etc.

COPS – Do Not Resuscitate (DNR) Orders

DEFINITIONS:

A. A DNR Order is an order issued by a physician directing that in the event the patient suffers a cardiopulmonary arrest, cardiopulmonary resuscitation will not be administered. DNR orders are only valid when a patient is under the care of skilled nursing personnel.
   1. Patient in HOSPICE in cardiac arrest is considered DNR, withhold resuscitation.
B. A Living Will is a legally executed document expressing the patient's wish for future health care, which includes patient preference for resuscitation.
C. Portable Orders for Life Sustaining Treatment (POLST): Legal document signed by patient and physician indicating patient preference for life sustaining treatment. Includes preference for resuscitation.
D. Resuscitation includes attempts to restore failed cardiac and/or ventilatory function by procedures such as endotracheal intubation, mechanical ventilation, chest compressions, defibrillation, and use of ACLS cardiac medications.

GUIDELINES:

A. When the patient's family, friends, or nursing home personnel state that the patient is not to be resuscitated:
   1. BLS protocols will be followed while attempts to determine if a written POLST form, DNR order, or a Living Will is present.
   2. In the absence of the above, call MC.
   3. The POLST form, DNR order, or Living Will must be documented in the patient care report.
B. No BLS or ALS procedures should be performed on a patient who is the subject of a confirmed POLST form, DNR order, or has a Living Will and who is PULSELESS AND NONBREATHING.
C. See DEATH IN THE FIELD Protocol for further information.

COPS – EMS RESPONSE: MPDS, Unit Delayed, Ambulance Closer

MEDICAL PRIORITY DISPATCH SYSTEM (MPDS):

A. Once a call is received by an ALS or BLS transport unit, the unit will respond as rapidly as possible and make patient contact to determine and administer emergency medical care as needed.
B. All EMS units will follow the Clark County MPDS EMS Response Modes and the respective response determinants. At times deviation from these modes may be appropriate.

FIRST RESPONSE UNIT DELAYED:

A. The first response unit shall advise CRESA to notify the responding ambulance of the delay.
B. CRESA shall advise the responding ambulance of the delayed response.
C. The responding ambulance shall upgrade to the First Response EMS Response Mode.
D. Delayed response is defined as any response time (time of dispatch to time of arrival) exceeding an EMS agency's response time standard for the incident location.

AMBULANCE CLOSER TO A CALL:

A. When a responding ambulance unit realizes it is closer to a call:
    1. The ambulance crew shall advise the first responder of their location and respond according to the First Response EMS Response Mode;
    2. The first responder shall decide if it will respond according to First Response or Ambulance Response Mode.

COPS – EMS RESPONSE: Cancellation/Slowdown/Higher Priority Call /Requesting BLS Ambulance/Staging

CANCELLING OF RESPONSE:

A. CRESA reports the original caller has canceled the request for service. The Paramedic will make the decision to cancel or continue the call based on information from CRESA.
B. A first-in responding unit reports that no patient is present.
C. A first-in responding unit with an EMT, Paramedic, or EMS agency known to the responding unit arrives and reports that the patient does not want or need contact by ALS transport unit. This cancellation can be due to:
    1. No need for treatment or minor care administered by the first-in units.
    2. Patient/Guardian desires POV transport (should be conveyed to transport unit). If first-in unit feels ALS transport Paramedic should continue in for evaluation, this should be conveyed to responding medic unit.
        a. It shall be the discretion of the Paramedic on the responding medic unit whether to continue to the scene.
        b. If the ALS transport unit does not respond, the first-in unit will obtain a refusal form signed by the patient or other responsible person stating that based on his/her own initiative they do not desire transport.

SLOWDOWN:

A. Transport units may be slowed by first-in units, staffed by a Paramedic or EMT, after evaluating the patient and determining a slower response is appropriate.
B. It would be more appropriate for the first-in unit to convey patient information to the medic unit so the responding Paramedic can decide if a slower response is appropriate.

DIVERSION TO HIGHER PRIORITY CALL:

A. An ALS transport unit may be diverted to another call when:
    1. It is obvious the second call is a life-threatening emergency and first-in units known to ALS transport unit as EMTs and/or Paramedics report that first call can await a second ambulance.
    2. A second ambulance is dispatched to the first call.
    3. The first ambulance is decidedly closer to the second call and the response by it to the second call might conceivably be vital to the patient's outcome.

REQUESTING BLS TRANSPORT AMBULANCE

A. If an ALS first responder arrives first and determines that the patient meets BLS Transport Unit Response criteria, they can ask dispatch if there is a BLS ambulance available, if so, dispatch would cancel the ALS ambulance and send a BLS ambulance.

STAGING:

A. Stage/standby will be done only when responding to scenes involving acts of violence or other scene safety issues until the scene is secured by law enforcement or other means. Items to consider:
    1. Information from CRESA indicating violence or potential for violence, i.e., assault with weapon, violent individual(s), hostage situation.
    2. Information that raises questions regarding the safety of responders, i.e., hazardous material or another special rescue situation.
B. Units will advise CRESA of intent to stage and request Law Enforcement (or other appropriate agency) response (if not already done). CRESA will notify all responding units of intent to stage.
    1. The responsibility to stage rests with the responding agency. Communication of intent to stage will be shared between multiple responding agencies.
C. CRESA has no authority to tell a unit to stage. They should provide ALL pertinent information to the responding units so they can make the appropriate determination as to whether to stage. This should be the same complete information as provided to law enforcement responding units

COPS – Interfacility Transport

GUIDELINES:

A. It is the responsibility of the transferring facility to ensure the medical necessities for safe patient transfer are met including stabilization.
B. Follow instructions of the Physician and RN's unless contrary to standing orders.
C. Attendance of the patient during transport:
    1. Physician - he or she will direct all care regardless of standing orders.
    2. RN – he or she will direct care of the patient via orders from the physician at transfer or the receiving physician. The RN may defer emergency care to the Paramedic.

STABILIZATION PRIOR TO TRANSFER:

A. Patients will not be transferred without first being stabilized. Stabilization includes adequate evaluation and initiation of treatment to assure that transfer of a patient will not, within reasonable medical probability, result in material deterioration of the condition, death, or loss or serious impairment of bodily functions, parts, or organs.
B. Stabilization of patients prior to transfer to include the following:
    1. Establish and assure an adequate airway and adequate ventilation.
    2. Initiate control of hemorrhage.
    3. Stabilize and splint the spine or fractures, when indicated.
    4. Establish and maintain adequate access routes for fluid administration.
    5. Initiate adequate fluid and/or blood replacement.
    6. Determine that the patient's vital signs are sufficient to sustain adequate perfusion.
C. ALS patient and Above Criteria Not Met:
    1. You may initiate prehospital protocols and guidelines including the establishment of intravenous lines, airway control, etc.
    2. You may refuse to transfer the patient until the facility has complied with the above evaluation and/or treatment. Should you decide this is necessary, contact MC for concurrence and consultation or contact the MPD directly.

OTHER CONSIDERATIONS:

A. If a BLS transport is requested and the BLS crew determines the patient needs to be transported by ALS ambulance, it is mandated that dispatch be contacted and an ALS crew dispatched. Under no circumstances should a BLS crew transport an ALS patient. (Exception: mass casualty incidents.)
B. Emergencies en route:
    1. Prehospital protocols immediately apply.
    2. MC should be contacted as appropriate; the receiving facility should be contacted as soon as possible to inform them of changes in the patient's condition.
C. Specific transport provider (AMR) protocols exist for ALS transfer between medical facilities. See AMR ALS Transfer Protocols, Clark County Washington.
D. Any deviation from this guideline or from the transport protocols should be reported to the MPD on an incident report within 24 hours of occurrence.

COPS – Life Flight/Air Ambulance Transport

GENERAL CONSIDERATIONS

A. Air transport is appropriate for critical trauma patient if transport time can be reduced by at least 10 minutes vs. ground. Consider the following:
   1. Factors affecting the **10-minute** reduction include:
      a. Transfer of patient care to Life Flight personnel.
      b. Establishing and transporting to the landing zone.
      c. Transferring patient from helicopter to receiving medical team.
   2. In general, incidents occurring within **20 miles** of the trauma center do not necessitate helicopter transport.

STANDBY

A. Life Flight may be placed on standby by:
   1. 1st Responder, EMT, Paramedic
   2. Any Physician
   3. Any Police Officer
B. When Life Flight is put on standby status, the helicopter is readied but remains available for any other requests on a priority basis. If another agency requests activation and you have Life Flight on standby, Life Flight will check with you for activation or stand-down.
C. Life Flight should be placed on standby by trained personnel on scene after patient assessment has been done. It would be appropriate to place Life Flight on standby prior to personnel arrival based on the following guidelines:
   1. If first response unit arrival will be > 10 minutes and the information dispatched purports to be the type of patient who will benefit from Life Flight.

ACTIVATION:

A. The decision to activate rests with a responding Paramedic (or a physician on scene):
   1. As Paramedic arrives on scene and evaluates patient.
   2. Based upon information relayed to Paramedic by people on scene.
B. In some cases, Life Flight can be immediately dispatched (activated) to the scene prior to the arrival of a first-in unit or Paramedic, when:
   1. Travel time for that first-in unit will be over 20 minutes and the situation as known purports to be the type of patient who will benefit from Life Flight.
   2. Where it is known that difficult terrain will be encountered rendering ground access difficult but where the helicopter can get near the patient easily.
   3. Reporting party relates some other special circumstance indicating the need for its immediate activation.
   4. On scene EMS responders relay to the Paramedic the need for activation of Life Flight prior to that Paramedic's arrival.
C. Activation shall be done through CRESA with concurrence of responding Paramedic.
D. Criteria for Activation
   1. Patient(s) meet criteria for trauma system entry and extrication and/or ground transport will be prolonged (>10 minutes).

2. Type of injury may dictate immediate transport to level I (Emanuel Hospital, OHSU).
   a. Medical Control will be contacted as soon as possible for instruction and/or concurrence for diversion to Portland of adult patients.
   b. Situations that may result in diversion include but are not limited to:
      * Burns (major).
      * Pregnancy with multi-system trauma in shock, unresponsive to aggressive resuscitation, or where surgery is anticipated immediately.
      * Pediatric patient meeting trauma entry criteria. Can consider rendezvous with LifeFlight at PHSW or LSC landing pad.
3. Multiple victims meeting trauma team criteria.
4. Diversion to Portland by Medical Control due to hospital resources (PHSW down for trauma).
5. Life Flight should not be used for situations where the outcome is an obvious fatality. (Refer to DEATH IN THE FIELD protocol.)

E. Destination Hospital
   1. Unless diversion criteria above applies, the destination hospital shall be indicated to Life Flight by the Paramedic in charge (PIC). The PIC will consult with Medical Control and TCC to determine destination

CANCELLATION

A. Life Flight may be cancelled by the Paramedic responsible for the patient upon examination of the patient and it is apparent that air transport is not necessary.

CASE REVIEWS:

A. Life Flight calls will be reviewed by Clark County QA Committee and reported to the Medical Program Director.

COPS – MASS CASUALTY INCIDENT (MCI)

THE NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS) WILL BE USED TO MANAGE ALL INCIDENTS.

A. Incident Command (IC) is the responsibility of the agency having jurisdiction (AHJ).
B. Each assisting agency shall retain full authority to operate within the scope of its agency operational and administrative protocols and procedures.
C. Agencies that are assisting in the support of a single jurisdiction will function under the direction of that jurisdiction's designated Unified Incident Command.
D. Incident Command of a multi-discipline event should be predicated on the "Primary Hazard" of the event.
E. In a Unified Command, the "Lead Agency" may change as priorities change.

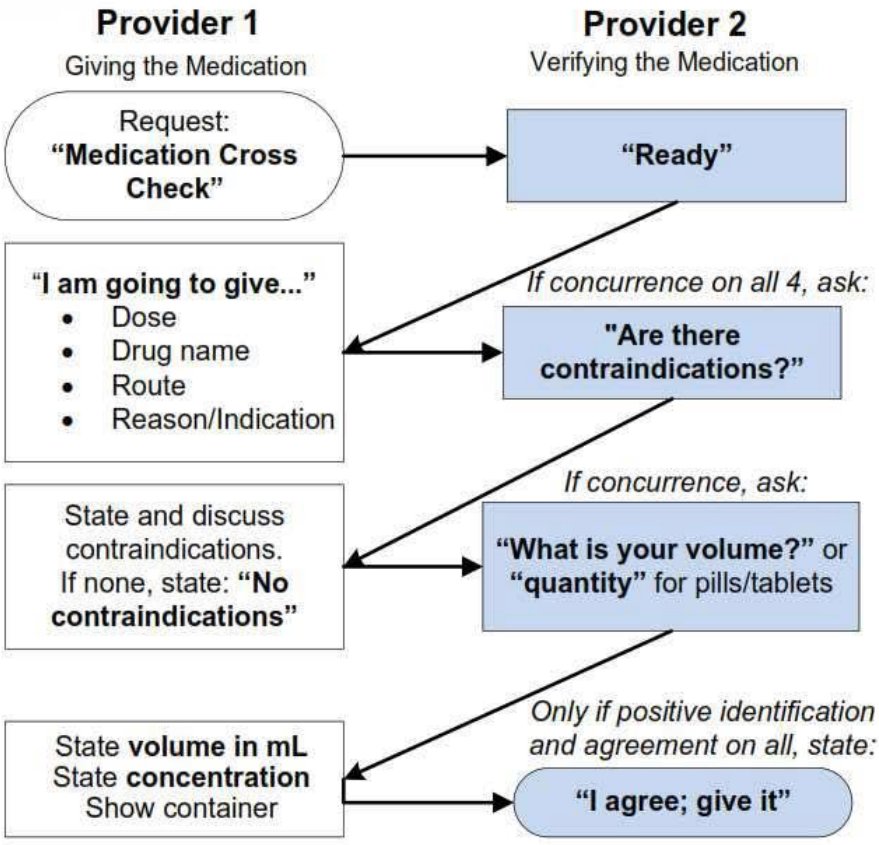
MCI PROTOCOL

A. Tool that may be used in part or whole as determined by the on-scene Incident Commander in situations where the number of patients exceeds the resources of the on-scene responders. There is no set number of patients that will automatically initiate this protocol. If the Incident commander determines that additional resources or incident structure is needed to better manage due to the complexity of the incident, he/she shall announce to dispatch that an MCI is being declared. This may be done upon arrival or at any time during the incident.
    1. If the incident involves multiple asymptomatic patients (HazMat exposure) set up secure evaluation area.
    2. During a declared MCI, the Trauma System is not in effect.
    3. "Licensed ambulances" are not needed for transport.
    4. If transport resources are limited, more than one critical patient may be placed in an ambulance.

For detailed description of roles and responsibilities during an MCI please reference MCI Protocol – Detailed Operation

COPS - Medication Administration Guidelines

Medication Administration Cross Check



- "**Contraindications**" include: 1) verification of appropriate vital signs, 2) known patient allergies, and 3) expiration date.
- If a discrepancy, disagreement, or need for clarification is encountered at any step in the process, it must be resolved prior to continuing the cross check.
- Provider 2 can authorize the administration of the medication.
- The Medication Administration Cross Check must be completed prior to the administration of any medication when two EMS providers are available.
- If there is an interruption or change in patient condition of any kind, the process must be re-initiated by Provider 1.
- Avoid ambiguous statements or confirmations like "okay."

RED RULE of Medication Administration
(A Duty to Avoid Causing UNJUSTIFIABLE Harm)
NEVER give the contents of a syringe that is not labeled or without visualizing the vial from which it was immediately drawn.

Adapted with permission from Wichita-Sedgwick County EMS System

ALLERGIES TO MEDICATIONS:

A. No medication should be given without making every reasonable attempt to ensure the patient is not allergic to them.

MEDICATION ADMINISTRATION ERRORS:

A. Any errors that occur while giving a medication must be reported immediately upon discovery to the following:
    1. Facility receiving the patient.
    2. Agency EMS department administration OR follow agency SOP for notification of medication error.
    3. An incident report will be provided to OMPD by the agency EMS department as soon as feasible and no later than 24 hours from the discovery of the error.

CONTROLLED MEDICATIONS:

A. Controlled medications are maintained at each agency utilizing approved protocols and security, to include lot number and/or vial number. Agency operating procedures for controlled medication ordering, receipt, storage and administration may be individualized but they must follow these general guidelines:
    1. When a controlled substance is used, the MPD approved controlled medication proof of use form will be completed by the Paramedic administering the medication and the agency personnel authorized to replace the medication. Wastage will be documented in the same fashion.
    2. Each agency will maintain the Controlled Drug Proof of Use form in written or electronic format as a permanent record.
B. Paramedics only are authorized to administer controlled drugs.
C. Ordering of controlled medications, (to be done ONLY by the authorized agency officer):
    1. The DEA order form (222) will be completed by the agency authorized officer and submitted to the MPD for signature.
    2. The MPD will retain a copy of the order form (222) and the authorized officer will submit the form to the vendor.
    3. A scanned copy will be provided to allow for quarterly audits with the controlled medication vendor.
    4. Electronic forms (e222) will be used when approved by DEA (Agency application)
D. Receipt and storage of controlled medications:
    1. Receipt of controlled medication from the vendor will be done by approved agency personnel and overseen by the authorized agency officer in charge of controlled medications.
    2. Storage and disbursement of controlled medications will include records of lot and/or vial numbers and amounts distributed to ALS personnel.
    3. Controlled medications will be stored under double lock.
E. Inventory of controlled medications will be monitored for security by no less than two authorized agency personnel to ensure compliance with these guidelines.

F. All ALS agencies with controlled medications must have operating procedures on file with the OMPD.
G. All agencies will monitor controlled medication utilization by each Paramedic on a routine basis. This data will be available to the OMPD for review.

