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The Standard Operating Procedures assume that certain tasks will be done simultaneously by EMS Providers. The order in which the tasks appear is not necessarily in order of need or importance.

OUTLINE FOR RADIO REPORT

TRANSMIT THE FOLLOWING, BEING AS CONCISE AS POSSIBLE:

1. Name and vehicle number of provider, desired destination, and ETA. Indicate if desired destination is the nearest by travel time, and any reasons for desiring to transport to other than the nearest hospital.
2. Patient age, sex, and approximate weight.
3. Level of consciousness and orientation.
4. Chief complaint and paramedic impression, including severity:
 - symptoms, degree of distress, severity of pain on a scale of 0-10
 - mechanism of trauma/pertinent scene information
 - pertinent negatives/associated complaints
5. Signs
 - GCS
 - Pulse - rate, quality, regularity
 - Blood Pressure - auscultated or palpated
 - Respirations - rate, pattern, depth
 - Skin - color, temperature, moisture, turgor
 - Pupils – size, equality, reactivity
 - Lung Sounds
6. History
 - **Signs and Symptoms**
 - **Allergies**
 - **Medications:** time and last dosage taken (bring all medications to ED)
 - **Past history of pertinent illness/injury**
 - **Last oral intake (food or fluid) if known, Last Menstrual Period**
 - **Events surrounding event**
7. Clinical findings
 - Assessment findings from review of systems - pertinent (+) and (-) findings
 - Interpretation of ECG and vital signs
 - Blood glucose for patients with altered mental status
 - Body temperature when appropriate
 - Cincinnati and/or Fast NIHSS Prehospital Stroke Scale when appropriate
 - Trauma score parameters if appropriate

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GENERAL PATIENT ASSESSMENT

BLS / ALS

1. Assess and secure scene safety
2. Use situationally-appropriate personal protective equipment (PPE) and procedures on all patients
 - Consider **EMERGING INFECTIOUS DISEASE GUIDANCE, p. 135** for all patients with complaint and symptom profiles that are similar to those diseases

ADULT

3. **Adult Initial Assessment**

- Airway – establish and maintain an airway. Consider **Spinal Motion Restriction p. 65** as indicated.
- Breathing – assess; assist or provide ventilations as indicated; assess lung sounds
- Circulation – check pulse and control hemorrhage
- Disability – neurologic
 - A – Alert
 - V – responds to Verbal stimuli
 - P – responds to Painful stimuli
 - U – Unresponsive
- Expose and examine as indicated
- Identify priority transports

4. **Focused History and Physical Exam**

- Signs & Symptoms, Systematic head-to-toe assessment including Glasgow Coma Scale (GCS)
- Allergies
- Medications
- Pertinent Medical History
- Last oral intake, Last Menstrual Period
- Events leading to present condition
- Initial set of vital signs
- Rate pain 0-10 scale

5. **Detailed Physical Exam (patient and injury specific when appropriate)**

6. **Ongoing Assessment**

- Reassess ABCDs

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CONSIDERATION FOR PATIENTS WITH SPECIAL HEALTHCARE NEEDS

- Track Adults and Children with Special Healthcare Needs in your service area and become familiar with both the patient as well as their anticipated emergency care needs.
- Refer to patient's emergency care plan formulated by their medical providers, if available. Understanding the patient's baseline will assist in determining the significance of altered physical findings. Parents or caregivers are the best source of information on: medications, baseline vitals, functional level/normal mentation, likely medical complication, equipment operation and troubleshooting, emergency procedures.
- Regardless of underlying conditions, assess in a systematic and thorough manner. Use parents/caregivers/home health nurses as medical resources.
- Be prepared for differences in airway anatomy, physical development, cognitive development, and possible existing surgical alterations or mechanical adjuncts. Common home therapies include: respiratory support (oxygen, apnea monitors, pulse oximeters, tracheostomies, and mechanical ventilators), cardiac devices (LVADs, continuous infusions), nutrition therapy (nasogastric or gastrostomy feeding tubes), intravenous therapy (central venous catheters), urinary catheterization or dialysis (continuous ambulatory peritoneal dialysis), biotelemetry, ostomy care, orthotic devices, communication or mobility devices or hospice care.
- Communicate with the patient in an age appropriate manner. Maintain communication with and remain sensitive to the parents/caregivers and the patient.
- The most common emergency encountered with pediatric patients is respiratory related, so familiarity with respiratory emergency interventions, adjuncts, and treatment is important and appropriate.

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ADULT INITIAL MEDICAL CARE

BLS/ALS

1. Loosen tight clothing and reassure patient
2. Place patient in Semi-Fowler's position or position of comfort unless contraindicated.
3. Enhance airway adequacy by suctioning and/or insertion of an oropharyngeal or nasopharyngeal airway as needed
4. Evaluate oxygen saturation and consider need for supplemental oxygen, especially for patients with dyspnea, suspected hypoxemia or altered mental status

Target SpO2 94-98% (92% if hx of COPD)

Respiratory Assessment / Findings	Oxygen Administration
Adequate rate/depth, minimal distress, mild hypoxia, baseline SpO2 92-94% (88-91% COPD)	Low FiO2
Adequate rate/depth, moderate/severe distress, SpO2 < 92% (< 88% COPD)	High FiO2
Inadequate rate/depth with moderate/severe distress, unstable	High FiO2 by BVM ventilation

- Hyperoxia contraindicated in uncomplicated myocardial infarction / STEMI, post-cardiac arrest, acute exacerbations of COPD, stroke, newly born / neonatal resuscitation. If supplemental oxygen is used in these patients, the goal is to relieve hypoxemia without causing hyperoxia (target SpO2 94%, not 100%).
5. Waveform capnography for spontaneously breathing patients with respiratory distress, metabolic disorders, altered mental status (if available).

ALS

- If intubated, use capnography, end tidal CO₂ monitoring.
 - If unable to intubate, consider use of alternate airway/rescue device.
6. If altered mental status:
 - Place patient on side (vomiting precautions), unless contraindicated
 - Check glucose level. If glucose < 60, treat per **ADULT DIABETIC / GLUCOSE EMERGENCIES, p. 29**
 7. Evaluate cardiac rhythm if indicated. All ALS patients do not necessarily require continuous ECG monitoring or transmission of a strip to the telemetry base station.
Note: 12-lead ECG on all patients with cardiac-related complaints (pain, dysrhythmias), syncope and stroke.
 8. Establish venous access via **IV of NORMAL SALINE (NS) at 10 mL/hr** with regular drip tubing or consider **SALINE LOCK** as indicated by patient condition. Attempt x 2 unless requested to continue or situation indicates.

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ADULT INITIAL MEDICAL CARE

- Continuing use of central venous access devices is acceptable for transport if initiated by RN or physician. Document the name of the on-scene healthcare provider or trained caregiver, i.e. parent. Contact Medical Control prior to administration of any medications.
- If patient encountered with continuous infusion devices or home medication devices, transport unaltered and contact Medical Control.
- Per System-specific policy, **INTRAOSSUEOUS ACCESS** may be used in patients for whom vascular access is urgently needed.

BLS/ALS

9. **Pain management** should be considered in the care of all patients. Ask patient to rate pain on a scale of 0-10.