IV FLUIDS:

A. The purpose for IV access:
    1. Fluid resuscitation for hypotension.
    2. Administration of IV medications per protocol.
    3. The anticipation of need for the above.
B. Lactated Ringer's (LR) is the fluid of choice if significant volume replacement is required, i.e. hypovolemia shock, Sepsis. Normal saline (NS) is indicated for shock associated with hyperkalemia (End-stage renal disease, crush syndrome, rhabdomyolysis).

BLOOD PRODUCTS:

A. Blood products may be administered enroute, during interfacility transfer to unstable patients who are actively bleeding or in shock.
    1. Blood will be provided by transferring facility and be administered via provided large bore IV blood tubing.
    2. Stop infusion if patient develops signs of allergic reaction and treat pt. accordingly.

INTRAOSSEOUS (IO) ACCESS:

A. Indications:
    1. Attempts at peripheral IV sites unsuccessful, patient requiring vascular access.
B. See IO Insertion procedure

PEDIATRIC MEDICATION ADMINISTRATION:

A. Use a length-based system for determining the correct dose of any medication.
B. As pediatric dosing is weight dependent, DO NOT exceed the adult dose for any medication delivered to a pediatric patient.

COPS – Medications for Opioid Use Disorder (MOUD)

PURPOSE:

A. Patients experiencing opioid overdose are susceptible to experiencing severe withdrawal symptoms after reversal. They also have a high risk of repeat overdose.
B. These guidelines are for patients 13 or older with suspected opioid withdrawal. The withdrawal can be precipitated by naloxone or occurring because the patient has not used opioids recently.
C. Buprenorphine is an effective treatment for opioid use disorder by reducing cravings, diminishing withdrawal symptoms, and giving protection against overdose after the patient has been induced. Buprenorphine is the most effective treatment to prevent death from opioid use disorder.

MEDICATION USAGE

A. This Medication for Opioid Use Disorder procedure is only to be used by personnel trained in its use.
B. For purposes of this protocol, single-agent buprenorphine (brand name Subutex) and combination buprenorphine-naloxone (brand name Suboxone) may be used interchangeably.

PATIENT EVALUATION:

A. Treat if signs of overdose with respiratory depression per AMS Opioid OD protocol.
B. In a patient with history of opioid use disorder, evaluate for signs of opioid withdrawal (more symptoms present with more severe withdrawal):
    1. Restlessness such as frequent shifting, extra movements of legs or arms, unable to stay still for more than a few seconds.
    2. Anxiety or irritability.
    3. Pulse rate > 100.
    4. Large pupils.
    5. Rhinorrhea.
    6. Nausea or vomiting.
    7. Yawning.
    8. Sweating.

C. Contraindications to treatment with buprenorphine:

Absolute:

1. Age < 13
2. Methadone in the last 48 hours
3. Altered mental status

Relative (consider OLMC consult):

1. Benzodiazepine or other sedative intoxication suspected
2. Patients on chronic, prescribed opioids

TREATMENT:

A. Assess the patient's interest in engaging with treatment.
   1. "Would you like some medicine to help you feel better now?" If patient declines medication, recommend transport. If patient declines transport, refer to follow-up.
   2. "Can we help schedule follow-up for you?"
   3. "What phone number would be best?"
B. If patient consents to Buprenorphine:
   1. Administer 16 mg **Buprenorphine** (2 strips) under the tongue. Instruct patient to allow strips to dissolve. Do not chew or swallow the strip
   2. Reassess symptoms in 10 minutes. If symptoms worsen or persist, administer 8 mg **Buprenorphine** (1 strip) as above. Repeat x 1 as needed, for total buprenorphine dose 32 mg.
   3. Refer to Vomiting/Significant Nausea protocol as needed.
C. If patient does not agree to buprenorphine, obtain refusal and provide access to further care, i.e. ensure transport to ED or alternative SUD facility if requested, leave at home referral materials as well as leave behind Naloxone, when available, should be left at all scenes where responding agency providers presume a possibility of possible secondary OD etc.
D. Document use of buprenorphine in chart including patient response

DISPOSITION OPTIONS:

A. Transport patient to ED if patient requires additional treatment.
B. Transport to Rainier Springs per Alternate Destination protocol.
C. Referral to ScalaNW: (206) 573-5389
   1. 24/7 call referral line for MOUD patients.
   2. Call results in an appointment for follow-up (could be in-person or virtual).
   3. Required information: name of EMS agency, call back number for patient, patient name, DOB, medication initiated, insurance status/carrier.
D. Provide field referral to Nurse Navigation if patient consents.
E. If patient refuses transport, refer for CARES follow-up if in CARES response area.
F. Provide patient the option to accept leave behind Narcan

COPS – Online Medical Control (OLMC) Consult

INTRODUCTION:

A. Online medical control is provided by EMS physicians and emergency medicine physicians delegated by the MPD through the numbers listed in the Contacts section.
B. Documentation of Consultation with Medical Control:
    1. All conversations with medical control will be documented in the EHR flowchart to include physician name, reason for contact and instructions provided.

PROCEDURE:

A. If a patient is being transported to a facility outside of Clark County, OLMC must be utilized for treatment concurrence while the EMS unit is within Clark County. When the transport unit is operating in Oregon, OLMC is at Medical Resource Hospital (MRH), OHSU.
B. In cases where life-threatening conditions exist or when communication is impossible, controlled medical treatment(s) can be given without base station physician concurrence. Document reasoning.
C. FORMAT FOR OLMC CALL:
    1. Name, Unit, Reason for call (AMA refusal, medication orders, TOR, consult)
    2. Patient age and gender
    3. Brief clinical history
    4. Vitals (or initial rhythm, downtime, and current rhythm and EtCO2 for cardiac arrest)
    5. Pertinent physical exam

PARAMEDIC CONSULT WITH MEDICAL CONTROL REQUIRED FOR THE FOLLOWING:

A. Some cases of FIELD TERMINATION OF ACLS (see Death In The Field protocol).
B Patient or decision-maker refusing against medical advice, including well-appearing infant after BRUE
C. Disparity between the prehospital protocols and on-scene physician wishes

COPS – Nurse Navigation Triage Request by Field Unit

REQUESTING NURSE NAVIGATION:

A. Once providers rule out the need for ALS treatment and transport, they shall determine whether the patient is eligible for referral to Nurse Navigation (NN). NN assessment may result in a patient staying home for self-care, being referred to a community clinic, or being transported to an emergency department. NN operates 24 hours daily, seven days per week.

INCLUSION CRITERIA:

A. Patient must be 18 years and able to give consent.
B. Normal level of consciousness with no cognitive impairment.
C. Cooperative.
D. Ambulatory, able to perform activities of daily living.
E. Not under law enforcement custody.
F. NONE of the exclusion criteria identified below.

EXCLUSION CRITERIA:

A. Requires ALS evaluation:
    1. Subjective Complaints:
        a. Chest pain
        b. Shortness of breath
        c. Complaints that might suggest acute coronary syndrome
        d. New altered mental status or focal weakness
        e. Impending or recent childbirth, including care of a neonate.
    2. Objective Findings:
        a. Cool, clammy skin
        b. Pulse < 50 or > 110 at rest, in adults, or more than 10 beats per minute outside normal limits for pediatric patients.
        c. Respiratory rate < 10 or > 25, or shallow or labored breathing at rest, or more than 5 breaths per minute outside normal limits for pediatric patients.
        d. Blood pressure < 100 systolic if symptomatic due to BP, or outside of normal limits for pediatric patients.
        e. New neurologic deficits
        f. BGL < 70 or > 300
    3. Other Criteria:
        a. Medication overdose or adverse reaction resulting in ALS symptoms, requiring ALS intervention or decompensation expected to occur.
        b. Crew judgement

B. Exception to exclusion criteria:
    1. If vital signs outside normal range and assessment reveals that this is consistent with the patient's baseline vitals, NN can be considered.
    2. If blood pressure is elevated above normal and the patient is asymptomatic (e.g., no neurological symptoms/chest pain/shortness of breath/syncope/headache), NN can be considered.
    3. If elevated BGL and patient asymptomatic, NN can be considered.

ELIGIBILITY FOR NURSE NAVIGATION

A. Once a patient is deemed eligible for NN, the provider will explain to the patient that based on the assessment, the patient's complaint is being referred to NN to determine the best care pathway. EMS providers will remain on scene, by the patient's side, as the patient speaks with NN, and a disposition determination is made.

CONTACTING NURSE NAVIGATION:

A. Contact number for NN (Preferable to use the patient's phone):
    1. AMR (855) 228-8891
    2. Fire (855) 228-9636
B. Be prepared to provide NN the following:
    1. Name/DOB/Gender
    2. Address/Phone
    3. Chief complaint
    4. VS / Assessment
    5. Pertinent history and/or meds (if known).
C. After speaking to the provider, the nurse will ask to speak to the patient either directly, or on speakerphone if the patient's privacy can be maintained.

DISCREPANCIES BETWEEN EMS AND NN:

A. There may be times when EMS providers disagree with the disposition determination made by the Triage Nurse. Remember that the nurse makes the final decision of transport or destination on these calls. Do not argue with the Triage Nurse while providing patient care. If after the NNL call, EMS personnel question the assessment or destination decision of the Triage Nurse, transport the patient, and report it to your clinical department.

PATIENT REFUSAL OF NURSE NAVIGATION:

A. Patients may refuse to speak with the nurse or refuse the triage and further care decision made by NN. Every effort should be made to encourage these patients to speak with NN and abide by their decision. Patients will almost always be seen faster and have more appropriate care based on their presentation than being seen in the ER. If, after repeated attempts to the contrary, the patient continues to refuse, transport to the ER. Exception to this is crisis standards of care declared by the MPD.

DOCUMENTATION:

A. After referral of the patient, document the EHR with the following:
    1. Unit Disposition: Patient Contact Made
    2. Patient Evaluation/Care: Patient Evaluated and Care Provided (the care being assessment and referral to an appropriate resource)
    3. Crew Disposition: Initiated and Continued Primary Care
    4. Transport Disposition: No Transport
    5. Reason for Refusal/Release: Released Following Protocol Guidelines
B. No refusal signatures are required.
C. Documentation must include all patient's demographics, a full assessment that includes a minimum of 2 sets of vitals, and a detailed narrative with the nurse's name.

COPS – Patients Refusing Care

GUIDELINES:

A. Establish if medical need exists. If the patient is refusing or resisting care, determine:
   1. Patient or decision-maker capable of making informed decision.
   2. Patient or decision-maker not capable (in EMT's opinion) of making informed decision.

PATIENT OR DECISION-MAKER CAPABLE OF MAKING INFORMED DECISION:

A. No medical need exists:
   1. A refusal form is not necessary.
   2. EHR documentation will include the events necessitating the call to EMS as well as all criteria for no medical need. Disposition: Patient Evaluated, no Treatment/Transport Required

B. Non-emergent medical need exists:
   1. If transport is recommended by the EMT, refusal form and EHR must be completed by EMT or Paramedic attending patient.
   2. If transport is not recommended by the EMT; complete EHR with all the necessary elements. Explain decision-making. Give callback precautions signed by patient.
   3. EHR documentation shall include necessary elements. Disposition: Patient Treated, Released (per protocol)
   4. If MPD HAS DECLARED CRISIS STANDARDS OF CARE
      a. Non-emergent medical need and transport not necessary see Non-Transport, Crisis Standards of Care protocol

C. Immediate medical care and/or ambulance transport necessary:
   1. A refusal form is necessary. Form/EHR must be done by the EMT or Paramedic attending patient.
   2. Every effort will be made to convince these patients/decision-makers to accept necessary prehospital intervention and transport to definitive care. Options available to the EMT or Paramedic include:
      a. Solicit assistance from family, friends, and/or other close associates to persuade the patient to accept necessary treatment and transport.
      b. Solicit assistance from law enforcement (police hold), mental health professional (psychiatric hold), and/or clergy as the situation directs.
      c. Consider requesting a paramedic if no ALS providers are on scene.
   3. CONSULTATION WITH MEDICAL CONTROL IS MANDATORY.
      a. Purpose of MC consult is to influence patient to agree to transport/treatment and provide another perspective on risks of refusing care/transport.
   4. EHR documentation shall include necessary elements. Disposition: Patient Treated, Released (AMA)

D. If the patient still refuses treatment/transport, the attending EMT or Paramedic will be responsible for explaining the CLARK COUNTY EMS REFUSAL INFORMATION FORM and documenting the conversation in the EHR. Completion of the form includes:
   1. Explanation of instructions and release of liability to the patient/decision-maker.

2. Receipt of signature (dated) from patient/decision-maker, or documentation of telephone conversation with decision-maker.
3. Completion of patient assessment, MC consult, and patient disposition sections.

NO ONE CAPABLE OF MAKING INFORMED DECISION:

A. Medical care and/or ambulance transport necessary:
   1. EHR must be completed by Paramedic attending patient.
   2. Every effort will be made to convince these patients to accept necessary prehospital intervention and transport to definitive care. Options available to the Paramedic include:
      a. Solicit assistance from family, friends, and/or other close associates to persuade the patient to accept necessary treatment and transport.
      b. Solicit assistance from law enforcement (police hold), mental health professional and/or clergy as the situation directs.
      c. Consider physical restraint and/or sedation per Medical Control concurrence based on the patient's condition and current situation.
      d. Physical restraint and/or sedation can occur only when the Paramedic believes the patient poses a danger to him/herself or others.
   3. CONSULT WITH MEDICAL CONTROL IS MANDATORY.
      a. Purpose of OLMC consult is to influence patient to agree to transport/treatment and provide another perspective on risks of refusing care/transport.
   4. EHR documentation shall include necessary elements. Disposition: Patient Treated, Released (AMA).
   5. Should the above efforts prove fruitless, it may be necessary to leave these patients at the scene. Aforementioned documentation guidelines will be adhered to.

PATIENT IN CUSTODY AND/OR INCIDENT INVOLVING LAW ENFORCEMENT:

A. If patient has capacity, follow protocol outlined above regarding medical need. The patient will require a full medical exam, pertinent to the nature of the chief complaint and mechanism of injury. If the patient refuses care and/or transport a refusal form must be signed by the patient and the conversation documented.
B. If patient in custody of police, under arrest and/or restrained by officers who are refusing transport for a minor medical need, document refusal in EHR with signature of arresting police officer on refusal form.
C. All other patients will be transported to the hospital by ambulance. It is not appropriate to allow transport by police if a patient has obvious medical need.

DOCUMENTATION OF REFUSAL IN THE EHR:

A. In the event a patient refuses treatment or transport consistent with County Operating Procedures, the signature obtained from the patient or guardian shall be on the electronic version of the Clark County Patient Refusal Information Sheet located on the signatures page of the EHR or on physical paper form which is to be scanned and attached to the EHR. A paper copy shall be available to leave with the patient.
B. Refusals should also include a brief statement regarding the discussion about the decision to refuse. (For example, “I recommended transport because of the risk of life-threatening

complications of chest pain. The patient understood the risks and refused transport, despite family members attempting to convince him.")

C. Online Medical Control Contact
    1. For any online medical control (including all AMA refusals) please include in the EMR the name of the physician you spoke with when contacting OLMC. Document On-Line (Remote Verbal Order) in the Medical Control field

NECESSARY ELEMENTS

A. The patient's chief complaint.
B. Events prior/reason for call to EMS.
C. Pertinent medical history.
D. Description of scene (if relevant to patient's chief complaint).
E. Physical exam including vital signs
F. Clinical impression.
G. Prehospital interventions.
H. Consultation with Medical Control.
I. Patient's response to medical care and/or transport attempts.
J. Instructions to patient and/or family including risks/benefits of treatment/transport.

COPS - Patient Treatment Rights

CONSENT:

A. These prehospital care protocols are intended for use with a conscious, consenting patient, or an unconscious (implied consent) patient.
B. If the condition warrants, treatment of a minor (under age 18) is done via implied consent.

RIGHT TO MAKE DECISIONS REGARDING CARE:

A. If a conscious patient is rational and refuses treatment, the Paramedic should document the refusal (see guidelines for refusing care).
B. If a conscious patient is irrational (or impaired by alcohol or drugs) refuses treatment, the Paramedic should contact Medical Control and police as well as county mental health professional, if necessary (see guidelines for refusing care).
C. If a patient's family, patient's physician, or nursing home refuses treatment for a patient, protocols are contained herein to deal with those situations.
D. A rational patient has the right to select a hospital to which to be transported in a non-emergent situation.
E. If a patient is a minor (under age 18), no consenting adult is available and the minor refuses treatment, the EMT should contact Medical Control (and police, etc.)
F. When in doubt, contact the Medical Control and fully document all of your actions

COPS – Prehospital Communications

HOSPITAL DIVERT STATUS:

A. PHSW will accept Trauma Entries, STEMI, Cardiac Arrest, Stroke and Septic Shock Alerts when on ED divert. LSC will accept Septic Shock Alerts and Stroke patients that meet criteria.

HOSPITAL NOTIFICATION OF PATIENT ACUITY:

A. Acuity Definitions
    1. RED: Patient presents with symptoms of a life-threatening illness or injury with a high probability of mortality if immediate intervention is not begun to prevent further airway, respiratory, hemodynamic and/or neurologic instability.
    2. YELLOW: Patient presents with symptoms of an illness or injury that may progress in severity or result in complications with a high probability for morbidity if treatment is not begun quickly. Typically, patient needs to be seen by a physician within 10 minutes of arrival to the hospital.
    3. GREEN: Patient presents with symptoms of an illness or injury that have a low probability of progression to more serious disease or development of complications.

HOSPITAL PRE-ARRIVAL NOTIFICATION REPORT FORMAT AND PATIENT ACUITY:

A. Pulsara – follow reporting format within the application.
    1. If patient meets Trauma, STEMI, or Stroke activation criteria use those individual case types when entering the patient into Pulsara.
    2. For all other patient types, i.e. Sepsis, other ACS, etc. use the General case type and clearly indicate acuity and reason.
B. For all other receiving facilities not using Pulsara:
    1. RED or YELLOW Acuity Report Format:
        a. Unit identification
        b. Age and sex of patient
        c. Patient acuity
        d. Chief complaint or reason for transport
        e. Very brief pertinent medical history
        f. Vital signs
        g. Pertinent treatment rendered
        h. Request for additional information or treatment
        i. Estimated time of arrival (ETA)

    2. GREEN Acuity Report Format:
        a. Unit identification
        b. Age and sex of the patient
        c. Patient Acuity and reason for transport
        d. Estimated time of arrival (ETA)
C. The prehospital report should be provided to the receiving facility as soon as practical once transport has begun.-

D. Advise OLMC or receiving ED of changes in patient's condition en-route and request for further treatment.
E. If patient identified as acuity RED and interpreter services needed or anticipated please notify the receiving facility.

VERBAL REPORT UPON HOSPITAL ARRIVAL:

A. This should contain more detail than the radio report. Present thorough details of the scene, complete patient assessment, and complete report on patient care and the result of your efforts.
    1. Name, age, sex
    2. Chief complaint or injuries
    3. If trauma, describe the trauma scene
    4. Pertinent medical history
    5. Physical examination findings
    6. Explain patient treatments and results of such

COPS - Prehospital Documentation

WRITTEN REPORTS/DOCUMENTATION:

A. An approved Electronic Health Record (EHR) must be appropriately completed for any call for EMS assistance resulting in patient contact regardless of patient transport. This will apply to all responding agencies and includes public assist calls.
   1. Patient contact occurs when a provider contacts/sees/hears a patient. When more than one agency is on scene, each agency is responsible for documentation of an EHR. The treatments and evaluations provided, while provider is in contact with the patient, shall be documented.
   2. Public Assist/Lift Assist: These patient encounters will include documentation of, at minimum, the patient's mental status (GCS), blood pressure, pulse, and respiratory rate/effort as allowed by the patient, as well as any treatment or assistance provided. Documentation will be done as per above EHR guidelines.
   3. Provide Manpower/Assist Other Agency: Units requested to assist with patient movement and/or packaging ONLY will document as per agency policy.

B. Documentation format:
   1. ESO is the EHR of choice in Clark County. This is a legal record and may be called upon as evidence in any court of law. The narrative portion of the EHR should include the subjective assessment as well as plan of treatment and transport/disposition.

C. Documentation of Response Determinant/Priority:
   1. Complete documentation of patient care will include the determinant and/or priority assigned at initial dispatch and any upgrades received while enroute.

D. Documentation of Procedures and Treatments:
   1. Performance of any procedure will be documented within the flowchart of the EHR to include time, reason for procedure and patient response.
   2. For all intubated patients, documentation of end tidal CO2 numeric value AND waveform will be uploaded to the chart
   3. Whenever an EKG monitor is used, a copy of the EKG recording will be affixed and/or downloaded to the chart. This includes 12 lead tracings, the electronic monitor file and code summary reports.

E. Sharing of patient demographic and treatment information will be done by first arriving units to later arriving units via ESO mobile.

F. The patient care report is a legal document and should reflect the patient care incident as accurately as possible. As such, the report will be completed as soon as feasible after the patient encounter to ensure an accurate accounting of the incident. ALL REPORTS MUST BE COMPLETED PRIOR TO THE END OF SHIFT or within 24 hours whichever occurs first.
   1. Transporting units will leave a completed report or Field Worksheet at the receiving facility upon delivery of the patient. The Pulsara report will fulfill this function at those facilities using the platform.
   2. Transport agencies are required to provide a completed EHR to the receiving facility within 24 hrs. of patient arrival

DOCUMENTATION GUIDELINES/COMPLETION OF THE EHR

A. General Principles:
    1. The goal is to efficiently create a document that describes the key elements in the patient's care. To maximize efficiency, we want to avoid documenting the same data in different parts of the EHR. We want to use data fields to document data and use narrative fields to describe what can't be captured in the data fields.
    2. Consultation with Medical Control:
        a. All conversations with medical control will be documented in the EHR to include physician name, reason for contact and instructions provided.
B. Flowchart:
    1. The flowchart section shall be used to document all procedures and treatments performed.
    2. All treatments and procedures shall include documentation of the following regardless of the treatment being successful or not:
        a. The providers name,
        b. The size of any equipment used,
        c. The dosage and route of any medications administered,
        d. Any complications encountered and
        e. The patient's response to treatment.
    3. STEMI, Stroke, Medical Control Consult, Sepsis and Trauma Alerts will be time stamped in the flowchart section with the time the notification was made to the receiving ED.
    4. Offered and Refused
        1. For those treatment options offered to the patient and the patient refuses those treatment options, i.e. medications, procedures, it is imperative that this information is documented in the EHR. Document in the treatment and response section the medication/procedure as "offered" and in the notes section indicate the patient "refused"
C. Assessments Tool
    1. The assessments tab shall be used to document the objective findings of the patient's physical exam. The comments area within each section of the Assessment tab shall be used to further describe details that the "+" and "- "check boxes do not clearly explain. (Example: a note in the Mental Status comment box stating, " Patient is oriented to person and place, but somnolent and slow to respond.")
    2. The anatomical model may be used to detail specific locations of injuries or findings. This is highly recommended to create a specific and clear picture of injuries identified.
    3. In general, for each chief complaint, there are one or two organ systems that should have a detailed exam. For example, patients with chest pain require a detailed cardiac and pulmonary exam. Patients with neurologic complaints require a detailed neurologic exam. Spend time on the key parts, save time on the rest.
D. Primary Impression
    1. The primary impression field shall be populated with the most life-threatening possible medical problem identified by the pre-hospital provider. (Example: if the patient was initially seen for a STEMI but deteriorated to cardiac arrest, the Primary Impression

selected within the EHR would be "Cardiac Arrest" and the Secondary Impression would be "STEMI". Primary is worst, not first or dispatch determinant.)

2. The primary impression should always reflect the reasonable worst-case scenario based on the available information. For example, a patient that presents with chest pain and anxiety would be given the primary impression “Chest Pain.”

E. ECG and Monitor Imports
   1. If vitals are imported from the patient monitor, the provider shall confirm the accuracy of those vitals and remove erroneous values. (i.e. a heart rate of 240 recorded due to artifact on the monitor during transport would be deleted). Pulse values should be indicative of a true intrinsic mechanical pulsation not electrical activity in the heart or chest compression rate. (Example the pulse for PEA should be 0 not 87.)
   2. 12 lead ECGs performed, and pertinent ECG tracings shall be uploaded and attached to the EHR. At least one of the 12 lead ECGs (the one with the most relevant clinical information) shall be detailed/identified in the ESO EHR vitals/ECG section.
   3. Any subsequent 12 lead ECG with significant changes is to be documented there as well.
   4. Monitor imports should include the PCO file containing continuous waveforms from monitor power on to termination of patient contact. Waveforms should include ETCO2, ECG lead as appropriate (paddles or lead 2), and SPO2.

F. Personnel
   1. All personnel within the provider's agency who were involved with patient care shall be listed in the personnel section of the EHR..

G. Completion
   1. For transported patients, the provider will enter the destination transported to in the EHR prior to departure from the Emergency Department. (Note: Once Wi-Fi is available, ESO will then transmit a draft version of the information collected up to that point to the Hospital Patient Tracker software.) As soon as possible and within 60 minutes of arrival of the Emergency Department, a draft report shall include at least the following information:
      a. Patient First and Last Name (unless unknown)
      b. Hospital medical record number (MRN) (unless transporting to destination with health data exchange).
      c. Approximate age or birth date
      d. Chief Complaint
      e. Vital Signs,
      f. Medications Administered
      g. Treatments performed and last known well when applicable to treatment for presumed CVA patients.

H. Per the requirements of WAC 246-976-330(2)(b) all EHRs must be completed (locked) and available at the Emergency Department within 24 hours of patient arrival, but the goal should be completion of documentation before the patient is likely to leave the Emergency Department.

I. Narrative:

1. Providers may elect to document a complete traditional SOAP format in the narrative but shall still comply with all the other aspects of this policy and ensure the patient record does not contradict itself.
2. The Narrative section is intended to tie together all the aspects of the EHR and provides a clear depiction of the patient encounter and your thought processes in the moment. The goal of the Narrative is NOT to repeat information found elsewhere in the EHR. The Narrative section shall include the following information:
    a. **S** = **Subjective**: What is told to you
        i. What were you dispatched to? Include any updates, changes, delays, staging, or anything out of the ordinary that happened while en route to the scene if applicable.
        ii. What the patient and/or witnesses state led to/happened just prior to this incident.
        iii. What was the patient's chief complaint? Detail the patient's and/or witnesses; description of chief complaint in their words as much as possible.
        iv. Consider using mnemonics such as O.P.Q.R.S.T. Document pertinent negatives and positives related to the chief complaint.
    b. **O** = **Objective**: What you find/see
        i. Describe the general appearance of the patient and the scene.
        ii. The majority of the objective exam is detailed in the Assessment Tab but you can also use the objective portion of the narrative to describe anything else that cannot be adequately described in the patient assessment.
    c. **P** = **Plan**: Actions performed during patient care
        i. The Plan portion of the Narrative shall include a less detailed chronology of the treatments and procedures performed. The intent of this additional narrative is to provide a reader with a general picture of what was done for the patient recognizing the specifics of those treatments and procedures are detailed in the flowchart section. It is critical that you include the thought process that led to your decisions (for example, “the patient appeared more and more fatigued despite CPAP, and I made the decision to proceed with RSI.”)

J. Additional Forms
    1. All required specialty forms, as determined by the MPD, shall be completed prior to locking the record, including the Cardiac Arrest, ACS, LAMS, BEFAST, and Advanced Airway.

K. Documentation of Patient Race/Ethnicity and Sex/Gender
    1. Whenever possible, scan driver license or another medical document for obtaining patient’s sex. If that is not available, for conscious patients, ask the patient “What sex were you assigned at birth. If patient cannot or chooses not to provide information, record Unknown.
    2. Documentation of gender is determined by agency. Follow agency policy for gathering of gender demographics.

L. Limited English Proficiency
    1. Document primary language (Billing Authorization Form Language Selection). Document use of interpreter in narrative if not primarily English speaking, or document interpreter declined (in narrative)

M. Disposition/Patient Acuity
    1. Disposition and patient acuity should match; although we do not need to use lights & sirens for every patient triaged red, we should NOT use lights & sirens if the patient is not critically ill.
N. First Responder Assist Only – Documentation within Incident Tab
    1. Unit Disposition – No Patient Contact OR Patient Contact
    2. Patient Evaluation and/or Care Disposition – Patient Support Services Provided
    3. Crew Disposition – Provided Care Supporting Primary EMS Crew OR Incident Support Services Provided (Including Standby)
O. Final Signature
    1. Once the EHR has been completed, the author will sign the EHR attesting to its completeness and accuracy.
    2. The EHR should also be co-signed by a member of the response team who can also attest to the completeness and accuracy of the EHR

DOCUMENTING SPECIFIC CALL TYPES/PROCEDURES USING AVAILABLE FORMS IN ESO

A. CARDIAC ARREST use the CPR Form to document the following:
    1. Estimated time of arrest (not range)
    2. Arrest Witnessed and by whom.
    3. Time of first CPR (not range) and by whom:
        a. Bystander; Family; Law Enforcement (LE); Non-LE 1st responder; Other Healthcare provider; EMS
    4. Type of first CPR:
        a. Compressions and ventilations; Compressions only; Ventilations only ; Mechanical CPR (Y/N) and time
    5. Prearrival instructions by dispatch (Y/N)
    6. First Defibrillation, time and by whom Form but no time. Time should be documented in flowchart
    7. AED PTA:
        a. Yes, with defibrillation; Yes, without defibrillation; No
    8. AED applied by PRN:
        a. Bystander; Family Member; Healthcare Provider (non-911 Responder); Law Enforcement; First Responder; Non-Law Enforcement First Responder
    9. First Arrest Rhythm:
        a. VF; Pulseless VT; Asystole; PEA; Unknown Shockable; Unknown Unshockable
    10. Rhythm at Destination PRN
    11. Final ROSC time PRN
    12. Resuscitation discontinued, time and reason: Form
        a. Not responding; POLST/DNR
    13. Advanced Airway: Procedure in flowchart
        a. ETT; iGel; Used existing trach; No
    14. Vascular Access: Procedure in flowchart
        a. IV (location); IO (location); No
    15. STEMI: Assessment documented in flowchart, EKG portion
        a. Yes; No; Unk.

16. Drugs given and time of administration Procedure in flowchart
17. SHOCKABLE RHYTHMS Procedure in flowchart
    a. Total Shocks, Energy level and time of each; Pad placement: Initial and Change of Vector
19. NOT SHOCKABLE RHYTHMS Procedure in flowchart
    a. If PEA, please describe; H's and T's

B. AIRWAY
1. Reason for advanced airway (AA): Procedure in flowchart
    a. Potential for compromise; Airway reflex compromised; Illness/Injury of airway; Ventilations compromised; Apnea/Agonal; Other
2. GCS and Neurologic exam prior to sedatives or paralytics and AA. Procedure in flowchart
3. Anticipated difficult airway Procedure in flowchart
4. Pulse Oximetry (SpO2) time and value. Please indicate if on RA or patient's home oxygen requirements. Procedure in flowchart
5. Airway obstruction alleviation Procedure in flowchart
    a. Suction; Back blows; Chest thrusts; McGill's
6. Pre-Oxygenation method(s): Procedure in flowchart
    a. High flow NC; NRM; BVM; CPAP
7. Treatment: needle thoracentesis and/or meds Procedure in flowchart
8. Full set of VS to determine if resuscitation is necessary Procedure in flowchart
9. Intubation if SpO2 94% or greater and MAP > 65mmHg for 3+ minutes, induction medications: choose one Procedure in flowchart
    a. Ketamine: Dose, time, indication.
    b. Etomidate: Dose, time, indication.
    c. Midazolam: Dose, time, indication.
10. Intubation if SpO2 94% and MAP > 65 mmHg for 3+ minutes, paralytic medications: choose one Procedure in flowchart
    a. Succinylcholine: Dose, time, indication.
    b. Rocuronium: Dose, time, indication.
15. Intubating device: use Advanced Airway Form
    a. Direct laryngoscopy (DL); Video Laryngoscopy (VL)
16. Time device inserted past teeth (or where teeth should be). Form
17. Endotracheal tube (ETT) size, bougie use and depth. Form
    a. Number of attempts (device passing teeth); If failure, reason for failure
18. Time ETT placed with cuff inflated and ventilations begun. Form
19. Operator placing ETT. Form
20. End tidal CO2 placement time and value Form
21. Post intubation Fentanyl: Dose and time. Procedure in flowchart
22. Post intubation sedating medications: choose one Procedure in flowchart
23. Post intubation ventilation rate, PEEP and if ventilator was used Procedure in flowchart
24. Post intubation SpO2 time and value. Procedure in flowchart
25. Post intubation EtCO2 time and value, with continuous waveform monitoring of EtCO2 Form
26. Failed intubation with placement of iGel or Cricothyrotomy: Advanced Airway Form

a. Yes, if yes time of placement; No

27. Reason for long-acting paralytic: Procedure in flowchart
    a. Risk of losing airway; Chest rigidity, unable to ventilate; No
28. Long-acting paralytic medication: choose one Procedure in flowchart
    a. Rocuronium: Dose, time, indication.
    b. Vecuronium: Dose, time, indication.
29. Post long term paralytic SpO2 and EtCO2: Time and value Procedure in flowchart
30. Post intubation patient movement (Scene to gurney, gurney to ambulance, ambulance to hospital): SpO2 and EtCO2 time and value. Procedure in flowchart

C. ACS Must document this in flowchart
    1. Aspirin administered or contraindication documented.
    2. 12 lead ECG within 10 minutes of patient contact or documentation of reason for delay
    3. Transmission of STEMI positive 12 lead within 10 minutes of acquisition with time stamp
    3. Explanation of >20 min scene time
    4. Reason for destination
D. STROKE
    1. Blood Glucose Procedure in flowchart
    2. Forms page for BE FAST/LAMS, including time assessment performed. Form Include Last Known Normal. Procedure in flowchart
    3. Stroke Alert if patient meets alert criteria. Procedure in flowchart
    4. 20 min or less on scene
        a. Comprehensive stroke center for LAMS ≥4 with Last Known Normal < 24 hours. Procedure in flowchart
E. TRAUMA
    1. If any delays on scene, reason for delay Procedure in flowchart

F. BLOOD DRAWS
    1. Blood draws require a PCR report. Minimum documentation shall include the following:
        a. Agency that has the subject or patient in custody.
        b. Image of the valid warrant attached to the ePCR.
        c. Documentation of the patient or subject verbalizing either consent or nonconsent for the blood draw.
        d. RASS Score
        e. Narrative should include any information not defined in the flow section including restraints in place at time of EMS arrival, physical restraint used by law enforcement during the blood draw, and compliance during the procedure.

COPS - Prehospital Exposure and Infectious Disease Control

KNOWN OR SUSPECTED EXPOSURE:

A. If exposure occurs, follow agency SOP for notification of agency administrators.
    1. DO NOT WAIT TO REPORT. Should be done as soon as possible.
B. Upon hospital arrival with patient, notify ED staff (typically the Employee Health (EH) or Infection Control (IC) nurse) of potential exposure. Also inform staff of all other prehospital personnel who made patient contact. If you work for a non-transporting agency, contact administrative personnel as per your agency SOP.
    1. If a communicable disease exposure is suspected, all exposed personnel in contact with the patient will be documented and be contacted (or their agency contact person) by the EH/IC RN or his/her designate upon confirmation of communicable disease.
C. Treatment/prophylaxis will be provided as per "Centers for Disease Control (CDC) postexposure prophylaxis.
    1. If indicated, prehospital personnel will be required to sign in as patients to the Emergency Department (preferably at the same hospital the patient was delivered) and complete workers compensation form.