10. If patient is experiencing nausea or vomiting, consider administering **ZOFTRAN (ondansetron) ODT 4 mg tab or 4 mg slow IV** x 1 dose only (if available).

11. Attempt to contact Medical Control as soon as possible prior to transport. Relay assessment and treatment information, including patient response to treatment

Note: Some patients with time-sensitive illness or injury will benefit from limiting scene time AND early notification of Medical Control to mobilize hospital response teams. Contact Medical Control at the initial point of contact, as soon as a clinical impression has been formed from assessment findings.

These patients include, but are not limited to, STEMI findings in suspected coronary artery chest pain, abnormal Cincinnati Prehospital Stroke Scale in stroke, cardiac arrest in pregnancy, and meeting trauma center bypass criteria in adult and pediatric trauma.

12. Interpretation of ECG and vital signs q 15 minutes and after each ALS intervention; q 5 minutes if unstable.

13. Transport to the closest appropriate hospital. **Note: By law, a physician must certify that the benefits outweigh the risks of transport to a facility other than the closest appropriate hospital, unless patient meets Level 1 Trauma criteria pg. 51-53.**

14. Pursuant to Illinois Vehicle Code Section 625 ILCS 5/11-1421, the use of visual and audible warning devices from the scene to the hospital is authorized by the EMS Medical Director when deemed necessary by the healthcare provider(s) caring for the patient (refer to System-specific policy).

Certain situations may require that treatment, which would normally be administered on the scene, be attempted enroute to the hospital. The patient's condition or behavior which necessitated abbreviated scene time should be thoroughly documented.

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**OUTLINE FOR STREAMLINED COMMUNICATION
FOR BLS CALLS ONLY**

1. Name and vehicle number of provider
2. Patient age and gender
3. Chief complaint/mechanism of injury
4. SOP being followed
5. Any deviation from SOP/unusual circumstances
6. ETA

**Illinois Region 8 Emergency Medical Services
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INITIATION OF ALS CARE

ALS should be initiated according to the following guidelines:

1. Patient with abnormal vital signs, regardless of complaints. The following are guidelines for adults:
 - Pulse < 60 or > 130 BPM; or irregularity
 - Respiratory rate < 10 or > 30; or irregularity
 - Systolic blood pressure < 90 or > 200 mmHg
2. Any patient with a potential life-threatening condition which exists or might develop during transport. Examples of situations in which ALS care is usually indicated include, but are not limited to:
 - Altered Mental Status and/or Unconsciousness
 - Chest Pain
 - Palpitations
 - Seizures
 - Neurologic Deficit/Stroke
 - Syncope or Near Syncope
 - Abdominal Pain
 - Shortness of Breath/Difficulty Breathing
 - Vaginal Bleeding
 - Complication of Pregnancy or Emergency Childbirth
 - GI Bleeding
 - Trauma
 - Overdose/Poisoning
3. In an uncooperative patient, the requirements to initiate assessment and full ALS service may be waived in favor of assuring that the patient is transported to an appropriate medical facility. Document clearly the reasons ALS care was aborted.
4. Never discontinue ALS once initiated unless prior approval by Medical Control.
5. **WHEN IN DOUBT, CONSULT WITH MEDICAL CONTROL.**
6. **Drug Administration Guidelines for Pediatric Patients:** When calculating drug dosages for pediatric patients, the maximum individual and total doses should not exceed the respective adult doses. This does not apply to IV fluid boluses (where the pediatric dose of 20 mL/kg may exceed the 200 mL adult dose) or individual doses of Versed (midazolam) or Narcan (naloxone) due to weight-based dosing.

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LOAD-AND-GO SITUATIONS

This SOP applies if circumstances demand hospital care for patient stability. In certain circumstances, a patient's condition may require EMS providers to omit or abbreviate certain procedures described in these SOPs. The decision to deviate from Standard Operating Procedures must be documented thoroughly. This Standard Operating Procedure does not imply that the rate of speed of transport is accelerated, but rather, there is emphasis on rapid patient packaging and limited on-scene time (barring prolonged extrication). ***Any deviation from Standard Operating Procedures must be based on the medical judgment of the EMS provider treating the patient.***

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Standard Operating Procedures**

WITHHOLDING OR WITHDRAWING OF RESUSCITATIVE EFFORTS

BLS/ALS

1. If at any time you are not certain which of these policies apply, begin treatment and contact Medical Control for orders.
2. Emotional support should be provided to significant others.
3. Disposition of the patient will be handled according to local and county requirements.
4. **Use of SOP must be guided by a physician.** Contact should be established via telemetry radio or cellular phone. Note: **MERCI radio or private phone may be used in extenuating circumstances.**
5. Patients may be pronounced dead by an ED physician. The time of pronouncement should be documented on the patient care report (PCR).

ALS

6. Thoroughly document all circumstances surrounding the use of this procedure.
7. Attach a copy of the ECG rhythm strip to the provider copy of the PCR. If someone represents themselves as having Power of Attorney to direct medical care of a patient and/or a document referred to as a Living Will is present, follow these guidelines:

Power of Attorney for Healthcare

8. POLST/DNR requests can only be honored by EMS providers if a **written POLST/DNR Order**, signed by the patient's Attending Practitioner, is presented.
9. Healthcare decisions other than POLST/DNR may be made by the Power of Attorney for Healthcare, if the document provides for this. If in doubt, begin treatment and contact Medical Control.
10. Bring any documents presented to the hospital.

Living Will / Surrogates

8. POLST/DNR requests can only be honored by EMS providers if a **written POLST/DNR Order**, signed by the patient's Attending Practitioner, is presented.
9. Living Wills **may not** be honored by EMS providers. Begin or continue treatment. Contact Medical Control, explain the situation, and follow any orders received.
10. There are no situations in which a surrogate can directly give instructions to EMS providers. Begin or continue treatment. Contact Medical Control, explain the situation and follow any orders received.

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WITHHOLDING OR WITHDRAWING OF RESUSCITATIVE EFFORTS

BLS/ALS

POLST / DNR Orders / Withholding Treatment

8. Confirm the validity of the POLST/DNR order according to System-specific policy. Call Medical Control if any item is missing. Components of a valid POLST/DNR Order:
- Must be a written document that has not been revoked. It must contain all of the following:
 - **Name of patient**
 - **Resuscitation Orders** (section A of the POLST form) or the equivalent language in a previous DNR form (the words “Do Not Resuscitate”, “Withhold Treatment”)
 - **Three signatures** required
 - **Evidence of consent** – any of the following:
 - ◆ Signature of the patient, or
 - ◆ Signature of Legal Guardian, or
 - ◆ Signature of Durable Power of Attorney for Health Care Agent, or
 - ◆ Signature of surrogate decision maker under the Illinois Health Care Surrogate Act
 - **Signature of a Witness to Consent**
 - **Signature of Attending Practitioner** - physician, licensed resident (second year or higher), advanced practice nurse or physician assistant
 - ◆ **Effective date** (date the practitioner signed the order)
9. If the POLST/DNR order is valid, resuscitative efforts will be withheld. Follow any and all specific orders found on the POLST/DNR order.
10. In the event the patient has a valid POLST/DNR order but IS NOT in cardiac or respiratory arrest with a decompensating condition, begin **Adult Initial Medical Care SOP, p. 4-5**; if you are considering intubation **contact Medical Control**. If unable to contact Medical Control, follow appropriate SOP.
11. If resuscitative efforts were begun prior to the POLST/DNR form being present, efforts may be withdrawn once the validity of the order is confirmed. Contact Medical Control and follow any orders received.

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WITHHOLDING OR WITHDRAWING OF RESUSCITATIVE EFFORTS

BLS/ALS

Obviously Dead Patients: “Triple Zero”

8. Obviously dead patients are those found to be non-breathing, pulseless, asystolic, and have one or more of the following long-term indications of death. No resuscitative efforts are to be initiated for the patients listed below:
 - Decapitation
 - Rigor Mortis without hypothermia
 - Profound dependent lividity
 - Decomposition
 - Mummification/putrefaction
 - Incineration
 - Frozen state
9. For patients appearing to be obviously dead but not listed above, contact Medical Control and explain the situation. Indicate that you have a “Triple Zero”. Follow any orders received.
10. Document pronouncement time and physician name.

BLS/ALS

Hospice Patients Not in Arrest

8. If patients are registered in a hospice program, initiate BLS care and immediately contact Medical Control for orders on treatment and disposition. Inform Medical Control of the presence of written treatment orders and/or valid POLST/DNR orders.

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WITHHOLDING OR WITHDRAWING OF RESUSCITATIVE EFFORTS

ALS

Patients in persistent Asystole / PEA who do not respond to treatment

Note: An order from a physician is required before stopping treatment under this SOP.

8. Provide patient care, per **ADULT ASYSTOLE / PEA SOP, p. 20**, based on the patient's condition.
9. Contact Medical Control and explain the events of the call. Report treatments administered and any patient responses.
 - Confirm all of the following:
 - The patient is an adult, is normothermic, and experienced an arrest unwitnessed by EMS
 - The patient remains in asystole or PEA
 - Confirm **ADEQUATE AIRWAY** and **VASCULAR ACCESS**
 - Drug therapy, defibrillation, and CPR attempts have been carried out according to SOP
 - Waveform capnography under 10 mmHg for more than 20 minutes and/or duration of pulselessness (if available)
 - If the physician determines it is appropriate, s/he may give the order to discontinue medical treatment. It is not necessary that all four above criteria be met.
 - **Only an ED physician may make the determination to withdraw resuscitative efforts.**
 - Consult with Medical Control for disposition of patient. Record time of pronouncement and physician name.
10. If the physician gives the order to continue resuscitative efforts until you reach the hospital, treat per appropriate SOP.
11. If unable to establish communications with Medical Control, resuscitative efforts should continue until the patient reaches the hospital.

BLS/ALS

Blunt Traumatic Arrest

1. Blunt trauma patient without vital signs upon arrival, **may be considered for** withholding resuscitative efforts with approval of Medical Control.

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ADULT WITH SUSPECTED ACUTE CORONARY SYNDROME (ACS)

**TIME
SENSITIVE**

STABLE: alert, oriented, normotensive

BLS/ALS

1. Adult Initial Medical Care SOP, p. 4-5

- Inquire about the patient's medication use. If any of the following have been taken in the past 48 hours withhold **NITROGLYCERIN (NTG)**.
 - sildenafil (Viagra)
 - vardenafil (Levitra, Staxyn)
 - tadalafil (Cialis, Adcirca)
 - sildenafil citrate (Revatio)
 - riociguat (Adempas).
- Hyperoxia should be avoided

2. Administer **BABY ASPIRIN 324 mg (4 x 81 mg tablets) chewed and swallowed**

- unless contraindicated
- may omit if patient has taken ≥ 324 mg aspirin within 8 hours
- administer aspirin to achieve a total dose of 324 mg within the last 8 hours

BLS

- 3. If patient has physician-prescribed NTG and has not taken the maximum dose, and if SBP > 140 mmHg, patient may self-administer **NTG 0.4 mg SL X 1, unless contraindicated.****

ALS

- 3. **12-Lead ECG.** Obtain and review early, preferably with initial vital signs and **before** NTG administration.**

- If ST-segment elevation indicative of acute myocardial infarction (STEMI) seen, condition is considered **TIME-SENSITIVE. *Contact Medical Control at the initial point of contact, as soon as a clinical impression has been formed from assessment findings.*** Communicate ECG to Medical Control ASAP; transmit ECG (if System mandated) and/or relay ST-segment findings and machine interpretation.
- Maintain continuous ECG monitoring

- 4. If systolic BP > 140 mmHg and symptomatic: **NTG 0.4 mg SL**; may **repeat NTG x 1** in 5 minutes if systolic BP > 140 mmHg and IV established (NOTE: Initial NTG may be given prior to IV start)**

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

ADULT WITH SUSPECTED ACUTE CORONARY SYNDROME (ACS)

TIME SENSITIVE

5. If patient has pain and systolic BP > 100 mmHg, administer **FENTANYL**:

< 65 years old	≥ 65 years old
1 mcg/kg SLOW IV or IM/IO/IN, max first dose 100 mcg. May repeat dose 0.5 mcg/kg SLOW IV or IM/IO/IN in 5 min, max repeat dose 50 mcg.	0.5 mcg/kg SLOW IV OR IM/IO/IN, max dose 50 mcg. May repeat dose 0.25 mcg/kg SLOW IV OR IM/IO/IN in 5 min, max repeat dose 25 mcg

UNSTABLE: altered mental status and/or signs of hypoperfusion

BLS

1. **Adult Initial Medical Care SOP, p. 4-5**
2. Initiate **Expeditious Transport**. Notify Medical Control enroute.

ALS

3. If pulse < 60 BPM, treat per **BRADYDYSRHYTHMIA SOP, p. 15**
4. If pulse ≥ 60 BPM, treat per **CARDIOGENIC SHOCK SOP, p. 22**
5. Treat dysrhythmias per appropriate SOP

Special considerations:

- Avoid more than two IV attempts if patient is a candidate for thrombolytic therapy.
- **If ST-segment elevation in leads II, III, aVF (possible inferior wall MI), avoid lidocaine.**

Note:

- Acute coronary syndrome (ACS) in patients < 30 years old is uncommon and judgment should be used in implementing this protocol unless 12-lead ECG findings consistent with ACS are seen.

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

ADULT BRADYDYSRHYTHMIAS

ALS

STABLE: alert, oriented, normotensive

1. **Adult Initial Medical Care SOP, p. 4-5**
 - **Anticipate the need for transcutaneous pacing (TCP)**
2. **Transport**

UNSTABLE: altered mental status and/or signs of hypoperfusion (SBP < 90 mmHg)

1. **Adult Initial Medical Care SOP, p. 4-5**

Bradycardia

2. **ATROPINE 0.5 mg rapid IV/IO; may repeat ATROPINE q 3-5 minutes up to 3 mg until pacing available.**
3. If patient remains hypotensive and pulse < 60 BPM: initiate **TRANSCUTANEOUS PACING (TCP)** at an initial rate of 70 BPM per System-specific procedure. If SBP > 100 mm Hg consider sedation with **VERSED** (midazolam) **2 mg IV/IO (4mg if IN)**.
4. If patient remains symptomatic, administer **DOPAMINE 5 – 10 mcg/kg/min IVPB**.