UNKNOWN EXPOSURE:

A. Prehospital personnel (or their designated agency representative) will be contacted by the EH/IC RN with confirmation of communicable disease.
B. All prehospital personnel will be documented on the "Prehospital Exposure Log."
C. Treatment/prophylaxis will be provided as per "Guidelines for Prophylaxis of Occupational Exposure to Common Infectious Diseases."
    1. If indicated, prehospital personnel will be required to sign in to FasTrack in the Emergency Department (preferably at the same hospital the patient was delivered) and complete workers compensation form.

EXPOSURE DEFINED:

A. Exposure(s) of any bodily fluids into body openings, mucous membranes or cuts/wounds.

RESPIRATORY DISEASE DECLARATION:

A. During typical respiratory infectious disease season, per declaration by Clark County Public Health, the following procedure will be applied:
    1. Personnel will follow standard infectious disease prevention during patient encounters including wearing a mask for:
        a. ANY patient contact within enclosed spaces containing a sick patient to include private residence, SNF, clinic, patient transport vehicles (ambulances).
        b. Entering all hospital facilities.

STANDARD INFECTIOUS DISEASE PREVENTION

A. Minimum PPE for all patient contacts will include gloves, and eye protection. Use above plus N95 or higher level of mask during Aerosal Generating Procedures (AGPs), infected patient or when desired by the provider. Use above plus surgical mask for any immunocompromised patient or when desired by the provider. Examples of AGPs include: intubation, open suctioning of respiratory secretions, manual ventilation, non-invasive ventilation, and nebulizer treatments.
    1. **If responding to a residence/facility with a known or potential outbreak assume all patient contacts are potentially infected, until assessed.**
        a. All patients will be asked to "come to us" if they are ambulatory by contacting the residence or facility through verbal contact from doorway, call into the residence/facility, or by CRESA who will direct staff to add the direction of – "If you are safe to do so, please make your way or assist the patient in getting to the front door of your residence or facility to meet the crews."

COPS - Prehospital Research

INTRODUCTION:

A. Prehospital research will be regularly conducted in Clark County. This may involve retrospective and concurrent data extrapolation from CAD and patient care documentation and will not influence current patient care protocols or clinical practice. However, some prospective projects will require modification of protocols and procedures and require prehospital personnel to become informed of the alterations in practice prior to study involvement. In the event of a prospective prehospital study the following guidelines should be used:
    1. No study will be done without full vetting of the project, including any financial implications, with all agencies affected. Each agency agreeing to participate will enter into an agreement.
    2. All involved personnel must attend necessary didactic and clinical skills training sessions pertaining to the research project, as per guidelines set forth by the MPD and the research team.
    3. Consultation with DOH will occur to determine need to apply for pilot project status.

ALTERATIONS IN PATIENT CARE PROTOCOLS/PROCEDURES:

A. Alterations in patient care protocols/procedures, i.e., institution of new procedures/medications, change in destination procedures, addition of new devices, etc. will be followed as per guidelines set forth in the education programs.
B. These alterations will be adhered to and supersede current protocols during the time of the study.
C. When feasible and length of research project warrants, modified guidelines will be provided to participating personnel in the form of addenda to these protocols.

TIME STAMP FOR PROTOCOLS AND PROCEDURES:

A. Consistent and synchronized documentation of treatment and intervention time is paramount to the success of a research project. Time documentation will be done using the cardiac monitor, where applicable, or CAD supported time stamp.
B. Any device used for documentation of treatment/intervention time will be synchronized with CRESA daily if necessary.

UPLOAD OF CARDIAC MONITOR/CPR PROCESS FILES:

A. If applicable to a study, electronic cardiac monitor and/or CPR process files will be acquired and submitted in accordance with EMS agency policy, software, and cardiac monitoring equipment.

COPS - Treating Physician And/Or Medical Professionals At The Scene

TREATING PHYSICIAN AT THE SCENE:

A. When the patient's treating physician is in attendance and has identified themselves, the ALS team will comply with that physician's instructions for the patient. If orders are given which are inconsistent with established protocols, clearance must be obtained through the OLMC Physician.
   1. Physicians must provide proof of their identity, if they wish to assume or retain responsibility for the care given the patient after the arrival of the Paramedic unit.

B. The Physician at the Scene:
   1. May request to talk directly to the Medical Control Physician to offer advice and assistance;
   2. Can offer assistance with another pair of eyes, hands, or suggestions;
   3. May take total responsibility for the patient with the concurrence of the Medical Control Physician.

C. Transport:
   1. If during transport, the patient's condition should warrant treatment other than that requested by the treating physician, OLMC will be contacted for information and concurrence with any treatment, except in cases of cardiopulmonary arrest (follow appropriate cardiac arrest protocol).

D. The above protocol will also apply to cases where a physician may happen upon the scene of a medical emergency and interacts with the ALS team.

OTHER MEDICAL PROFESSIONALS AT THE SCENE:

A. Medical professionals at the scene of an emergency may provide assistance and should be treated with professional courtesy. Medical professionals who offer their assistance must identify themselves.

MIDWIFE AT SCENE OF HOME/COMMUNITY DELIVERY:

A. If EMS is contacted, this is a true emergency, and expedited transport to a hospital is required. In general, there are three primary reasons for an expedited transport;
   1. Fetal distress during labor
   2. Maternal post-partum hemorrhage
   3. Newborn respiratory distress or complex resuscitation

B. Midwife will likely be the most experienced person on scene. Be aware of their expertise. Midwife has training for medications to assist labor, manage hemorrhage and carries equipment for neonatal resuscitation, including I-gel, BVM etc.

C. The Midwife should be in attendance of the patient in the ambulance, with EMS assistance.

D. Midwife does not direct EMS but EMS can and should assist the Midwife. EMS can perform *procedures within their scope of practice* at the request of the Midwife. None of the EMS protocols should be in conflict with the Midwife's request; if there are any questions contact Medical Control.

COPS - Non-Transport of Patients

CRITERIA FOR NO TRANSPORT:

A. The EMT may recommend no transport if no emergent medical need. Under routine operations, the patient or decision-makers' request for transport will be honored. Patients may be left on scene if:
   1. EMT recommends transport, and a patient or decision-maker with decision-making capacity has been informed of the risks of refusal and has signed a refusal form.
   2. The EMT and the patient or decision-maker agree transport is not required.
   3. The patient is dead on arrival or resuscitation efforts have been terminated.
B. **EXCEPTION: MPD HAS DECLARED CRISIS STANDARDS OF CARE**
   1. EMT recommends no transport and patient/decision-maker is requesting transport, consult medical control. If EMT and physician agree there is no medical benefit to transport, the patient will be left on scene.

PATIENTS REFUSING CARE AND/OR TRANSPORT (CLASSIFIED AS FOLLOWS):

A. No medical need exists. Patient cancels EMS.
B. A person with normal decision-making capacity who, after having been informed of risks and benefits of treatment/transport, voluntarily declines further services.
C. Any other person is assumed to require a medical screening evaluation and EMS personnel will use all resources available to have that person treated and transported.

IMPAIRED DECISION-MAKING CAPACITY DEFINED:

A. Inability to understand the nature of his/her illness/injury.
B. Inability to understand risks or consequences of refusing care/transport.
C. Individuals impaired by:
   1. Alcohol/drugs
   2. Psychiatric conditions
   3. Injuries (head injury, shock, etc.)
   4. Organic Brain Syndromes (Alzheimer's, developmental delays, etc.)
   5. Minors (<18 years old)
   6. Language/communication barrier (incl. deafness)

CRITERIA FOR INFORMED CONSENT FOR REFUSAL:

A. Person is given accurate information about possible medical problems and the risk/benefits of treatment or refusal.
B. Person is able to understand and verbalize these risks and benefits.
C. Person is able to make a decision consistent with his/her beliefs and life goals.

COPS – Patient Transport - First Response Aid Agency Emergent Transport Criteria

INTRODUCTION:

A. As per RCW 18.73.130 (4) define when it is appropriate for a first response aid agency to transport a patient in emergent situations where the licensed transport provider is delayed or unavailable due to overwhelming demand.
B. This policy must be agreed to between the first response agency and the transport provider. It is not the intent of this operational procedure to supersede any contract for provision of ambulance service.

GUIDELINES:

A. The aid agency transport vehicle will be staffed and equipped to the level necessary to safely treat and transport the patient as per their level of illness or injury. This will almost always require paramedic-level providers with necessary advanced life support equipment and supplies. Resource availability during MCI may dictate BLS level care and transport.
B. The aid agency transport vehicle must be designed for the patient to be safely transported on a gurney and allow for appropriate safety restraint systems to be used by the attending provider and patient.
C. Activation of the aid agency transport vehicle must be done per the judgement of the on-scene providers after evaluation of the patient. Follow agency procedures for activating the transport unit.

PROCEDURE:

A. Use of the of the aid agency transport vehicle may be considered in the following situations and the licensed transport provider is significantly delayed or unavailable:
    1. Emergent transport criteria
        a. Inability to oxygenate or ventilate the patient.
        b. Uncontrolled hemorrhage despite hemorrhage control measures.
        c. Hypotension not responding to resuscitation.
        d. RED trauma system entry criteria.
        e. Return of spontaneous circulation (ROSC) after 10-minute cool down period.
        f. Precipitous childbirth, i.e. breech presentation.
        g. Patient meeting STEMI or Stroke activation criteria.
B. Transport as per Receiving Hospital protocol.
C. The aid agency transport unit will notify the receiving facility utilizing Pulsara, unless transporting into Oregon per Clark County Receiving Hospital protocol.
D. ALL transports by the aid agency transport vehicle will follow documentation procedures outlined in protocol (link) and include immediate notification to the Office of the MPD and the ambulance provider to include date, time, incident number and rationale.

COPS – Patient Transport Mode

PURPOSE:

A. Transport Mode – Lights and Sirens (L&S)
   1. L&S may be used if the patient requires a time-sensitive treatment that is not available pre-hospital, and the expected decrease in transport time outweighs the risk of using lights and sirens. Rationale should be documented in the EHR. The transporting ambulance will be operated as per RCW 46.61.035 and local company policies and procedures for emergent operation of a vehicle.
   2. Depending on operational conditions, L&S MAY be considered for:
      a. Red trauma
      b. STEMI
      c. Suspected stroke with new neurological deficits present
      d. Inability to oxygenate or ventilate
      e. Severe respiratory distress not responding to treatment
      f. Shock not responding to treatment
      g. Medical uncontrolled hemorrhage

B. Transport Mode – No Lights and Sirens
   1. All other transports will be without use of emergency warning systems or traffic control devices. All local traffic laws will be followed.
   2. L&S are NOT routinely indicated for:
      a. Yellow trauma
      b. Chest pain without STEMI or hemodynamic instability
      c. TIA with resolved symptoms (May still be triaged red)
      d. Intubated patients with stable vital signs
      e. Post-ROSC patients without STEMI or hemodynamic instability
      f. Any patient triaged yellow
      g. Sepsis (unless shock not responding to treatment as above)

COPS - Receiving Hospital

TRIAGE CRITERIA:

A. Non-Life-Threatening Injuries or Illness – preference is for the closest, most-appropriate facility. Can go to a further appropriate Hospital at the discretion of patient, family, or the patient's physician.
    a. Patients with behavioral issues only will be transported to the closest facility.
B. Life-Threatening Injuries or Illness – transport to the closest appropriate facility unless diversion criteria in effect.
C. Specific Presentations
    a. Red or yellow acuity trauma patients, any other patients expected to require trauma services
        i. PHSW, unless patient meets criteria outlined in Receiving Hospital Diversion
    b. Acute MI/STEMI and Cardiac Arrest with Return of Spontaneous Circulation
        i. Transport to closest facility with 24/7 PCI (LSC or PHSW)
            1. Always check STEMI divert status prior to initiating transport.
            2. If unavailable, divert to closest appropriate facility (Legacy Emanuel, Providence Portland, Portland Adventist, Kaiser Sunnyside, or OHSU).
            3. Contact MC if divert not practical due to traffic, etc.
    c. Stroke Patients
        i. Comprehensive Stroke Center
            1. The following patients require a comprehensive stroke center with neurointerventional capability. Check facility status prior to initiating transport. If PHSW unavailable, divert to closest appropriate facility (Legacy Emanuel, Providence Portland, Kaiser Sunnyside, or OHSU). Contact MC if divert not practical for logistical reasons.
                a. LAMS 4 or 5
                b. Symptoms more than 3 hours but less than 24 hours
                c. Patient comatose, with profound paralysis, or aphasia
                d. Suspected intracranial hemorrhage
                e. Age greater than 80
            2. Closest Stroke Center
                a. Symptoms 3 hours or less, above criteria not met

COPS – Receiving Hospital Diversion Policy

COUNTY HOSPITAL DIVERSION PROTOCOL:

A. Diversion may occur at either PHSW or LSC. Destination hospital will generally be the other Clark County hospital. If both hospitals are on divert, transport patient to the closest, most appropriate Clark County hospital.
    1. Notify receiving hospital that the County Hospital Diversion Protocol is in effect and theirs is the most appropriate receiving facility.
    2. This notification should be made as soon as possible once transport determination is made.

OTHER DIVERSION CRITERIA:

A. Trauma Diversion - Medical Control at PHSW contact is NOT required for transport to Emanuel or OHSU allowed by County Operating Procedure (burns, pediatric trauma entry, pregnancy with multi-system injury). Document on the EHR. 2
B. Pediatric Trauma Diversion – Transport all Pediatric (less than 15 years) trauma entry patients to Pediatric Level I (Emanuel/OHSU) unless closest hospital necessary for airway control, vascular access, or arrest.
    a. For long transport, or traffic issues, consider activation of LifeFlight: helipad at PHSW/LSC can be an appropriate rendezvous.
C. Diversion Based on Patient Request, Attending Physician, and/or Primary Care/Health Plan:
    1. If patient condition critical (emergent/Code 3 transport) divert to closest appropriate facility.
    2. Potential for further diversions, i.e., receiving hospital on divert to another hospital. If intended hospital on divert, Paramedic may divert to closest facility.
    3. Other Considerations:
        a. Weather - traffic patterns, time of day, etc. - ambulance levels in the county (all agencies)
        b. If, in the Paramedic's judgment, diverting to a Portland hospital will result in a prolonged out-of-service time, divert to the closest facility. The receiving ED physician will be informed of the criteria and reason for the diversion; these shall also be documented in the EHR and be included in the criteria for MPD review.

COPS – Receiving Hospital Diversion Policy/Five County Area

OVERVIEW:

A. The Greater Portland Metropolitan Area (Multnomah, Clackamas, Washington and Columbia Counties, and in coordination with Clark County, Washington) is a large geographic area with a growing population. There is a complex network of medical providers, and hospital systems servicing the area. The Portland Metro Five-County Emergency Medical System (EMS) values transporting patients to the hospital of their choice and getting patients to the right hospital for specialty services. These systems require coordination between patient transport and patient destination, ensuring continued use and availability of emergency medical resources to the community. The patient diversion guidelines exist to provide guidance for emergency departments (ED) and ambulance providers during high-capacity times. The guidelines are a collaborative effort between many stakeholders that include hospitals, ambulance providers, county oversight agencies, and the Oregon Association of Hospitals and Health Systems (OAHHS). This protocol does not pertain to prescheduled, non-emergency, or inter-facility transports.

PURPOSE:

A. Ambulance diversion is a hospital short-term management tool used as a last resort when the patient load overwhelms ED resources after internal diversion avoidance procedures have been implemented. Ambulance diversion is not to take the place of effective patient volume management processes. This protocol defines how the Portland Metro Five-County EMS system will effectively manage situations where the diversion of an ambulance may be necessary and when such diversions may have an adverse effect on individual patient care or the EMS system.

PHILOSOPHY:

A. The Greater Portland Metropolitan Area hospitals will make every effort to avoid the diversion of ambulances which may result in:
    1. Transporting patients away from their hospital or physician of choice.
    2. Prolonged prehospital care for unstable or critically ill patients.
    3. Prolonged transport times.
    4. Attempts by field personnel to predict the specific diagnostic and therapeutic resources needed by individual patients.
    5. Reduced ED availability to the community.
    6. Reduced ambulance availability to the community.
B. This protocol sets the standard that diversion should be the exception rather than the rule.

OBJECTIVES:

A. To promote efficient and effective provision of EMS services in accordance with county ambulance service plans, codes, as well as state and federal regulations.
B. To assure hospitals develop and adhere to diversion avoidance strategies.
C. To assure hospitals limit diversion to ED patient safety reasons and remove diversion status immediately after the patient safety issue has been resolved.

D. To provide consistent definitions and agreed upon procedures to guide each hospital.
E. To assure system accountability and quality improvement to facilitate the goal of limiting diversion.
F. To report and collect meaningful data, which more accurately defines prehospital and hospital EMS demand, service consumption, and resource availability.
G. To identify a system of accountability and quality improvement by providing diversion data to all participants monthly.

DEFINITIONS:

A. All Divert No Divert – When all hospitals in a zone go on diversion simultaneously (all close), the HOSCAP/OCS system or zone manager will immediately open all hospitals within the zone. No zone or all hospitals within a zone will be allowed to close for zone management unless authorized by the EMS medical director/zone manager for emergent reasons.
B. Disaster Management – Epidemic, pandemic, inclement weather, man-made or natural disaster, zone management, mass casualty incident, or other circumstances that challenge emergency services abilities to continue meeting patient care demand.
C. Diversion – The redirection of an ambulance from an intended receiving facility to an alternate receiving facility due to a sudden, unanticipated, temporary inability to receive any additional 9-1-1 patients; or safely care for additional critical/unstable patients in the ED.
D. Inter-Facility Transfers – Hospital destination is pre-determined by physician-to-physician communication as a formal transfer.
E. Oregon Capacity System (HOSCAP/OCS) – State owned and managed, data system for distribution of hospital status information and incident management.
F. Regional Hospital – A medical facility designated to coordinate Mass Casualty Incident (MCI) or disaster situations co-located with Trauma Center Communications (TCC) and Medical Resource Hospital (MRH) which provides online medical control for Multnomah, Clackamas, Washington, Columbia and Clark Counties, currently located within Oregon Health Science University (OHSU).
G. Zone Manager – An agency or facility authorized to provide coordination to pre-hospital care providers and hospitals during times of zone wide diversion.
H. ED Diversion Status Categories:
    1. OPEN (GREEN) - The ED can accept patient(s) transported from an ambulance.
    2. CLOSED (RED) - The ED is unable to accept patient(s) transported from an ambulance; except:
        a. Uncontrolled airway.
        b. Non-trauma patient too unstable to transport to another facility.
        c. Patient refuses alternate facility.
        d. Prearranged inter-facility transfer.
        e. Pregnant patients > 20 weeks gestation or illness or injury which could have a potential life-threatening effect on the mother and/or the fetus.