Note:

- If patient is symptomatic, **do not delay pacing** while awaiting IV access or **atropine** to take effect
- **Do not give lidocaine** to patients in AV blocks or IVR
- **If ST-elevation in leads II, III, aVF (possible inferior wall MI), avoid lidocaine and nitroglycerin**

**Illinois Region 8 Emergency Medical Services
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**ADULT SUPRAVENTRICULAR TACHYCARDIA
(NARROW COMPLEX TACHYCARDIA RATE > 150 BPM)**

ALS

1. Search for potentially reversible causes:

Possible Cause	Field Treatment
Cardiogenic Shock	CARDIOGENIC SHOCK SOP, p. 22
Heart Failure	PULMONARY EDEMA SOP, p. 21
Hypovolemia	IV fluid bolus(es)
Hypoxemia	Ventilations with high FiO ₂ , verify ET tube placement
Hypoglycemia	DIABETIC / GLUCOSE EMERGENCIES SOP, p. 29
Hypothermia	COLD EMERGENCIES SOP, p. 48
Side effects of medications or overdose	
Tamponade (cardiac)	IV fluid bolus(es) to optimize preload
Tension Pneumothorax	Pleural decompression of affected side

STABLE: alert, oriented, normotensive

2. **Adult Initial Medical Care SOP, p. 4-5** - start IV in proximal vein
3. **Valsalva maneuver** while preparing medication
4. If no response, **ADENOSINE 6 mg rapid IV** with 10 mL NS flush
5. If no response, **ADENOSINE 12 mg rapid IV** with 10 mL NS flush
6. If no response, **ADENOSINE 12 mg rapid IV** with 10 mL NS flush

UNSTABLE: HR > 150 BPM with altered mental status and/or signs of hypoperfusion (SBP < 90 mmHg)

2. **Adult Initial Medical Care SOP, p. 4-5**
3. If SBP > 100 mmHg consider sedation with **VERSED** (midazolam) **2 mg IV/IO (4 mg if IN) unless it would cause a delay in cardioversion.**
4. **SYNCHRONIZED CARディオVERSION at 100 J**
5. **If no response, repeat SYNCHRONIZED CARディオVERSION** at recommended energy. Check rhythm and pulse between shocks.
6. If no response, consider **CARDIOGENIC SHOCK SOP, p. 22**, or contact Medical Control

ADENOSINE Notes:

- **ADENOSINE** should not be given to irregular rapid rhythms
- Follow **ADENOSINE** doses with rapid 10 mL NS flush

For defibrillation / cardioversion energy settings, please refer to
DEFIBRILLATION & CARディオVERSION ENERGIES, p. 134

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
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**ADULT VENTRICULAR TACHYCARDIA WITH PULSE
(WIDE COMPLEX TACHYCARDIA)**

ALS

STABLE: alert, oriented, normotensive

1. **Adult Initial Medical Care SOP, p. 4-5, with HIGH FiO₂**
2. Treat patient with either amiodarone (preferred) **OR** lidocaine **only**. Do not combine medicinal therapies.
3. Administer **AMIODARONE 150 mg IV/IO over 10 min.**
4. If no response, call Medical Control to consider **ADENOCARD** (adenosine).

UNSTABLE: altered mental status and/or signs of hypoperfusion (SBP < 90 mmHg), heart rate > 150 BPM

1. **Initial Medical Care with HIGH FiO₂ or VENTILATION**
2. If SBP > 100 mmHg consider sedation with **VERSED** (midazolam) **2 mg IV/IO (4 mg IN) unless it would cause a delay in cardioversion.**
3. **SYNCHRONIZED CARディオVERSION at 100 J**
4. Administer **AMIODARONE 150 mg IV/IO over 10 min.** Do not delay cardioversion attempts for IV start.
 - Assess pulse and rhythm after each cardioversion
 - Consider cardioversion if rhythm persists
 - If rhythm converts, follow appropriate SOP
5. If VT persists, **repeat SYNCHRONIZED CARディオVERSION** at recommended energy. Check rhythm and pulse between shocks.

Note:

- If VT becomes pulseless or deteriorates to ventricular fibrillation (VF), defibrillate immediately per **VENTRICULAR FIBRILLATION / PULSELESS VENTRICULAR TACHYCARDIA SOP, p. 18**

For defibrillation / cardioversion energy settings, please refer to
DEFIBRILLATION & CARディオVERSION ENERGIES, p. 134

**Illinois Region 8 Emergency Medical Services
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**ADULT VENTRICULAR FIBRILLATION (VF)
ADULT PULSELESS VENTRICULAR TACHYCARDIA (pVT)**

ALS

1. Verify pulselessness
2. If arrest is witnessed by EMS providers, **DEFIBRILLATE** as soon as available. If defibrillator is not immediately available, perform **precordial thump**
3. **High Quality Continuous CPR** until defibrillator available
 - **While patient is pulseless, CPR should be continuous except for pausing for ventilation (unless intubated), rhythm check or shock delivery.**
Rhythm checks should be less than 10 seconds and pulse checks only if an organized rhythm is observed
4. **DEFIBRILLATE** at recommended initial energy
5. **Resume CPR immediately following defibrillation. After 2 minutes**, pause CPR and check rhythm and pulse
 - If VF/pulseless VT, **resume CPR** and **DEFIBRILLATE** at second recommended energy as soon as defibrillator charged
 - If rhythm converted after defibrillation, treat per appropriate SOP
6. **If pulseless, resume CPR. Maintain adequate ventilation, if needed place advanced airway. Establish IV/IO ACCESS.**
7. **EPINEPHRINE 1:10,000 1 mg IV/IO.** After 2 minutes of **CPR**, **DEFIBRILLATE** at maximum energy.
8. **AMIODARONE 300 mg IV.** After 2 minutes of **CPR**, **DEFIBRILLATE** at maximum energy.
9. **EPINEPHRINE 1:10,000 1 mg IV/IO.** After 2 minutes of **CPR**, **DEFIBRILLATE** at maximum energy.
10. **AMIODARONE 150 mg IV as repeat dose.** After 2 minutes of **CPR**, **DEFIBRILLATE** at maximum energy.
11. Repeat **EPINEPHRINE / CPR / DEFIBRILLATION** sequence q 2-3 minutes as long as pulseless rhythm persists. After 4th **EPINEPHRINE** administer **SODIUM BICARBONATE 50 mEq IV/IO.**

If V-Fib converts

If VF converts to a supraventricular rhythm with a pulse and has not received > 300 mg of **AMIODARONE**, begin an **AMIODARONE** infusion of **150mg/100ml over 10 minutes.**

Note:

- Flush all IV/IO push meds with 20 mL IV fluid
- For Amiodarone shortages, **LIDOCAINE** is the alternate. **1mg/kg IV/IO (max single dose of 100mg)** up to **3mg/kg IV/IO.** If using **LIDOCAINE** and patient converts to perfusing rhythm, bolus **LIDOCAINE 1mg/kg IV/IO** and rebolus

For defibrillation / cardioversion energy settings, please refer to
DEFIBRILLATION & CARDIOVERSION ENERGIES, p. 134

ADULT TORSADES DE POINTES

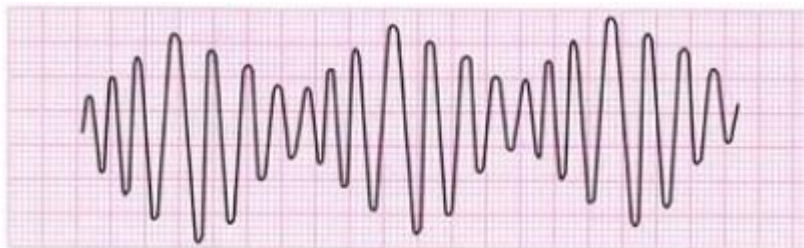
ALS

1. Verify pulselessness
2. If arrest is witnessed by EMS providers, **DEFIBRILLATE** as soon as available. If defibrillator is not immediately available, perform **precordial thump**
3. **High Quality Continuous CPR** until defibrillator available
 - **While patient is pulseless, CPR should be continuous except for pausing for ventilation (unless intubated), rhythm check or shock delivery.**
Rhythm checks should be less than 10 seconds and pulse checks only if an organized rhythm is observed
4. **DEFIBRILLATE** at recommended initial energy
5. **Resume CPR immediately following defibrillation. After 2 minutes,** pause CPR and check rhythm and pulse
 - If pulseless, **resume CPR** and **DEFIBRILLATE** at second recommended energy as soon as defibrillator charged
 - If rhythm converted after defibrillation, treat per appropriate SOP
6. **If pulseless, resume CPR. Maintain adequate ventilation, if needed place advanced airway. Establish IV/IO ACCESS.**
7. **MAGNESIUM SULFATE 2g IV/IO DILUTED IN 10 ml NS over 5 minutes.** After 2 minutes of **CPR, DEFIBRILLATE if indicated** at maximum energy.
8. **EPINEPHRINE 1:10,000 1 mg IV/IO.** After 2 minutes of **CPR, DEFIBRILLATE** at maximum energy. Repeat q 3-5 minutes as indicated.
9. **DEFIBRILLATE if indicated** at maximum energy.
10. Repeat **EPINEPHRINE / CPR / DEFIBRILLATION** sequence q 2-3 minutes as long as pulseless rhythm persists. After 4th **EPINEPHRINE** administer **SODIUM BICARBONATE 50 mEq IV/IO unless contraindicated.**

Note:

- Flush all IV/IO push meds with 20 mL IV fluid
- Defibrillation sequence is CPR – Rhythm Check – CPR (defibrillator charging or medication administration) – Shock

For defibrillation / cardioversion energy settings, please refer to **DEFIBRILLATION & CARIOVERSION ENERGIES, p. 134**



**Illinois Region 8 Emergency Medical Services
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ADULT ASYSTOLE / PULSELESS ELECTRICAL ACTIVITY

ALS

1. **High Quality Continuous CPR** until defibrillator available for rhythm check
 - **While patient is pulseless, CPR should be continuous except for pausing for ventilation (unless intubated), or rhythm check.** Rhythm checks should be less than 10 seconds and pulse checks only if an organized rhythm is observed
 - Search for potentially reversible causes:

Possible Cause	Field Treatment
Hypovolemia	IV fluid boluses
Hypoxemia	High FiO ₂ ventilations, confirm ET tube placement
Hypoglycemia	Check blood sugar and treat per DIABETIC / GLUCOSE EMERGENCIES SOP, p. 30
Hypothermia	Active rewarming if hypothermic
Hyperkalemia	HYPERKALEMIA SOP, p. 46
Tamponade (cardiac)	IV fluid boluses to maximize preload
Tension Pneumothorax	Pleural decompression of affected side
Toxins	TOXICOLOGIC EMERGENCIES SOP, p XXX
Trauma	TRAUMA SOPs, p. XX-XXX

2. Administer **EPINEPHRINE 1:10,000 1 mg IV/IO**
 - **Repeat EPINEPHRINE q 3-5 minutes while pulseless**
 - After 4th **EPINEPHRINE** administer **SODIUM BICARBONATE 50 mEq, IV/IO unless contraindicated.**
3. If return of spontaneous circulation (ROSC) occurs, refer to appropriate SOP
4. If patient remains in persistent asystole, consider withdrawal of resuscitation per **WITHDRAWING OF RESUSCITATIVE EFFORTS SOP, p. 9**

Notes:

- Flush all IV/IO push meds with 20 mL IV fluid
- If ETCO₂ has a sudden rise and reading is above 30 mmHg, PEA is ***unlikely*** and ROSC may have occurred.

**Illinois Region 8 Emergency Medical Services
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**ADULT PULMONARY EDEMA
(DUE TO HEART FAILURE)**

BLS/ALS

STABLE: alert, oriented, normotensive or hypertensive

1. Adult Initial Medical Care SOP, p. 4-5

- Place patient in High Fowler's position, if systolic BP > 100 mmHg
- Consider need and method of delivery of supplemental oxygen

ALS

2. If systolic BP > 140 mmHg , administer **NTG 0.4 mg SL**

STABLE: alert, oriented, normotensive or hypertensive

3. CPAP per System-specific procedure unless contraindicated. Max PEEP of 10 cmH₂O. If patient becomes unstable (SBP < 100 mmHg) lower PEEP. If patient continues to worsen, remove CPAP. If GCS ≤ 10 or deteriorating GCS remove CPAP.

CPAP Inclusion Criteria:

Respiratory Distress – 2 or more of the following:

- Retractions/accessory muscle use
- Respiratory rate > 25
- SPO₂ < 90%
- Exam consistent with pulmonary edema
- Bilateral or diffuse rales/crackles

3. If systolic BP ≥ 140 mmHg, repeat **NTG 0.4 mg SL; may repeat q five minutes if systolic BP ≥ 140 mmHg**

UNSTABLE: altered mental status or signs of hypoperfusion

1. Adult Initial Medical Care SOP, p. 4-5. HIGH FiO₂ or VENTILATION

2. Pulse < 60 BPM: treat per **BRADYDYSRHYTHMIAS SOP, p. 15**
Pulse ≥ 60 BPM: treat per **CARDIOGENIC SHOCK SOP, p. 22**

Note:

- Oral medications for erectile dysfunction (Viagra, Levitra, Cialis, Adcirca, Staxyn, sildenafil, tadalafil, vardenafil) or pulmonary hypertension (Revatio, Adempas, sildenafil, riociguat) may potentiate the effect of nitrates
- **Consult Medical Control** prior to administering NTG in these situations.

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ADULT CARDIOGENIC SHOCK

ALS

1. **Adult Initial Medical Care SOP, p. 4-5, with HIGH FiO₂ or VENTILATION**
 - If hypovolemic and/or dehydrated and lungs are clear:
IV FLUID BOLUS IN 200 mL INCREMENTS x 2
 - Reassess breath sounds after each 200 mL increment IV fluid bolus
2. Treat underlying dysrhythmias per appropriate SOP
3. **DOPAMINE DRIP, dose dependent on clinical condition**
 - If pulse > 60 BPM, begin at 5 mcg/kg/min and increase q 3 min to achieve systolic BP ≥ 90 mmHg to a maximum of 20 mcg/kg/min

Calculation Chart

Body Weight		mcg / kg / min			
		5	10	15	20
Pounds	Kilograms	mcgtts/min ↓	mcgtts/min ↓	mcgtts/min ↓	mcgtts/min ↓
80	36	7	14	20	27
100	45	9	17	26	34
120	55	10	20	31	41
140	64	12	24	36	48
160	73	14	27	41	55
180	82	15	31	46	61
200	91	17	34	51	68
220	100	19	38	56	75
240	109	20	41	61	82
260	118	22	44	66	89
280	127	24	48	72	95
300	136	26	51	77	102

Individual dosage requirements may vary widely.
The above drip rates cover a dosage range of 5 – 20 mcg/kg/min.
This chart applies to a concentration of 1600 mcg/mL
(typically 800 mg/500 mL or 400 mg/250 mL D5W).