I. Trauma Diversion Status Categories:
   1. TRAUMA YELLOW - A designated trauma hospital has declared that trauma restrictions exist, and some trauma related services may be limited.
   2. TRAUMA RED - A designated trauma hospital will divert to another trauma hospital when it has exceeded its capacity of personnel, equipment, or facilities to assess and care for trauma patients.

J. Life Flight Network Status:
   1. GREEN – Available
   2. YELLOW– On stand-by for another patient
   3. RED – Unavailable

DESTINATION HOSPITAL/SERVICES – EMS ABBREVIATIONS

1	**DC**	Doernbecher Children's Hospital (located within OHSU ED)	Portland
2	**EM**	Legacy Emanuel Medical Center	Portland
3	**EC**	Legacy Randall Children's Hospital (located in Emanuel's ED)	Portland
4	**GS**	Legacy Good Samaritan Medical Center	Portland
5	**MH**	Legacy Mt. Hood Medical Center	Gresham
6	**MP**	Legacy Meridian Park Medical Center	Tualatin
7	**SC**	Legacy Salmon Creek Medical Center	Vancouver
8	**PA**	Adventist Medical Center	Portland
9	**PM**	Providence Milwaukie Hospital	Milwaukie
10	**PR**	Providence Portland Medical Center	Portland
11	**SK**	Kaiser Sunnyside Medical Center	Clackamas
12	**SV**	Providence St. Vincent Medical Center	Portland
13	**SW**	PeaceHealth Southwest Medical Center	Vancouver
14	**TH**	Hillsboro Medical Center	Hillsboro
15	**UH**	Oregon Health Sciences University Hospital	Portland
16	**UC**	Unity Center for Behavioral Health	Portland
17	**VA**	Veterans Administration Hospital	Portland
18	**WF**	Providence Willamette Falls Hospital	Oregon City
19	**WK**	Kaiser Westside Medical Center	Hillsboro
20	**LF**	Life Flight Network	Aurora/Hillsboro
21	**MW**	Metro West Ambulance	Hillsboro
22	**WCEO**	EMS Washington County EMS Office	Hillsboro
23	**AMR**	American Medical Response	Clackamas/Portland

ED AMBULANCE DIVERSION CRITERIA

A. It is the expectation that all hospitals receiving 9-1-1 patients make every effort to be continuously open and available.
B. Diversion is not to be initiated for:
   1. Lack of in-patient staffing or inpatient/ICU beds.
   2. Key resources being reserved for anticipated elective patient care (i.e., elective surgical cases or radiological studies).
   3. Routine ED overcrowding:

a. Full waiting room.
b. Long waiting room time.
c. Extended LOS of ESI 3, 4, 5s.
d. ED boarders

C. ED diversion may be initiated under the following conditions:
1. By the hospital
a. ED charge nurse and ED physician leader determine that the ED is reaching capacity with critical/unstable patients occupying all ED care spaces.
b. ED charge nurse and ED physician leader have attempted to accommodate increased demand by following their internal ED surge plan yet determine that ambulance diversion is necessary to safely care for patients in the ED because:
i. There are not enough resources to safely care for additional critical/unstable patients in the ED.
ii. There is a loss of CT scanner capability.
iii. There is an in-house disaster which compromises patient care/safety (i.e., fire, flooding, or electrical power outage).
2. By the EMS system
a. For nonstandard or extended off-load times of 35 min or greater – collaboration will occur with the EMS supervisor and affected ED(s) leadership to develop a patient placement plan.
b. Under the discretion of the EMS medical director.

D. Hospitals request diversion via the HOSCAP/OCS. Hospital initiated diversion events will last no longer than two hours before HOSCAP/OCS automatically opens the hospital to ambulance traffic again and the hospital will not be allowed to request ED ambulance diversion again for two hours.

E. In the event a hospital is unable to change their status in the HOSCAP/OCS system, (i.e., connection problems), the hospital may contact the zone manager to authorize the zone manager to change the hospital status in HOSCAP/OCS.

F. A hospital's diversion status at the time ambulance transport begins with a loaded patient will determine the ability of the hospital to accept patients. To ensure the up-to-the-minute ability of a hospital to accept a patient, a transporting unit will contact dispatch requesting the status of the preferred destination hospital when the patient has been loaded and as they are preparing to depart the scene. Diversion of a patient shall not occur after the transport has begun.

TRAUMA AMBULANCE DIVERSION CRITERIA:

A. The intent of the Trauma System is that only one of the designated Level 1 Trauma Centers may divert at a time: OHSU/Doernbecher's Children or Legacy Emanuel/Randall's Children.
1. When one of the Level 1 (adult or pediatric) trauma centers goes on diversion status, notification of diversion status to the other designated trauma center must occur. Trauma patients will then be diverted to the other trauma center.
2. When both Level 1 trauma centers are at capacity, the Trauma Center Communications Center will be notified to begin rotating trauma patients between the two trauma hospitals until the situation has stabilized or either hospital is able to return to standard operations. The Regional Hospital may also need to do an "All Call" to other

community hospitals activating the MCI or disaster system to coordinate distribution of trauma patients.

MULTNOMAH COUNTY PEDIATRIC HOSPITAL ED'S

A. When one of the dedicated Multnomah County pediatric EDs (Doernbecher's Children and Randall's Children) goes on diversion status, notification of diversion status to the other designated pediatric ED must occur. Pediatric patients will then be diverted to the other pediatric ED.
B. When both Multnomah County pediatric EDs are on diversion, the OHSU zone manager will rotate destination between the two Multnomah County pediatric ED's until the situation has stabilized or one of the pediatric EDs returns to green status. Zone Management Hospitals are grouped into the following geographical zones:

ZONE MANAGEMENT:

A. Hospitals are grouped into the following geographical zones:

West Zone	Central Zone	South Zone	North Zone	East Zone
Providence St. Vincent Medical Center	Legacy Emanuel Medical Center/ Randall Childrens Hospital	Kaiser Sunnyside Medical Center	PeaceHealth SW Medical Center	Portland Adventist
Legacy Meridian Park Medical Center	Legacy Good Samaritan Medical Center	Providence Milwaukie	Legacy Salmon Creek Medical Center	Providence Portland Medical Center
Kaiser Westside Medical Center	Oregon Health Sciences University/ Doernbecher Children's	Providence Willamette Falls		Legacy Mount Hood
Hillsboro Medical Center	Portland VA Medical Center			
	Unity Center for Behavioral Health			

B. When multiple hospitals go on diversion at the same time it poses a challenge to other hospitals trying to stay open. In the event all hospitals in a zone go on diversion simultaneously, an ALL DIVERT NO DIVERT process will be initiated and the HOSCAP/OCS system or zone manager will immediately open all hospitals within the zone and no hospital in that zone will be allowed to use ambulance diversion again for two hours.
C. Occasionally, for emergent reasons, i.e., MCI, the zone manager may need to initiate zone management. In the event this is required to enhance the EMS system or provide for public safety the zone manager will initiate diversion by:

1. Initiating “Active Zone Management” for the zone(s) affected and will facilitate an “all call” via the 800 MHz radio to hospitals informing them of the “Active Zone Management” status.
2. Local ambulance providers/dispatch centers will notify their respective ambulances that zone management is in effect for the defined zone(s) and that their units are to contact the zone manager to obtain hospital destination(s).
3. Under zone management, the zone manager will determine the destination of all ambulances within the affected zone(s).
4. Ambulances may go outside their zone during zone management if their destination hospital is GREEN, this may be done based on patient and EMS provider agreement and following patient treatment and transport guidelines on the final destination. This includes honoring previously agreed upon destinations.
5. Rotation will continue with one patient per hospital as determined by the zone manager. Note: the rotation will not apply to the trauma hospitals for trauma entry patients. Trauma hospitals participating in zone management will adhere to the trauma diversion portion of the ambulance diversion policy located above.
6. Trauma, STEMI, stroke, pediatric, and behavioral patient care protocols will continue.
7. Prior to discontinuing zone management, the zone manager will monitor key area hospitals and ambulance providers. When system resources are above the activation threshold the zone manager may discontinue zone management.
8. When appropriate, the county EMS Medical Director will participate in this discussion for the zones within their jurisdictional boundaries.

DISASTER MANAGEMENT:

A. Hospital destinations will be coordinated by Regional Hospital through HOSCAP/OCS and according to regionally and locally adopted EMS protocols.
B. During times of disaster management, situational status updates should be initiated and continued in four-hour operational intervals to provide updates to stakeholders.
    1. Disaster management as reported by community emergency responders.
    2. Any one facility activating their internal emergency management protocol.
    3. Actual or forecasted inclement weather.
    4. Any zone requiring persistent zone management.
    5. Circumstances as deemed appropriate by emergency operations officials or county EMS Medical Director(s).
C. Stakeholders involved in proactive (thresholds) communications may include:
    1. Medical directors/ED physicians.
    2. Managers or their designee, assistant nurse managers, charge nurses, house supervisors, AOC/AOD, executive leadership, hospital HICS members.
    3. Fire and EMS officials.
    4. Public health officials.
    5. Others, as appropriate.

SIGNIFICANT EVENTS PROCESS FOR DIVERSION DEVIATION:

A. Inclement weather, hazardous road conditions, heavy snow, ice storms, or other unusual conditions may prevent ambulance crews from transporting patients to their hospital of choice. County EMS authorities shall have a process in response to these unusual circumstance and significant events. The significant event process has been developed to modify operations to better manage and coordinate EMS resources during large scale incidents or inclement weather events in the Greater Portland Metropolitan Area.
B. During the significant event process:
    1. The impacted area's zone manager will be responsible for communicating the modification of EMS transport destinations to affected hospitals.
    2. The impacted area's zone manager will be responsible for communicating the modification of EMS transport destinations to affected hospitals.
    3. Dependent on the nature of the event, Regional Hospital may establish hospital destinations.
    4. Consideration will be given to patients requiring specialized care such as trauma, STEMI, stroke, behavioral, burn, hyperbaric, pediatric, and obstetrical patients.
    5. Every effort will be made to accommodate the patient's wishes for destination, however during a significant event, determination of the most appropriate facility may consider patient and crew safety.
    6. Final determination of patient destination must rest with the treating paramedic caring for the patient. This paramedic, in consultation with EMS operational supervisors and zone managers, as well as acting in accordance with county laws, and medical protocols, and with the ability to seek medical consultation, has the most direct knowledge of the patient's condition and conditions affecting transport.
C. The patient requires transport emergently to the closest hospital when in the judgement of the treating paramedic the patient is unstable and patient transport guidelines recommend transport to the closest hospital regardless of diversion status.
D. Anytime a patient is transported to a hospital other than the one requested the reason for the change and the destination hospital shall be documented on the Prehospital Care Report.

ACCOUNTABILITY AND QUALITY IMPROVEMENT

A. The hospitals shall develop:
    1. Develop an internal policy and systems to avoid diversion.
    2. Submit updated ED surge plan annually to the ED/EMS Leadership Collaborative.
    3. Ensure a hospital ED leader attends the monthly ED/EMS Leadership Collaborative meeting to review any diversion events the from the prior month and share what action planning is occurring to reduce diversion utilization.
B. County EMS will report number of hours and category of diversion to all zones based on information in HOSCAP/OCS.
C. The ED/EMS Leadership Collaborative is responsible for the monitoring of region-1 diversion hours and events, provide recommendations for quality improvement, and is responsible for the annual evaluation and revision to the Multnomah Operations Policy 50.030 Diversion System and the Five-County consortium Ambulance Diversion Guidelines

50.015. The ED/EMS Leadership Collaborative is a cooperative effort between involved EMS agencies, hospitals, their ED managers, and ambulance providers.

D. Problems related to the implementation of these guidelines should be forwarded to the chair of the ED/EMS Leadership Collaborative.
E. Problems related to the implementation of these guidelines should be forwarded to the Diversion and Zone Management Subcommittee.

ORGANIZATIONS IN SUPPORT OF THESE GUIDELINES:

Adventist Medical Center
Doernbecher Children's Hospital
Hillsboro Medical Center
Kaiser Sunnyside Medical Center Kaiser
Westside Medical Center
Legacy Emanuel Medical Center
Legacy Good Samaritan Medical Center
Legacy Meridian Park Medical Center
Legacy Mt. Hood Medical Center
Legacy Salmon Creek Medical Center
Oregon Health Sciences University
Providence Milwaukie Hospital
Providence Portland Medical Center
Providence St. Vincent Medical Center
Randall Children's Hospital
PeaceHealth SW
Unity Behavioral Health
Veterans Administration Hospital
Willamette Falls Hospital
Oregon Association of Hospitals and Health Systems

COUNTY EMS REGULATORY AGENCIES FOR THE FOLLOWING COUNTIES:

Clackamas County
Clark County
Columbia County
Multnomah County
Washington County

AMBULANCE PROVIDERS:

American Medical Response
Banks Fire District #13
Canby Fire Department
Camas Fire Department
Clackamas County Fire District 1
Cornelius Fire and Rescue
Forest Grove Fire and Rescue
Gaston Rural Fire District
Hillsboro Fire
Molalla Fire Department
Metro West Ambulance
North Country Ambulance
Life Flight Network
Tualatin Valley Fire & Rescue

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COPS – Sudden Infant Death Syndrome (SIDS)

SUDDEN INFANT DEATH SYNDROME:

A. General Considerations
   1. Infants usually < six (6) months of age.
   2. Sudden, without apparent cause, during sleep.
   3. It may be impossible to differentiate SIDS from suspected child abuse.

B. Interventions
   1. CPR, follow protocol for cardiac arrest unless there are obvious signs of death (rigor, lividity, etc.).
   2. Resuscitation may be terminated only by order of base station physician or family physician at the scene.

C. Support the parents. Avoid questions or comments suggesting blame.

D. Observe carefully and note:
   1. Location and position of child
   2. Objects immediately surrounding the child
   3. Behavior of all adults present
   4. The explanations provided
   5. Vomitus in mouth or foreign body present

E. Report all observations to Medical Control and Medical Examiner.

COPS - Transfer Of Care/Time On The Scene

TRANSFER OF CARE:

A. In many situations, two or more ALS units will respond. When more than one Paramedic is on scene, they will work cooperatively in making patient care decisions. If a disagreement exists on the correct course of action, Medical Control will be contacted for direction.
B. In many situations it is appropriate for the first-arriving fire Paramedic to maintain continuity of patient care through both scene and transport, and he/she may choose to do so if in their judgment the patient will benefit from that continuity or scene times will be positively impacted in a clinically significant way.
C. In less critical situations an orderly and efficient transfer of patient care responsibilities from first-responding ALS Paramedics to the transport team must occur, including:
    1. Transfer of patient care responsibility that does not interfere with or lengthen scene times.
    2. Written and/or verbal report that includes: vital signs, findings, and all treatment(s) rendered.
    3. In cases of Multiple Patient Incident, protocol is established as per the Incident Command System and Fire Operations.
D. A patient's condition may warrant attendance during transport by both the first responding Paramedic and the transport Paramedic. In these situations, the first responding Paramedic may choose to accompany the patient during transport if in their judgment the patient will benefit from the additional attendance and/or if their attendance will positively affect scene times in a clinically significant way.
E. A working cooperation when making patient care decisions is paramount and shall not be influenced by agency affiliation. Resources shall be utilized to the fullest for the benefit of patient care.

TIME ON SCENE:

A. Any time an airway cannot be provided to a patient within 2 minutes after initiating emergency medical care, transport the patient immediately, unless there are extenuating circumstances.
B. Medical – 30 minutes or less after initial encounter.
C. STEMI/CVA – 15 minutes or less after initial encounter.
D. Full Trauma Activation - 10 minutes or less once extrication has been accomplished.
E. Modified Trauma Activation- 15 minutes or less.
F. Code 99 - 30 minutes or less after initial encounter.
G. Document extenuating circumstances.

COPS – Trauma System Activation Criteria

RED CRITERIA
High Risk for Serious Injury

Injury Patterns

- Penetrating injuries to head, neck, torso, and proximal extremities
- Skull deformity, suspected skull fracture
- Suspected spinal injury with new motor or sensory loss
- Chest wall instability, deformity, or suspected flail chest
- Suspected pelvic fracture
- Suspected fracture of two or more proximal long bones
- Crushed, degloved, mangled, or pulseless extremity
- Amputation proximal to wrist or ankle
- Active bleeding requiring a tourniquet or wound packing with continuous pressure

Mental Status & Vital Signs

All Patients
- Unable to follow commands (motor GCS < 6)
- RR < 10 or > 29 breaths/min
- Respiratory distress or need for respiratory support
- Room-air pulse oximetry < 90%

Age 0–9 years
- SBP < 70mm Hg + (2 x age in years)

Age 10–64 years
- SBP < 90 mmHg or
- HR > SBP

Age ≥ 65 years
- SBP < 110 mmHg or
- HR > SBP

Patients with any of the above RED criteria should be transported to PHSW unless Trauma Diversion Criteria exist.