**Illinois Region 8 Emergency Medical Services
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ADULT LEFT VENTRICULAR ASSIST DEVICE (LVAD)

BLS/ALS

1. **Adult Initial Medical Care SOP, p. 4-5**
2. Assess patient condition
 - Check for pulses, if pulses absent the NIBP may be ***inaccurate***.
 - Check the percutaneous lead for damage or signs of infection at insertion site, ensure site is covered with sterile materials
 - Check for any and all audible and visual alarms on control module
 - Patient should have a device reference guide available, if none can be found contact medical control
 - If patient unable to communicate with crew, attempt to utilize family member or care giver for history and device assistance
3. If patient is stable contact the patients LVAD coordinator if not already done
4. Assess LVAD equipment
 - Wires and connectors are undamaged
 - No warning lights or audible alarm from control module
 - Check battery levels
 - Check the patients “VAD” bag for extra equipment
 - If the patient has the display screen attached, record the findings and convey them to Medical Control and patients LVAD coordinator
 - Normal flows: 4-8 L/min (RPM x Power)
 - Normal RPM: 8,000-10,000 average
 - Normal power: < 10 watts
5. If alarm sounds, check control unit and treat cause per reference guide if available

ALS

6. If pump fails a red “broken heart” symbol (HeartMate LVAS) will illuminate and audible alarm will sound. If indicated
 - Replace all batteries (**1 at a time**)
 - If still no change after replacing batteries, switch to back up control unit if available.
 - If no unit display is attached, attach pump to display monitor
 - If cardiac arrest occurs after these steps, initiate CPR and follow appropriate SOP
7. If the patient experiences **arrhythmias** follow the appropriate SOP (**defib pads should be placed anterior/posterior**)
8. If cardiac arrest occurs attempt to treat underlying **arrhythmias** per appropriate SOP with electrical and drug therapy **PRIOR** to CPR (CPR may be immediately started if cardiac arrest occurs if patient is unresponsive with fatal arrhythmia in the presence of a total LVAD failure or cut/severed drive line).

**Note: Bring any and all additional LVAD equipment with the Pt. to the ED
Do NOT restart device if off for more than 5 minutes**

**Illinois Region 8 Emergency Medical Services
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Standard Operating Procedures**

ADULT AIRWAY OBSTRUCTION

BLS/ALS

1. **Adult Initial Medical Care SOP, p. 4-5**
2. Determine responsiveness and ability to speak
3. Position patient to open airway:
 - If unconscious: use head tilt/chin lift
 - If suspected cervical spine injury: use modified jaw thrust
4. Assess breathlessness/degree of airway impairment
5. Monitor for:
 - Cardiac dysrhythmias and/or arrest
 - ETCO₂ waveform changes (if available)

CONSCIOUS

ABLE TO SPEAK:

- Do not interfere with patient's own attempts to clear airway

CANNOT SPEAK:

6. 5 abdominal thrusts with patient standing or sitting
5 chest thrusts if patient in 2nd – 3rd trimester of pregnancy or morbidly obese
Repeat if no response
7. **If successful: complete Adult Initial Medical Care SOP, p. 4-5, and transport**
8. **Still obstructed:**
While enroute to the hospital, continue any of the above steps you are reasonably able to perform.

UNCONSCIOUS

Note: Any time the efforts to clear the airway are successful, complete **Adult Initial Medical Care SOP, p. 4-5, and transport.**

6. Attempt to ventilate. If obstructed:
 - Attempt to clear away in the presence of visible airway obstruction unless contraindicated
 - Consider suctionIf still obstructed and unconscious, repeat above steps until airway is clear

ALS

7. Visualize airway with laryngoscope and attempt to clear using Magill forceps and/or suction.
8. **Still obstructed:** Attempt forced ventilation
9. **Still obstructed:** **INTUBATE** and attempt to push foreign body into right main stem bronchus, then pull tube back and ventilate left lung
10. **Still obstructed:** **Perform CRICOTHYROIDOTOMY; HIGH FiO₂ VENTILATION** and transport

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
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ADULT DRUG ASSISTED INTUBATION - KETAMINE

1. **ALS**
2. This SOP is to be used for patients > 15 years of age. **If ≤ 15 years of age, see PEDIATRIC DRUG ASSISTED INTUBATION - KETAMINE SOP, p. 93.**
3. **Adult Initial Medical Care SOP, p. 4-5** - The following are situations which may require the use of this SOP to facilitate intubation:
 - Glasgow Coma Scale score of ≤ 8
 - Imminent respiratory arrest
 - Imminent tracheal/laryngeal closure due to severe edema secondary to trauma or anaphylaxis
 - Flail chest and/or open chest wounds with cyanosis and a respiratory rate < 10 or > 30

ALWAYS HAVE CRICOTHYROIDOTOMY EQUIPMENT AVAILABLE

4. Prepare patient and equipment for procedure:
 - Position patient in sniffing position unless cervical spine injury suspected
 - Have suction with Yankauer or other rigid tip ready
 - Prepare all intubation and cricothyroidotomy equipment per System-specific procedure
 - **HIGH FiO₂ VENTILATION prior to and in-between steps of this procedure as able**

5. **BENZOCAINE spray** to posterior pharynx (0.5-1 second spray x 2, 30 seconds apart)
6. Administer **KETAMINE 2 mg/kg slow IV/IO (30-60 seconds), may repeat 1 mg/kg IV/IO if needed after 1 minute.**
7. Attempt oral or oral in-line intubation via System-specific procedure
8. After passing of tube, verify placement:
 - Adequate chest expansion bilaterally and symmetrically
 - Positive bilateral breath sounds
 - Negative epigastric sounds
 - Waveform capnography, end tidal CO₂ detector and/or esophageal detection device per System-specific procedure
9. Secure ET tube and reassess placement
10. Continuous waveform ETCO₂ monitoring (if available)

POST INTUBATION SEDATION

11. Administer **VERSED (midazolam) 2 mg increments IV/IO q 2 minutes** up to 10 mg total as necessary

If unsuccessful, continue HIGH FiO₂ VENTILATION, contact Medical Control, and be prepared for alternative airway/rescue device use or CRICOTHYROIDOTOMY per System-specific procedure.