YELLOW CRITERIA

Moderate Risk for Serious Injury

Mechanism of Injury	EMS Judgment
• High-Risk Auto Crash – Partial or complete ejection – Significant intrusion (including roof) • >12 inches occupant site OR • >18 inches any site OR • Need for extrication for entrapped patient – Death in passenger compartment – Child (age 0–9 years) unrestrained or in unsecured child safety seat – Vehicle telemetry data consistent with severe injury • Rider separated from transport vehicle with significant impact (eg, motorcycle, ATV, horse, etc.) • Pedestrian/bicycle rider thrown, run over, or with significant impact • Fall from height > 10 feet (all ages)	Consider risk factors, including: • Low-level falls in young children (age ≤ 5 years) or older adults (age ≥ 65 years) with significant head impact • Anticoagulant use • Suspicion of child abuse • Special, high-resource healthcare needs • Pregnancy > 20 weeks • Burns in conjunction with trauma • Children should be triaged preferentially to pediatric capable centers If concerned, take to a trauma center

Patients meeting any one of the YELLOW CRITERIA WHO DO NOT MEET RED CRITERIA should be transported to PHSW unless Trauma Diversion Criteria exist

COPS - Viral Respiratory Disease Pandemic

TRIGGERS:

A. Activation of the EMS Viral Respiratory Disease, Pandemic SOPs is made by Incident Command in consultation with Clark County Public Health.

ONGOING SURVEILLANCE:

A. CRESA will use protocol 26 (sick person) for patients whose primary chief complaint is flu-like non-priority symptoms (fever, nausea, and vomiting).
B. CRESA will use the Severe Respiratory Infection (Flu-Like) Symptoms checklist on all patients with illness caused by the flu.
C. CRESA will use protocol 36 (Pandemic/Epidemic/Outbreak) when a communicable disease outbreak has been declared.

WORKER SAFETY/INFECTION CONTROL

A. Enhanced Protective Equipment (PPE) Procedures:
    1. All Patient Contact – PPE including: gloves, N95 mask (surgical mask is appropriate if N95 is not available), and eye protection.
    2. Patients with Respiratory/GI symptoms – PPE outlined above, plus: cover patient with surgical face mask; disposable gown/overalls and shoe covers.
    3. Minimize personnel exposure at each call.
    4. Every job not involving patient contact – PPE including: Regular hand washing, and cleaning of work surfaces (minimum prior to each shift/staff change).
B. Vaccination / Antiviral Therapy:
    1. Emergency Responder Points of Distribution (POD) – Agency management in consultation with the Clark County Health Department will consider/coordinate activation of the Emergency Responder PODs for appropriate vaccination/antiviral therapy.
C. Staff Entry Control Process:
    1. All Fire/EMS agencies shall establish health care screening sites to clear employees prior to entering the work site at the start of each shift.
D. Decontamination and Cleaning of Equipment/Work Areas:
    1. Clean off all surfaces and equipment (including glasses and stethoscope) using the approved bio-spray or alcohol-based hand cleaner.
    2. Dispose of all cleaning supplies in red hazardous waste bag.
    3. Use bio-wipes or alcohol-based hand cleaner to clean hands and forearms until soap and water are available.
    4. Driver Prior to Transport and Technicians at end of Transport and Decontamination of Ambulance and Equipment - Remove disposable gown/overalls, face mask, gloves and disposable BP cuff into hazardous waste bag and secure.
    5. First Responders - Place all equipment used during the call in a red hazardous waste bag until decontamination prior or en route to next call.
    6. Driver on Arrival at Receiving Facility - Use new suit, gloves, face mask, and eye protection.

7. Once patient has been transferred, decontaminate inside of ambulance patient care area and equipment prior to arrival at next call.

PATIENT CARE AND TRANSPORT (RESPIRATORY DISTRESS (FLU LIKE) SYMPTOMS)

A. PPE
B. Assess Patient for Priority Symptoms
    1. Chief Complaint
    2. Vital Signs (including temperature)
    3. Medical History/ Travel History
C. Incident Command will advise 9-1-1 and Fire/EMS agencies which of the following Care and Transport options to use:
    1. Care and Transport to ED
        a. Allow patient to achieve position of comfort.
        b. Cover patient with surgical face mask, or administer O2 via face mask, to reduce aerosolization of virus.
        c. EKG, IV TKO (if patient is dehydrated provide fluid challenge based on shock guidelines).
        d. Proper cooling techniques based on temperature.
        e. Provide “Infection Control Guidance for Families.”
        f. Use patient isolation techniques.
            - Close off ambulance driver’s compartment.
            - Drape patient compartment.
        g. Early EMS Report.
    2. Care and No Transport
        a. Provide a handout explaining the demand of limited resources and decision of no transport.
        b. Provide “Home Care and Protective Equipment for Families Packet” and explain contents and use.
        c. Advise to call 9-1-1 should priority symptoms occur.
        d. Advise Home Health Care of patient condition and location for in-home support.

REFERENCE – Abbreviations, Approved

ABD	Abdomen
AED	Automated External Defibrillator
AFib	Atrial fibrillation
AGP	Aerosol Generating Procedure
ALS	Advanced life support
AMA	Against medical advice
AMI	Acute myocardial infarction
ASA	Aspirin
ATF	Arrived To Find
BID	Twice a day
BBB	Bundle Branch Block
BGL	Blood glucose level
BLS	Basic life support
BP	Blood pressure
BS	Breath sounds,
BVM	Bag-valve-mask
c/o	Complaining of
Ca	Cancer/carcinoma
CAOx4	Conscious, Awake, Oriented x 4 (Person, place, time, event)
CBG	Capillary Blood Glucose
C/C	Chief Complaint
CHF	Congestive heart failure
CLI	COVID Like Illness
CO	Carbon monoxide
CO2	Carbon dioxide
COPD	Chronic obstructive pulmonary disease (emphysema, chronic bronchitis)
CP	Chest pain
CPAP	Continuous positive airway pressure
CPR	Cardiopulmonary resuscitation
CSF	Cerebrospinal fluid
CVA	Cerebrovascular accident
Cx	Chest
DM	Diabetes mellitus
DNR	Do not resuscitate
DOA	Dead on arrival
DOB	Date of birth
Dx	Diagnosis
ECG	Electrocardiogram
e.g.	For example
EKG	Electrocardiogram
ETA	Estimated time of arrival
ETCO2	End-tidal carbon dioxide

ETT	Endotracheal Tube
Ext	Extremity
FAST	Stroke findings: Facial, Arm, Speech, Time
FROM	Full range of motion
Fx	Fracture
GCS	Glasgow Coma Score
GI	Gastrointestinal
g	Gram
GSW	Gunshot wound
gtt	Drop
gtts	Drops
GU	Genitourinary
GYN	Gynecologic
hr	Hour
H/A	Headache
HEENT	Head, ears, eyes, nose, throat
Hg	Mercury
h/o	History of
HPI	History of present illness
HTN	Hypertension
Hx	History
ICP	Intracranial pressure
ICU	Intensive Care Unit
IM	Intramuscular
IN	Intranasal
IO	Intraosseous
IV	Intravenous
JVD	Jugular venous distension
kg	Kilogram
KVO	Keep vein open
L	Left or Liter
lac	Laceration
LAMS	Los Angeles Motor Score
lbs	Pounds
LBB	Long back board
LBBB	Left bundle branch block
LE	Law enforcement
LLQ	Left lower quadrant
LOC	Level of consciousness
LS	Lung sounds
LSC	Legacy Salmon Creek
LUQ	Left upper quadrant
LZ	Landing zone
mcg	Micrograms
mg	milligram

MI	Myocardial infarction
mL	milliliter
MRH	Medical Resource Hospital
MS	multiple sclerosis
NAD	No apparent distress
NaHCO3	Sodium Bicarbonate
NC	Nasal cannula
NCT	Narrow Complex Tachycardia
NKA	No known allergies
NKDA	No known drug allergies
NPO	Nothing by mouth
NRB	Non-rebreather mask
NS	Normal saline
NSAID	Non Steroidal Anti-inflammatory Drug
NSR	Normal sinus rhythm
NTG	Nitroglycerin
N/V	Nausea / vomiting
O2	Oxygen
OB	Obstetrics
OD	Overdose
OLMC	Online Medical Control
OPA	Oropharyngeal airway
OR	Operating room
PCN	Penicillin
PEA	Pulseless electrical activity
PEEP	Positive end expiratory pressure
PERL	Pupils equal and reactive to light
PHSW	Peace Health Southwest
PID	Pelvic inflammatory disease
PMHx	Past medical history
PMD	Personal Medical Doctor
PND	Paroxysmal nocturnal dyspnea
PO	Per os (by mouth)
POV	Privately-owned vehicle
PRN	As needed
PSM	Pulses, Sensation, Movement
PSVT	Paroxysmal supra ventricular tachycardia
Pt	Patient
PTA	Prior to arrival
PVC	Premature ventricular contraction
R	Right
r/o	Rule out
RLQ	Right lower quadrant
ROM	Range of motion
ROSC	Return of Spontaneous Circulation

RUQ	Right upper quadrant
RVH	Right ventricular hypertrophy
RVR	Rapid ventricular response
Rx	Prescription
SaO2	Pulse Oximetry
SIDS	Sudden Infant Death Syndrome
SL	Sublingual
SNT	Soft, non-tender
SOB	Shortness of breath
STAT	immediately
SVT	Supraventricular tachycardia
Sx	Symptoms
TCC	Trauma Communications Center
TIA	Transient ischemic attack
TID	Three times a day
TKO	To keep open
TV	Tidal volume
Tx	Treatment
Trnx	Transport
VF	Ventricular fibrillation
VT	Ventricular tachycardia
V.S.	Vital signs
WNL	Within normal limits
WPW	Wolf-Parkinsons-White
Wt.	Weight
x	Times
y/o	Year(s) old
@	At
Δ	Change
>	Greater than
<	Less than
~	Approximate
+	Positive
-	Negative
♂	Male
♀	Female

REFERENCE – ALS Interfacility Transfer Protocols

PREHOSPITAL CARE PROTOCOLS FOR ADVANCED LIFE SUPPORT TRANSFER INCIDENTS

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These protocols are designed to guide the Paramedic in caring for the patient being transferred from one medical facility to another. The goal of these protocols is to facilitate the treatment and transport of these patients. A transferring physician may give specific orders for patients. Should there be an absence of response to treatment and deterioration of the patient's condition, transport to the closest facility.

The Paramedic should contact On-Line-Medical-Control (OLMC) when possible, to receive further orders for the care of these patients; or Medical Resource Hospital (MRH) for patients with a destination within Portland, Oregon. When unable to do so, the following protocols must guide the Paramedic's actions.

Marlow Macht MD, MPH
Clark County Medical Program Director

Abciximab (ReoPro®) or Aggrastat (Tirofiban®)

INDICATIONS

A. Patients undergoing percutaneous coronary intervention
B. Patients with unstable angina not responding to conventional medical therapy

CLASS

A. Glycoprotein (GP) IIb/IIIa ($\alpha_{IIb}\beta_3$) receptor inhibitor

MECHANISM OF ACTION

A. Fab fragment of the chimeric human-murine monoclonal antibody 7E3. It binds to the glycoprotein (GP) IIb/IIIa ($\alpha_{IIb}\beta_3$) receptor of platelets and inhibits platelet aggregation.

DOSING

A. Abciximab: 0.25 mg/kg intravenous bolus followed by a continuous infusion of 0.125 mcg/kg/min (to a maximum of 10 mg/min).
B. Aggrastat: initial rate of 0.4 mcg/kg/min for 30 minutes and then continues at 0.1 mcg/kg/min. Patients with severe renal insufficiency should receive half the usual rate.

SIDE EFFECTS

A. Bleeding including an increased risk of serious, intracranial bleeding
B. Thrombocytopenia (decrease in the number of platelets)
C. Allergic reactions

ADMINISTRATION

A. Must be administered by IV pump.
B. Maintain rate as ordered by transferring physician.
C. Stop administration if patient develops systemic effects, such as bleeding from IV sites, gums, or sudden mental status change.
D. If patient develops signs of allergic reaction stop the infusion and treat per protocol.

Dobutamine

INDICATIONS

A. Refractory heart failure
B. Hypotension secondary to heart failure
C. Hypotension secondary to septic shock

CLASS

A. Adrenergic

MECHANISM OF ACTION

A. An analog of isoproterenol that directly stimulates beta-1 receptors of the heart to increase myocardial contractility and stroke volume, resulting in increased cardiac output.

USUAL DOSE

A. 2.5 to 10 mcg/kg/min as an IV infusion. Rarely, infusion rates up to 40 mcg/kg/min may be needed.

SIDE EFFECTS

A. Headache
B. Increased heart rate
C. Hypertension
D. PVCs
E. Angina
F. Nonspecific chest pain
G. Nausea and vomiting
H. Shortness of breath
I. Beta blockers may antagonize Dobutamine effects

ADMINISTRATION

A. Must be administered by IV pump.
B. Maintain rate as ordered, may adjust as per physician order.
C. Decrease rate if side effects (above listed) develop.
D. Patients with atrial fibrillation may develop rapid ventricular rates secondary to increased AV conduction. If A-fib rates develop and patient is hemodynamically unstable, stop Dobutamine.

Heparin

INDICATIONS

A. Myocardial infarction
B. Cerebral vascular disease (CVA, TIA)
C. Pulmonary embolism
D. Treatment of deep vein thrombosis

CLASS

A. Anticoagulant

MECHANISM OF ACTION

A. Heparin accelerates formation of an anti-thrombin and III-Thrombin complex; additionally inactivates thrombin and prevents conversion of fibrinogen to fibrin.

USUAL DOSE

A. For treatment of MI and venous thromboembolism):
    1. Initial dose: 5000-7500 units IVP (or 80 Units/kg)
    2. Subsequent dose: 800-1200 units/ hour via IV pump

SIDE EFFECTS

A. Local: irritation, mild pain, hematoma, cutaneous/ subcutaneous necrosis
B. Bleeding gums
C. Petechiae
D. Epistasis
E. Melena
F. Tarry stools
G. Hematemesis

ADMINISTRATION

A. Must be administered by IV pump
B. Maintain rate as ordered by transferring physician
C. Stop administration if patient develops systemic effects such as: bleeding from IV sites, gums, or hematomas.

Maintenance Fluids and Blood Administration

PURPOSE

A. To allow the paramedic to use or maintain intravenous fluids being used in the transfer patient's care or supplied for the patient's care.

MAINTENANCE FLUID TYPES

A. Paramedics may infuse any of the following based on orders from the transferring physician:
    1. Total parenteral nutrition (TPN)
    2. Normal saline with potassium (K) (maximum 40 mEq in 1 L)
    3. Normal saline with dextrose
    4. Lactated Ringer's with or without dextrose
    5. Dextrose 5% in 0.5% normal saline
    6. Dextrose 5% in 0.25% normal saline

BLOOD ADMINISTRATION

A. Blood products should not be administered in a stable transfer situation. Blood may be administered enroute to unstable patients who are actively bleeding or in shock.
B. The blood products will be provided by the transferring facility. Whenever possible, cross matched blood will be used.
C. Administer through a large bore IV using blood tubing.
D. Stop infusion if patient develops signs of allergic reaction (hives, itching).

PRECAUTIONS AND NOTES

A. Observe for fluid overload and decrease to TKO if signs of pulmonary edema develop.
B. If TPN must be stopped (infiltrated line, fluid overload) the patient may develop hypoglycemia. Check glucose every hour and treat as indicated. Consider starting IV infusion of D10 NS, if possible.
C. Do not administer potassium at a rate greater than 10 mEq/ hr.
D. NEVER give fluid challenge with fluid containing potassium.
E. TPN or any fluid containing more than 40 mEq or potassium or calcium, MUST be administered via an IV pump.

Nitroglycerin Infusion

INDICATIONS

A. Chest pain of cardiac origin
B. Complications of ACS, including CHF, pulmonary edema,

CLASS

A. Organic nitrate; antianginal, vasodilator

MECHANISM OF ACTION

A. Relaxes vascular smooth muscle causing marked peripheral vasodilation, slight peripheral arteriolar dilation, and coronary vasodilation; causing decreased preload, decreased afterload, and increases blood flow to the ischemic myocardium respectively.

SIDE EFFECTS

A. Decreased preload
B. Decreases heart size, thereby decreases myocardial O_2 demand; increases subendocardial blood flow, which increases O_2 supply; decreases pulmonary blood flow, which decreases pulmonary congestion and edema
C. Decreased afterload
D. Decreased wall tension, decreased myocardial O_2 demand
E. Increases left ventricular stroke volume, increasing cardiac output and tissue perfusion, while decreasing pulmonary edema
F. Increases blood flow to ischemic myocardium

USUAL DOSE

A. Maintenance dose established by transferring physician

SIDE EFFECTS

A. Hypotension, secondary to decreased venous return and vasodilation, it is seen most often in patients who are upright or taking it for the first time
B. Reflex tachycardia, secondary to hypotension
C. Headache due to dilation of meningeal vessels

ADMINISTRATION

A. IV nitroglycerine must be administered based on orders from transferring facility and physician.
B. If chest pain occurs during transport, the nitroglycerine drip may be increased by 5-10 mcg/min increments until pain is controlled or hypotension develops.
C. If hypotension occurs during transport, decrease nitroglycerine drip by 5-10 mcg/min, administer 250-500mLof NS if no signs of pulmonary edema are present.
D. If blood pressure drops 30 mmHg or more, OR systolic blood pressure is less than 90 mmHg, STOP the drip. When BP returns to normal, restart the nitroglycerine drip at half the original dose.
E. In the ACS patient, limit systolic BP drop to 10% if normotensive and 30% if hypertensive, never allowing SBP to decrease below 90 mmHg.
F. If pain is not controlled by nitroglycerin drip and blood pressure is marginal (BP: 90/P to 100/P), administer pain medication per protocol.
G. Nitroglycerin infusion only administered with IV pump, through separate IV line. Do not mix with other drugs.

Propofol (Diprivan)

INDICATIONS

A. Used in airway management. Propofol can be used as a maintenance sedative within the ICU and during interfacility patient transport; additionally, it has powerful anticonvulsant properties.

CLASS

A. Sedative-hypnotic

MECHANISM OF ACTION

A. Propofol provides both anesthetic and amnesic effects beginning about 20 seconds after administration and lasting for 10-15 minutes. Propofol decreases myocardial activity and systemic vascular resistance, patients could experience a decrease in oxygen delivery to vital organs. Propofol has been shown to have a greater effect on depressing pharyngeal and laryngeal muscle tone, possibly facilitating endotracheal intubation

USUAL DOSE

A. Adult initial dose: 1-2.5 mg/kg; maintenance dose: 5-50 mcg/kg/min. Bolus-dosing orders will be bolus provided by the hospital / physician provider.

SIDE EFFECTS

A. Decreased vital organ perfusion
B. Hypotension
C. Depressed pharyngeal and laryngeal muscle tone

ADMINISTRATION

A. Propofol requires strict aseptic technique during preparation and administration; the lipid-based preparation serves as a breeding ground for invasive microorganisms.
B. Propofol infusions should not be continued for longer than 48 hours.
C. High doses of Propofol or prolonged infusions have caused patient fatalities from Propofol infusion syndrome, which includes metabolic acidosis, rhabdomyolysis, cardiac and renal failure.
D. Propofol has numerous medication interactions, including the potentiation of CNS and respiratory depressant medications.
E. In the event of adverse effects utilize fluids and/or pressors if hypotension/cardiogenic shock; additionally, you may need to decrease or stop infusion.

Clark EMS Transfer Protocol for Patient Who Has Received Tenecteplase (TNK)

TRANSFERRING HOSPITAL TO PROVIDE THE FOLLOWING INFORMATION TO EMS:

A. Date and time patient was last known normal
B. Family contact information (name, relationship, phone)
C. TNK information: Bolus dose and time given. ;

BEFORE DEPARTURE FROM TRANSFERRING HOSPITAL:

A. Document BEFAST findings, GCS, and vital signs
B. Transferring hospital to stabilize BP prior to transport. Verify BP < 180/105 and BP > 90 systolic

DURING TRANSPORT

A. Continuous cardiac monitoring
B. Continuous pulse oximetry and capnometry- SpO2 between 94% and 98%. ETCO2 35-45
C. Monitor and document VS and neuro checks q 15 min. Keep patient NPO
D. HOB to remain 30 degrees unless otherwise directed by transferring facility
E. Monitor for adverse effects. For the following symptoms, **discontinue infusion immediately** and contact receiving facility for further instructions:
    1. Acute intracerebral hemorrhage (sudden severe HA, decreased LOC, acute HTN, etc.)
    2. Angioedema / allergic reaction
    3. Serious bleeding (e.g., hematemesis, flank pain suggestive of retroperitoneal bleed, etc.)
    4. Sudden hypotension, BP < 80 systolic
F. **Blood Pressure Management During Transport:** (goal SBP < 180 mmHg and DBP < 105 mmHg) If SBP exceeds 180 mmHg or DBP exceeds 105 mmHg, **contact Medical Control at PHSW for guidance.** Treatment may include the following:
    1. **Labetalol** 10mg IV push over 2 min. May repeat **as directed** every 10-15 min to reduce BP to within goal range. (maximum total dose of 300 mg) Hold for HR < 60 BPM.
        a. Labetalol to be provided to EMT-P by hospital pharmacist prior to initiation of transfer. If not used during transfer discard at receiving hospital.
        b. If **Labetalol infusion** was started at transferring facility for blood pressure management, increase by 1 mg/min every 10 min as needed to maximum of 8mg/min to maintain BP < 180/105. If SBP < 140, or HR < 60 BPM, turn off infusion and contact facility for further instructions.
    2. If **Nicardipine infusion** was started at transferring hospital for blood pressure management, increase dose by 2.5 mg/hr if needed every 5 min to maximum of 15mg/hr until BP < 180/105. If SBP < 140, turn off infusion and contact receiving facility for further instructions.
    3. If patient develops hypotension (SBP <80) begin norepinephrine infusion at 4 mcg/min. per protocol. (alternative epinephrine infusion at 2mcg/min. per protocol).

G. Manage angioedema as per allergic/anaphylactic protocol. Epinephrine drip at 2-4 mcg/min preferred over IM epinephrine.

SIDE EFFECTS OF TNK

A. Hemorrhage (primary side effect)
B. Re-perfusion rhythms (infrequent)
C. Anaphylactic reaction (infrequent)

ADMINISTRATION NOTES:

A. DO NOT TRANSPORT ACS PATIENTS WITH THROMBOLYTICS RUNNING.
    1. Patients with thrombolytics for ACS being infused will NOT be transported until infusion is completed. Patients with thrombolytics running for other indications such as acute stroke may be transported.
B. Patients who experience re-perfusion rhythms should be treated per cardiac dysrhythmia protocol, if symptomatic and have symptoms of cardiac dysfunction.
C. Patients with hemorrhage should receive fluids per the shock protocol.

Vasopressin (Antidiuretic Hormone/Pitressin)

INDICATIONS

A. Alternate vasopressor to the first or second dose of epinephrine in cardiac arrest, may be useful in cases of vasodilatory shock (i.e., septic shock).

CLASS

A. Antidiuretic hormone

MECHANISM OF ACTION

A. Stimulation of V_1 smooth muscle receptors, potent vasoconstrictor when given in high doses. Acts on renal tubules, causing water to be reabsorbed into the blood, rather than excreted.

USUAL DOSE

A. Adult: 0.01-0.03 U/min infusion Pediatric: not recommended.

SIDE EFFECTS

A. Bronchoconstriction
B. Ischemic chest pain
C. Nausea and vomiting
D. Abdominal pain

ADMINISTRATION

A. Must be administered by IV pump
B. Rapid rebound hypotension is a common problem after treatment with vasopressin is stopped.

REFERENCE – Patients Ability Checklist

GENERAL - IMMEDIATE ACTION ITEMS:

A. Safety of EMS personnel and bystanders
B. Respect personal space, use calm tone
C. Include the patient in planning and decision making
D. Assess and treat immediate life threats
E. What physical barriers need to be removed
F. Consider the need for outside resources

PROCEED TO SPECIFIC ABILITY SECTION:

A. Mobility / Physical Impairments
    1. Assistive devices used by a patient should accompany the patient when possible.
    2. Arrange for alternative transport for the device or find a method of securing the device if it is not possible to transport the device.
    3. Consider using the same method patient was transported in past.
    4. Request other resources if special considerations in handling and transport are needed.
B. Sensory Impairments - Vision
    1. Determine the degree of vision deficit.
    2. Speak directly to the patient; do not shout or use non-specifics e.g. “Watch out”.
    3. Determine if assist devices or service animals are used.

C. Sensory Impairments – Hearing
    1. Determine the degree of hearing deficit.
    2. Determine which communication techniques are best to use, such as lip reading, signing, or the use of written language.
    3. Look for someone to help you to communicate or use a family member or other resource immediately available who is able to assist if appropriate.

D. Mental Health / Cognitive
    1. Check blood sugar.
    2. Consider the differential diagnosis (consider medical, traumatic conditions).
    3. Avoid sensory overload or triggering actions when interacting with the patient.
    4. Use calm voice, avoid escalation.
    5. Use open posture, avoid prolonged eye contact.
    6. Consider other resources for safety.
E. Autism
    1. Avoid sensory overload and triggering actions such as sounds or bright light when interacting with the patient.
    2. Discuss requirements for successful interaction with caregiver.
    3. Use calm tone, acknowledge, and validate emotions.
F. Service Animals
    1. Assure the service animal is transported with the patient.

2. Request additional assistance should the animal not be able to accompany the patient.

REFERENCE - APGAR Scoring Table

SCORE	0	1	2
HEART RATE	Absent	<100	>100
RESP. EFFORT	Absent	Slow, irregular	Good, crying
MUSCLE TONE	Limp	Some flexion of extremities	Active motion
REFLEX IRRITABILITY	No response	Grimace	Coughs, sneezes
COLOR	Blue/pale	Extremities blue	Completely pink

REFERENCE – Glasgow Coma Scale Adult and Infant

	Adult		Infant
EYES	*Spontaneous*	**4**	*Spontaneous*
	To Speech	**3**	*To Speech*
	To Pain	**2**	*To Pain*
	No Response	**1**	*No Response*
MOTOR	*Obeys verbal command*	**6**	*Normal movements*
	Localizes pain	**5**	*Localizes pain*
	Flexion- w/draws from pain	**4**	*Flexion- w/draws from pain*
	Flexion- abnormal	**3**	*Flexion- abnormal*
	Extension	**2**	*Extension*
	No response	**1**	*No response*
VERBAL	*Oriented and converses*	**5**	*Coos, babbles*
	Disoriented & converses	**4**	*Cries but consolable*
	Inappropriate words	**3**	*Persistently irritable*
	Incomprehensible sounds	**2**	*Grunts to pain, restless*
	No response	**1**	*No response*

REFERENCE – Richmond Agitation Sedation Scale (RASS)

Richmond Agitation Sedation Scale (RASS)

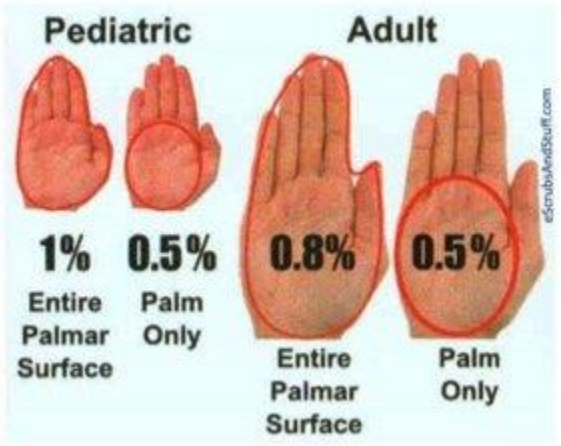
Score	Term	Description
+4	Combative	Overtly combative and violent; immediate danger to EMS
+3	Very agitated	Aggressive; verbally and physically uncooperative towards EMS
+2	Agitated	Frequent non-purposeful movement; agitated when touched or moved
+1	Restless	Anxious but movements not aggressive or dangerous to EMS or self
0	Alert and calm	
-1	Drowsy	Not fully alert, but has sustained awakening (eye opening/eye contact) to voice (≥ 10 seconds)
-2	Light Sedation	Briefly awakens with eye contact to voice (< 10 seconds)
-3	Moderate sedation	Movement or eye opening to voice (but no eye contact)
-4	Deep sedation	No response to voice but movement or eye opening to physical stimulation
-5	Unarousable	No response to voice or physical stimulation

REFERENCE – Rule of Nines/Palms

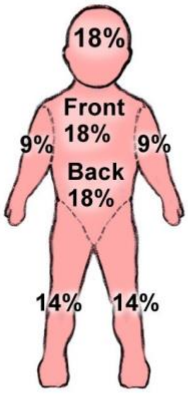
Rule of Palms

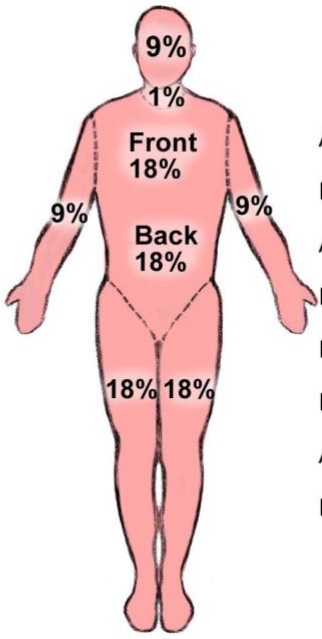
Use PATIENT's hand & ENTIRE palmar surface

Good for TBSA<15%



Child body	% of total
Part	BSA
Arm	9%
Head and neck	18%
Leg	14%
Anterior trunk	18%
Posterior trunk	18%





Adult body	% of total
Part	BSA
Arm	9%
Head	9%
Neck	1%
Leg	18%
Anterior trunk	18%
Posterior trunk	18%

REFERENCE – IM Vaccine Administration

POLICY STATEMENT
It is within the scope of practice for an Emergency Medical Technician (EMT) or Paramedic to administer a vaccination during a public health emergency.
EMS personnel may provide emergency medical care under the direction of their county EMS medical program director (MPD). The National Scope of Practice Model (2019) recognizes the use of certified AEMT and Paramedic level providers for administering vaccinations in public health initiatives.
Washington State scope of practice allows EMTs to perform an intramuscular injection with MPD-approved specialized training.

PROPER EQUIPMENT:

A. One alcohol wipe
B. One sterile 2 x 2 gauze pad
C. A new needle and syringe that are the correct size
D. Hand sanitizer and new gloves for each patient
E. Appropriate PPE

PROCEDURE:

A. Wear appropriate PPE, gloves, eye protection and n95 or higher mask.
B. Receive and confirm medication order and proper indication
C. Evaluate for contraindications and precautions. Contact MPD or Training Physician for questions
D. Prepare equipment and medication expelling air from the syringe.
E. Explain the procedure to the patient and reconfirm patient allergies.
F. Adult injection location
    1. The most common site for subcutaneous injection is the arm.
        a. Injection volume should not exceed 1 mL.
    2. The possible injection sites for intramuscular injections include the arm, buttock and thigh.
        a. Injection volume should not exceed 1 mL for the arm
        b. Injection volume should not exceed 2 mL in the thigh or buttock.
G. Pediatric injection location
    1. The thigh should be used for injections in pediatric patients and injection volume should not exceed 1 mL.
H. Expose the selected area and cleanse the injection site with alcohol.
I. Insert the needle into the skin with a smooth, steady motion
    1. SQ: 45-degree angle IM: 90-degree angle skin pinched skin flattened
J. Aspirate for blood. If none inject the medication.
K. Withdraw the needle quickly and dispose of properly without recapping.
L. Apply pressure to the site.
M. Monitor the patient for the desired therapeutic effects as well as any possible side effects.

DOCUMENT:

A. Date that the vaccine was administered
B. Route
C. Dose
D. Site
E. Manufacturer and Lot number
F. Publication date of the vaccine Information Statements (VIS)
G. Name and title of the person administering the vaccine.
H. Identify and report any adverse reactions to vaccine administration through the Vaccine Adverse Event Reporting System (VAERS).

REFERENCE – MCI Protocol Detailed Operations

MCI Task Card - MEDICAL

MEDICAL

Reports to Incident Commander (or Operations in larger incidents)

OBJECTIVES:

1. **Coordinate all On-Scene EMS activity.**
2. **Coordinate Medical activities with Incident Commander (IC), and other ICS branches as needed.**
3. **Provide accountability for supervised personnel.**

ACTIONS:

☐ Establish Medical with Command.

☐ Obtain a separate working radio channel for use by Medical.

☐ Establish the following roles/functions and hand out vest, triage tags and task cards.

- ☐ **Triage Treatment**
- ☐ **Transportation**
- ☐ **Destination** (reports to Transportation)
- ☐ **Staging Area** (confirm area, and proper talk group)
- ☐ **An assistant to help you with radio and face-to-face communications.**
- ☐ **Landing Zone (LZ)**

☐ Order additional resources and ambulances through Incident Command.

☐ Establish accountability system for personnel working within Medical.

☐ Refer to Medical checklists (over).

☐ Monitor performance of subordinates. Provide support and changes as needed.