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**ADULT ACUTE ASTHMA
COPD WITH WHEEZING
REACTIVE (LOWER) AIRWAY DISEASE**

BLS

1. **Adult Initial Medical Care SOP, p. 4-5**
2. If patient has prescribed inhaler, obtain time of last usage. If appropriate, assist patient with prescribed inhaler.
3. Reassess patient's respiratory status and begin transport
4. At discretion of Medical Control, additional doses of inhaler may be given
5. **ALBUTEROL 2.5 mg (3 mL) via nebulizer** per System-specific procedure
6. Consider possibility of congestive heart failure (CHF) / pulmonary edema in wheezing patient, if patient has a history of CHF, and/or pulmonary edema. If so, treat per **PULMONARY EDEMA SOP, p. 22.**

ALS

4. **Adult Initial Medical Care SOP, p. 4-5**
5. **ALBUTEROL 2.5 mg (3 mL) via nebulizer**
6. Partial response: **repeat ALBUTEROL** immediately
7. If **no response to ALBUTEROL** or **patient in severe respiratory distress:**
 - **CPAP per System-specific procedure with in-line ALBUTEROL 2.5 mg (3ml)** unless contraindicated. **Max PEEP of 10 cmH20.** If patient becomes unstable (SBP < 100 mmHg) lower PEEP. If patient continues to worsen, remove CPAP. If GCS ≤ 10 or deteriorating GCS remove CPAP
 - If age ≤ 50 and patient has no history of cardiac disease, consider **EPINEPHRINE 1:1000 0.3 mg IM**
 - ◆ If age > 50 and/or cardiac disease history, contact Medical Control
5. If **patient is in severe respiratory distress, MAGNESIUM SULFATE 2G IV/IO DILUTED IN 10 ml NS over 5-10 minutes.**
6. If imminent respiratory arrest, **INTUBATE** and use in-line **ALBUTEROL 2.5 mg (3 mL)**

Note:

- If intubated, respiratory rate may need to be **decreased** to obtain a target ETCO2 value of 35-45 mmHg

**Illinois Region 8 Emergency Medical Services
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ADULT PARTIAL (UPPER) AIRWAY OBSTRUCTION / EPIGLOTTITIS

ALS/BLS

1. **Adult Initial Medical Care SOP, p. 4-5**
2. Prepare intubation / cricothyroidotomy / suction equipment

ALS

STABLE - No cyanosis, effective air exchange

3. **NORMAL SALINE 6 mL via nebulizer**
4. If wheezing: **ALBUTEROL 2.5 mg (3 mL) via nebulizer. Do not delay transport waiting for a response**

UNSTABLE - Cyanosis, marked stridor or respiratory distress, severely diminished or absent breath sounds, evidence of inadequate air exchange, bradycardic, altered mental status, retractions, ineffective air exchange, actual or impending respiratory arrest

Breathing:

3. **EPINEPHRINE 1:1000 3 mg (3 mL) via nebulizer**

Nonbreathing:

3. **HIGH FiO₂ VENTILATION**
 - Attempt **ENDOTRACHEAL INTUBATION x 1** if unable to ventilate
 - If intubation unsuccessful, perform **CRICOTHYROIDOTOMY** per System-specific procedure

**Illinois Region 8 Emergency Medical Services
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ADULT ALLERGIC REACTION / ANAPHYLAXIS

BLS/ALS

1. **Adult Initial Medical Care SOP, p. 4-5**
2. Apply ice/cold pack to site

ALS

Allergic reaction with systemic signs, i.e. wheezing, diffuse hives, or prior history of systemic reaction, without signs of hypoperfusion

4. Administer **BENADRYL** (diphenhydramine) **50 mg IM or slow IV/IO**. Max dose 50 mg.
5. Administer **EPINEPHRINE 1:1000 0.3 mg IM**. May repeat x 1 after 15 minutes if minimal response
 - If age > 50 years old and/or cardiac disease history, contact Medical Control prior to administration of **EPINEPHRINE**
6. If wheezing, consider **ALBUTEROL 2.5 mg (3 mL) via nebulizer**

BLS/ALS

Anaphylaxis: multisystem reaction with signs of hypoperfusion; altered mental status or severe respiratory distress/wheezing/hypoxia

BLS

1. At the direction of Medical Control, administer one dose **EPINEPHRINE** via auto-injector device based on appropriate weight or 0.3 mg 1:1000 IM per system specific protocol.
2. If wheezing, consider **ALBUTEROL 2.5 mg (3 mL) via nebulizer**

ALS

3. If signs of hypoperfusion, **IV/IO FLUID BOLUS in 200 mL increments**
4. Administer **EPINEPHRINE 1:10,000 0.1 mg slow IV/IO q 3 minutes up to 0.5 mg** or **EPINEPHRINE 1:1000 0.3 mg IM**. May repeat **EPINEPHRINE** q 3 minutes
5. Administer **BENADRYL** (diphenhydramine) **50 mg slow IV/IO**
 - If no IV, give **BENADRYL** (diphenhydramine) **50 mg IM**
 - No repeat dose
6. If wheezing, consider **ALBUTEROL 2.5 mg (3 mL) via nebulizer**
7. **DOPAMINE** per **CARDIOGENIC SHOCK SOP, p. 22**, for refractory hypotension

Note

- **EPINEPHRINE** may be given IM if IV/IO access delayed.

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ADULT DIABETIC / GLUCOSE EMERGENCIES

BLS/ALS

1. **Adult Initial Medical Care SOP, p. 4-5**
 - Obtain medication history and last oral intake
 - Vomiting and seizure precautions
2. Obtain and record blood glucose level, if available
3. If blood sugar < 60 and patient is alert with intact gag reflex, consider the administration of **ORAL GLUCOSE**

ALS

Blood glucose < 60 or signs and symptoms of insulin shock/hypoglycemia

4. **DEXTROSE 10% 12.5 g (125 mL) IV.** May repeat x 1 if no improvement, or blood glucose remains < 60

OR

During critical drug shortages of dextrose 10%, administer
DEXTROSE 50% 25 g (50 mL) IV. If partial or no improvement, repeat
DEXTROSE 50% 25 g (50 mL) IV after 5 minutes

4. If unable to start IV, administer **GLUCAGON 1 mg IM**

Blood sugar > 180 with signs and symptoms of hyperglycemia/ketoacidosis

4. **IV FLUID BOLUS in consecutive 200 mL increments,** unless contraindicated

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

ADULT SEPSIS

BLS/ALS

1. **Adult Initial Medical Care SOP, p. 4-5**
2. Remove excess clothing if hyperthermia present
3. Consider sepsis if the patient has a known or suspected infection and meets two or more of the following criteria:
 - Temperature of $\geq 100.4^{\circ}\text{F}$ or $\leq 96.8^{\circ}\text{C}$
 - $\text{ETCO}_2 \leq 25$ mmHg with square waveform
 - Shock index of > 1 ($\text{HR} \div \text{SBP}$)
 - $\text{HR} > 90$ bpm
4. Obtain and record blood glucose level, if available, If < 60 , treat per **ADULT DIABETIC / GLUCOSE EMERGENCIES, p. 29**

ALS

5. Establish **LARGE BORE VASCULAR ACCESS IV/IO x 2**
6. **If SBP < 120 mmHg administer FLUID BOLUS with pressure bag and administer at least 1 L NS prior to ED arrival** (attempt total recommended dose of **30ml/kg** to be continued in the ED if not completed in the field)
 - Check lung sounds q 200 ml for pulmonary edema, if pulmonary edema occurs, **STOP** bolus, place IV at TKO rate and treat per **PULMONARY EDEMA SOP with the exception of NITROGLYCERIN if organ dysfunction is present.**
7. Inform medical control of **SEPSIS ALERT** prior to arrival