SCENE CHECKLIST

Functional Assignments:	**Ops:**	**Order Resources:**	**Ops:**	**HazMat:**	**Active Threat**
Triage		Ambulances (specify #)		Mass Decon	Casualty Collection Point
Treatment		Police (Secure Area)		Safety	Tactical Triage
Transportation		Buses		Rescue	L.E. Liason
Destination		Vans			
Staging Area		Medical Examiner			
Landing Zone		Red Cross			
		Specialty Teams			

OTHER ASSIGNMENTS

Incident Commander	**Triage**	**Treatment**	**Transportation**	**Destination**
				Staging Area

MCI Task Card - TREATMENT

TREATMENT

Reports to Medical (Use assigned radio channel)

Coordinates with Triage and Transportation

OBJECTIVES:

1. **To rapidly treat and transport all patients.**
2. **Identify and establish large treatment area(s) to stabilize and care for patients until transported.**
3. **Coordinate all activities within the treatment area.**
4. **Coordinate movement of patients from treatment area(s) with Transportation.**
5. **Provide accountability for personnel working in Treatment.**

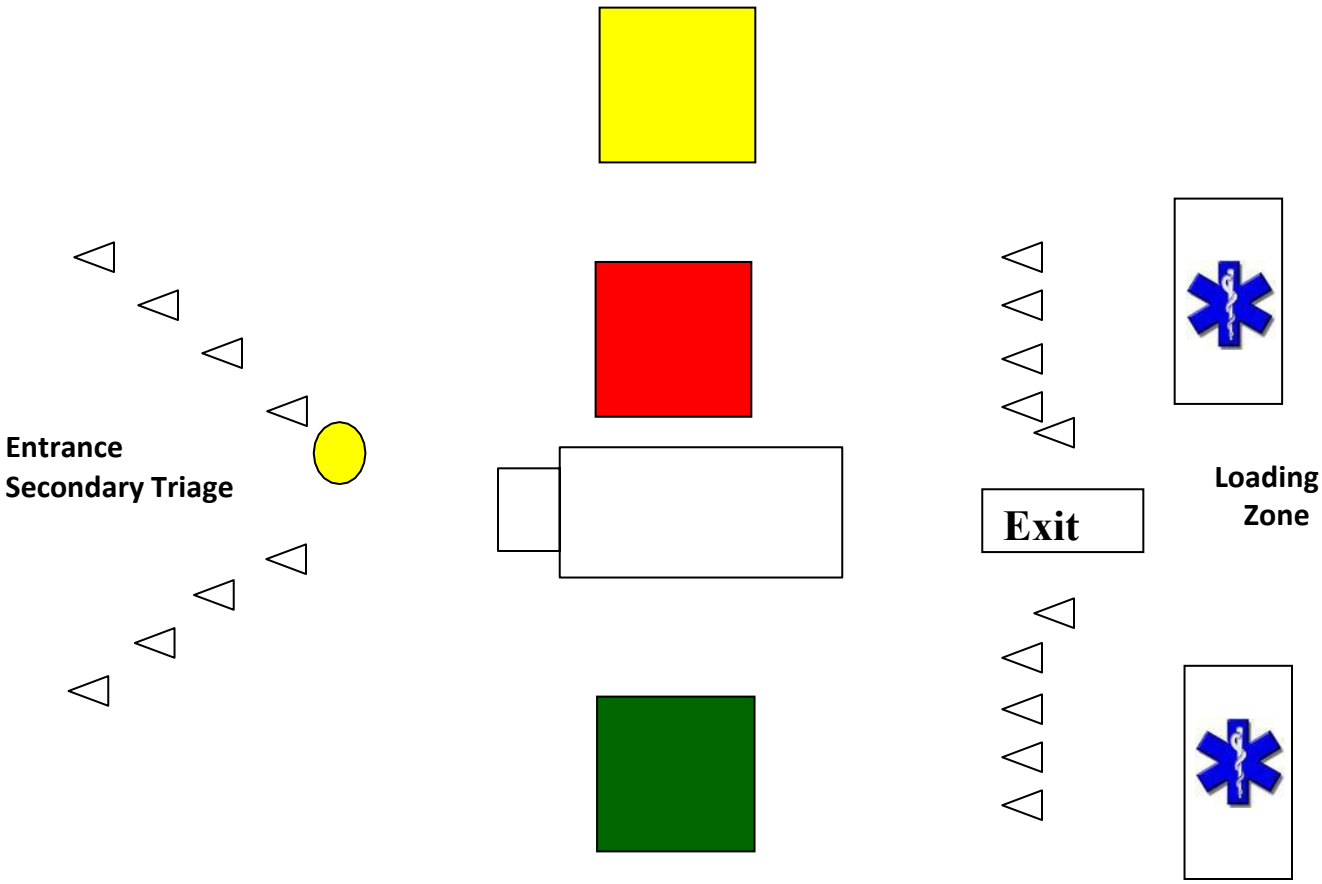
ACTIONS:

- ☐ Establish treatment area(s) large enough to receive estimated number of patients. Set up area with room to expand if necessary. Provide for environmental protection of victims and allow easy ambulance access and egress. If multiple treatment areas are needed, identify each geographically. (e.g. - North/South, street name, division name, etc.). See Diagram.
- ☐ Order additional resources through Medical.
- ☐ Clearly identify treatment area entry point. Assign a person at the entrance to conduct primary or secondary triage, attach triage tags and direct patients to correct treatment area.
- ☐ Consider appointing “Red,” “Yellow,” and “Green” Treatment Team Leaders and assign support personnel.
- ☐ Establish a medical supply drop area for incoming ambulances and fire units.
- ☐ Provide BLS care in the treatment area until resources allow a higher level.
- ☐ Ensure all patients in treatment area have been tagged with a triage tag.
- ☐ Identify the order in which patients are to be transported. Coordinate patient movement to the loading zone with Transportation.
- ☐ Provide accountability for personnel working within treatment area.

MCI Task Card - TREATMENT

Treatment Area Guidelines

- ☐ Set up treatment area WELL AWAY from Hazardous. Consider ambulance access/egress, wind direction and slope.
- ☐ Make it BIG. Set up in an area that will allow you to expand.
- ☐ Clearly identify entry point and exit point for patient transportation.
- ☐ Utilize colored tarps and flags to identify each treatment area.
- ☐ Separate the green area from yellow/red area. Consider separating with CBRNE unit or other natural barrier.
- ☐ Assign treatment team leaders to each area and identify them with the appropriate colored vests.



SCENE CHECKLIST

OPS Channels	Medical:	Treatment:	Transport:

Assign Treatment Team Leaders		Current Patients in Treatment Area	
RED Team Leader:		**Red**	
YELLOW Team Leader:		**Yellow**	
GREEN Team Leader:		**Green**	
Supply:		**Black**	

Additional Company Assignments

Company	Assignment

Notes:

Other Assignments:

Command	Operations	Triage	Staging	Destination
OPS:_____	OPS:_____	OPS:_____	OPS:_____	OPS:_____

MCI Task Card - Triage

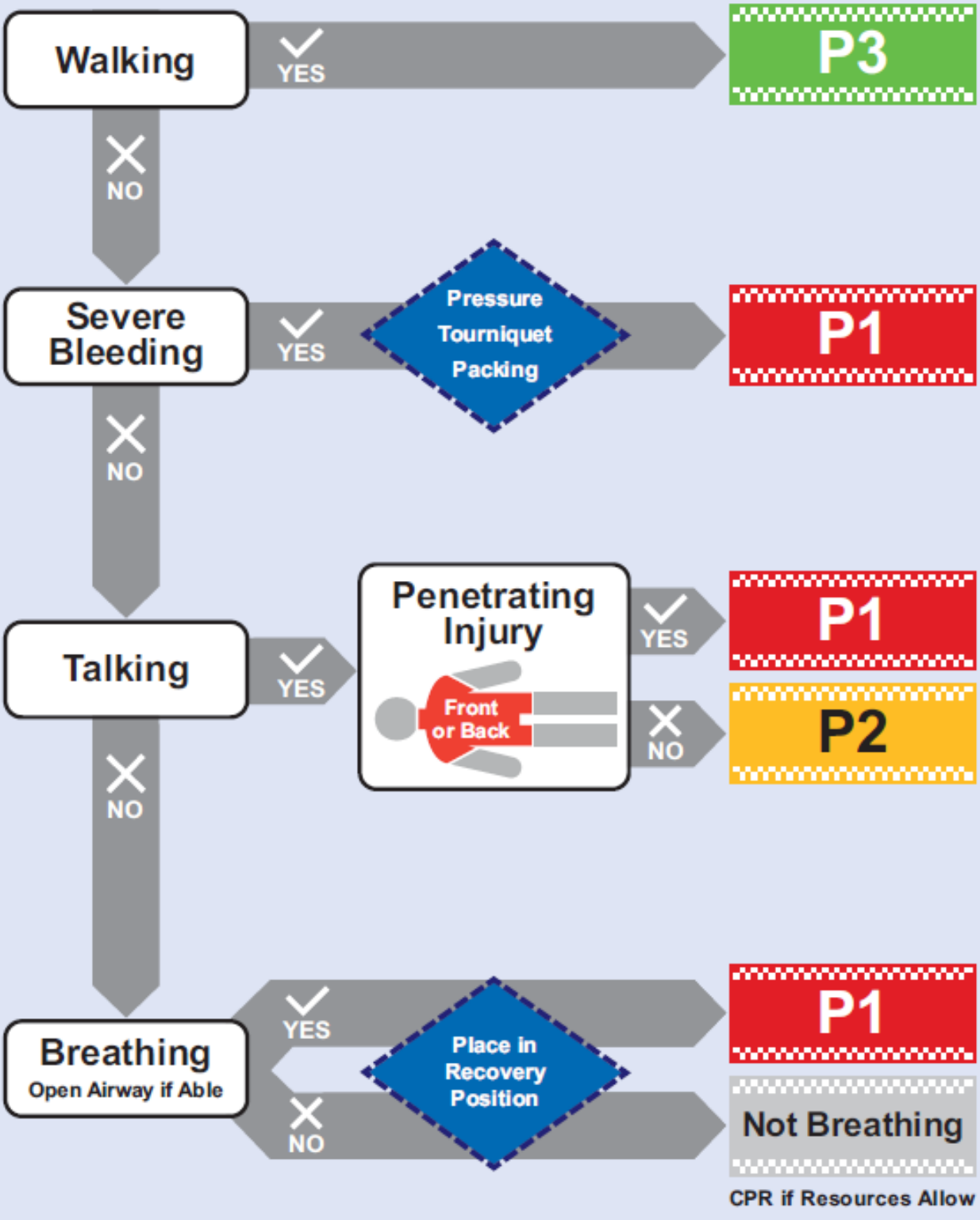
- ☐ Manage the triage function at the incident (should not perform task level triage)
- ☐ Coordinate personnel/crews performing primary and secondary triage
- ☐ Maintain accountability of all triage personnel/crews
- ☐ Ensure rapid primary triage is performed – no more than 30 seconds per patient
- ☐ Ensure secondary triage point is established when necessary or that secondary triage is accomplished in place
- ☐ Coordinates movement of triaged patients to treatment/collection/transport area. (order personnel and equipment as appropriate to accomplish this)
- ☐ Ensures appropriate patient triage log is initiated and maintained. (multiple logs may need to be managed and information integrated depending on the scope of the incident)
- ☐ Relay triage information up the chain-of-command and updates status as needed
- ☐ After triage is completed, assists treatment and transport supervisors/teams to locate their patients.

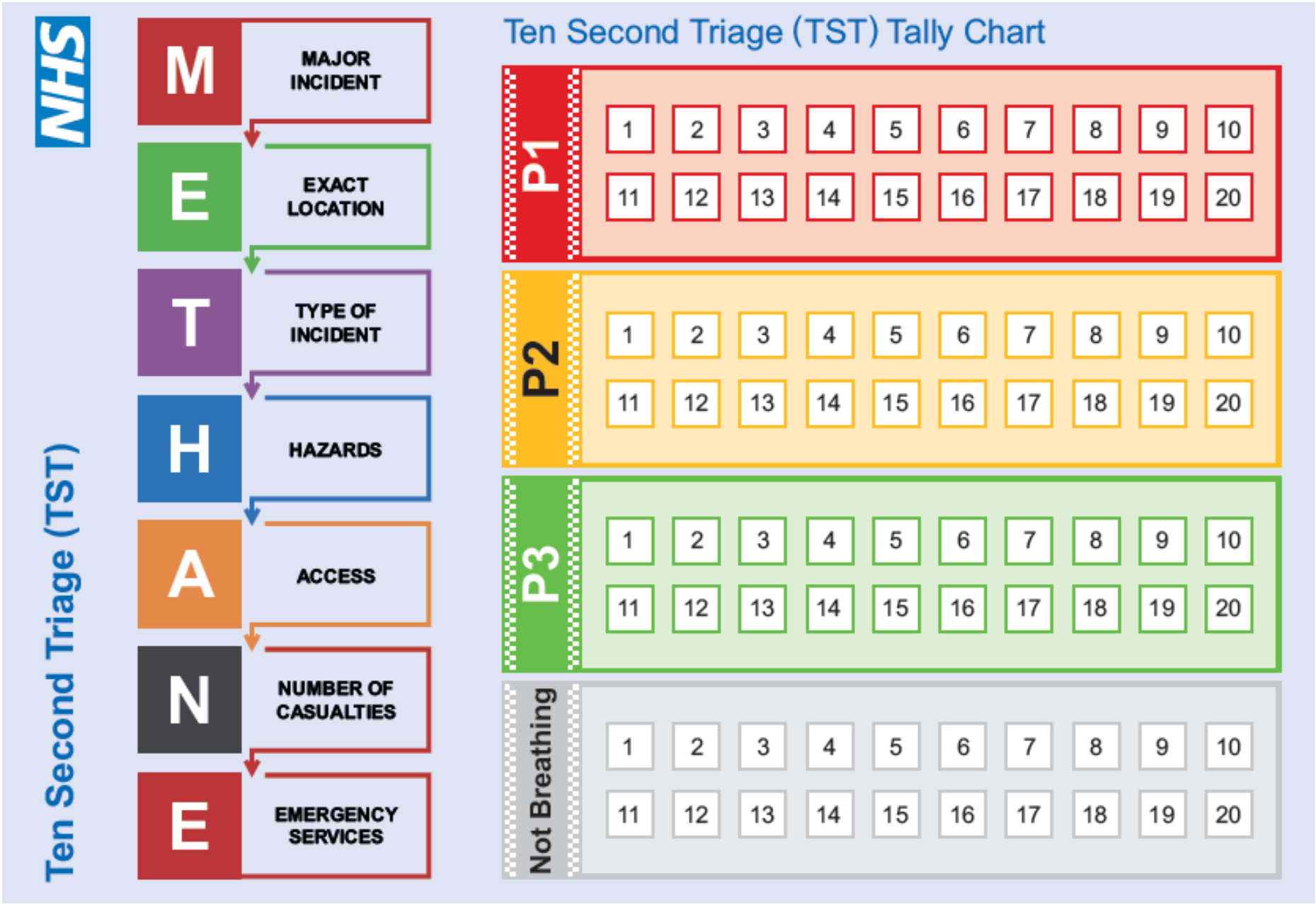
- *In a hazardous incident, patients may not be able to be triaged until they are removed from the hazard zone.*
- *Consider having crews utilize triage tags during secondary triage so that primary triage may be performed at appropriate speed.*

Triage & identify patients by category utilizing "Ten Second Triage" tool:

Ten Second Triage (TST)

NHS




NHS
Ten Second Triage (TST)
M
MAJOR INCIDENT
E
EXACT LOCATION
T
TYPE OF INCIDENT
H
HAZARDS
A
ACCESS
N
NUMBER OF CASUALTIES
E
EMERGENCY SERVICES
Ten Second Triage (TST) Tally Chart
P1
P2
P3
Not Breathing
1 2 3 4 5 6 7 8 9 10
11 12 13 14 15 16 17 18 19 20

MCI Task Card - TRANSPORTATION

Reports to Medical (Use assigned radio channel) Best to fill with Fire Officer

OBJECTIVES:

1. **Coordinate movement of patients from treatment area with Treatment.**
2. **Coordinate all activities within the loading zone.**
3. **Coordinate flow of transport vehicles with staging.**
4. **Provide accountability for personnel working in Transportation.**

ACTIONS:

- ☐ Establish patient loading zone.
- ☐ Establish one-way vehicle access/egress with Staging.
- ☐ Request additional resources as needed from Medical.
- ☐ Assign Medical Communications.
- ☐ Supervise patient movement to loading zone with Treatment.
- ☐ Monitor medical radio channel to estimate number of incoming patients.

MCI Task Card - TRANSPORTATION

Loading Zone Location:

_____

_____

Access/Egress Location:

_____

_____

Resources Requested:

Time	Resource	Unit/Agency

Medical Communications:

Name: _____

Unit/Agency: _____

MCI Task Card - DESTINATION

Reports to Transportation Best to fill with Ambulance Supervisor

OBJECTIVES:

1. **Coordinate hospital destination for patients leaving the loading zone.**
2. **Maintain the patient transport log using web based or protocol approved alternative.**

ACTIONS:

☐ Establish communications with "Regional Hospital." (Via MCI channel, phone number or approved alternative. (800 radio MCI channel or phone (503) 494-7333.)

☐ Confirm MCI has been declared with Regional Hospital and Dispatch.

☐ Provide total number of estimated patients.

☐ Establish communication with loading zone to receive information on patients ready for transport (e.g., face-to-face, runner, radio etc.).

☐ When a unit is ready to transport, contact Regional Hospital. Provide & record the following information.

1. Triage Tag #'sif available
2. Triage color/category
3. Age/gender
4. Unit number of transporting vehicle

☐ Confirm hospital destination with Regional and record.

☐ Inform the transporting unit of its destination.

Triage Tag # (last 4 digits)	Triage Level *R/Y/G*	Age	*Sex*	Injury Type/Location	*Destination*	Unit #	Transport *Time*
	R Y G		M F				
	R Y G		M F				
	R Y G		M F				
	R Y G		M F				
	R Y G		M F				
	R Y G		M F				
	R Y G		M F				
	R Y G		M F				
	R Y G		M F				
	R Y G		M F				
	R Y G		M F				
	R Y G		M F				
	R Y G		M F				
	R Y G		M F				
	R Y G		M F				
	R Y G		M F				

REFERENCE – Medical Examiner Information Sheet

PROCEDURE:
Notify the Clark County Medical Examiner as per guidelines in the Death in the Field protocol. The Medical Examiner (ME) will need the following information when reporting a death in the field:

DEMOGRAPHIC INFORMATION:

A. Name
B. Age/DOB
C. Gender
D. Address of the incident
E. Date and time of death (If time of death unknown provide time decedent found)
F. Time decedent last seen alive
G. Name of the Paramedic and Agency (and MC Physician if applicable) who confirmed death
H. Medical treatment (if any) by responders
    1. Note any invasive procedures that were done, i.e. IV/IO, intubation. In general, leave devices in place

DECEDENT MEDICAL HISTORY:

A. Personal Physician
B. Current medication list
C. Known medical history

CASE DETAILS:

A. Be prepared to answer the following as applicable:
    1. How was the decedent feeling in the days before they died?
    2. What was the decedent doing before they died?
    3. Was the death event witnessed? By whom?
    4. How/where were they found?
    5. What was their body position and clothing?
    6. What death signs are present?
    7. Were they moved from their original position?
    8. Funeral home if known

NOTES:

A. Follow guidelines for Child/Infant death scene if applicable.
B. If a Crime Scene is confirmed or suspected, follow guidelines contained herein.

REFERENCE - Washington State Standing Order to Dispense Naloxone

INTRODUCTION

A. Pharmacies and other entities can dispense and deliver the following naloxone products to eligible persons and entities based on availability and preference. Eligible persons and entities include persons at risk of experiencing an opioid-related overdose or persons or entities in a position to aid persons experiencing an opioid-related overdose. This includes anyone who may witness an opioid overdose and understands the instructions for use. This standing order shall be considered a naloxone prescription for an eligible person or entity.

LINK TO WASHINGTON STATE STANDING ORDER:
https://doh.wa.gov/sites/default/files/legacy/Documents/Pubs/150-127-StatewideStandingOrderToDispenseNaloxone.pdf?uid=6298fda55b362