NOTE:

- **ETOMIDATE** (amidate) should be avoided in sepsis patients due to adrenal insufficiency
- Organ dysfunction is characterized by a SBP < 100 mmHg or a MAP of < 65
- If hyperthermia is present warm fluids should be avoided
- Document amount of fluid given during care and transport

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

**ADULT SYNCOPE / NEAR SYNCOPE
Non-traumatic loss of consciousness**

BLS/ALS

5. **Adult Initial Medical Care SOP, p. 4-5**
6. Obtain and record blood glucose level. If < 60, treat per **ADULT DIABETIC / GLUCOSE EMERGENCIES, p. 29**
3. Anticipate underlying etiologies and treat according to appropriate SOP:
 - Metabolic **ADULT DIABETIC / GLUCOSE EMERGENCIES, p. 29,**
 or TOXICOLOGIC EMERGENCIES SOP, p. 36-39
 - Cardiac Appropriate Cardiac SOP, P. 13-23
 - Hypovolemic Fluid resuscitation
 - CNS Disorder See appropriate Medical or Trauma SOP
 - Vasovagal **Adult Initial Medical Care SOP, p. 4-5**

If indicated by decreasing sensorium and pinpoint pupils, depressed respirations, and possible history of opioid/synthetic opioid ingestion:

4. Consider **ADULT SUSPECTED OPIOID OVERDOSE SOP p. 35**

BLS

5. Expeditious transport. Contact Medical Control enroute

ALS

STABLE: alert, oriented, normotensive

- Special considerations:
 - Monitor ECG continually enroute
 - 12-lead ECG
 - Document changes in GCS

UNSTABLE: altered mental status or signs of hypoperfusion

If lungs clear with hypoperfusion:

5. **IV FLUID BOLUS in 200 mL increments**

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

**ADULT SEIZURES / STATUS EPILEPTICUS
Non-traumatic origin**

BLS/ALS

1. **Adult Initial Medical Care SOP, p. 4-5**; special considerations:
 - Clear and protect airway. Vomiting/aspiration precautions.
 - Protect the patient from injury. Do not place anything in mouth if seizing.
 - Position patient on side unless contraindicated
2. Obtain and record blood glucose level, if available. If < 60 treat per **ADULT DIABETIC / GLUCOSE EMERGENCIES, p. 29**

ALS

If actively seizing:

3. Administer **VERSED** (midazolam) **2 mg slow IV increments q 2 minutes up to 10 mg total as necessary.**
4. If unable to start IV:
 - Administer **VERSED** (midazolam) **10 mg in 2 mL IN**
Or
 - Administer **VERSED** (midazolam) **IM**
 - ◆ **< 70 kg = 2.5 mg IM**
 - ◆ **≥ 70 kg = 5 mg IM**

Note: If suspected that seizure is secondary to opioid overdose, see ADULT SUSPECTED OPIOID OVERDOSE SOP, p. 35

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

ADULT STROKE

**TIME
SENSITIVE**

BLS/ALS

1. **Adult Initial Medical Care SOP, p. 4-5**
 - Limit scene time
 - **Contact Medical Control at the initial point of contact, as soon as a clinical impression has been formed from assessment findings.**
 - **Spinal Motion Restriction** for unconscious patient with suspected trauma
 - Obtain and record time when last at baseline / **Last Known Well**
 - Obtain and record blood glucose level. If < 60, treat per **ADULT DIABETIC / GLUCOSE EMERGENCIES, p. 29**
2. Protect airway, suction as necessary.
3. Maintain head and neck in neutral alignment. DO NOT flex neck. If systolic BP > 90 mmHg, elevate head of bed 15-30°.
4. Assess and record neurological status using GCS and note any changes.
5. Assess patient using the Cincinnati Prehospital Stroke Scale (CPSS) or FAST NIH per system specific procedures and document new findings:
 - New Facial Droop (have patient show teeth or smile)
 - New Arm Drift (patient closes eyes and hold both arms out)
 - New Speech Deficit (have patient say "You can't teach an old dog new tricks")
6. If the patient has an abnormal Cincinnati Prehospital Stroke Scale they should be transported to the closest Primary Stroke Center (PSC).
7. Transport patients with an unobtainable or normal Cincinnati Prehospital Stroke Scale with any of the following symptoms to the closest PSC:
 - New onset of sudden or persistent language deficiency
 - New onset of sudden unilateral numbness or weakness
 - New onset of severe sudden headache with vomiting with or without severe hypertension (systolic BP > 200 mmHg)
 - New onset of sudden and persistent alteration of mental status
 - New onset of severe and sudden loss of balance/new onset ataxia
 - New onset of sudden visual field loss in one or both eyes

ALS

1. **INTUBATE** if GCS score ≤ 8
2. Establish IV, limit IV attempts to 2
3. If seizure activity, refer to **ADULT SEIZURES / STATUS EPILEPTICUS, p. 32**
4. Call Medical Control early and communicate time when patient was last at baseline/**Last Known Well** (if known)
5. 12-lead ECG
6. Transport to the closest Primary/Comprehensive Stroke Center for continuation of stroke care

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

ADULT ACUTE ABDOMINAL PAIN

BLS/ALS

1. Adult Initial Medical Care SOP, p. 4-5

ALS

2. Consider pain management if SBP > 100 mmHg:

FENTANYL (Preferred)	KETAMINE
< 65 years of age	
1 mcg/kg SLOW IV OR IM/IO/IN, max first dose 100 mcg. Repeat dose 0.5 mcg/kg SLOW IV OR IM/IO/IN in 5 min, max repeat dose 50 mcg.	0.1 mg/kg SLOW IV/IO. Repeat dose 0.05 mg/kg SLOW IV/IO
≥ 65 years of age	
0.5 mcg/kg SLOW IV OR IM/IO/IN, max dose 50 mcg. Repeat dose 0.25 mcg/kg SLOW IV OR IM/IO/IN in 5 min, max repeat dose 25 mcg.	No dose for ≥ 65 years of age

3. If patient is experiencing nausea or vomiting, consider administering **ZOFRAN** (ondansetron) **ODT 4 mg tab or 4 mg slow IV** x 1 dose only.

UNSTABLE: altered mental status and/or signs of hypoperfusion

4. Establish large bore IV enroute. Administer **IV FLUID BOLUS of 200 mL**, repeat as necessary. Titrate infusion rate based on clinical presentation.
5. If suspected ruptured abdominal aortic aneurysm (mottling distal to mass / pain) or ectopic pregnancy, early aggressive fluid resuscitation should be considered to maintain a SBP of 90 mmHg.
6. If signs and symptoms of shock present, establish second IV.

**Illinois Region 8 Emergency Medical Services
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Standard Operating Procedures**

ADULT SUSPECTED OPIOID OVERDOSE

BLS/ALS

1. **Adult Initial Medical Care SOP, p. 4-5**
2. If breathing is adequate, place on side and monitor V/S.

BLS

3. Protect airway, **HIGH FiO₂ or VENTILATION**
4. If breathing is **NOT** adequate, or patient is apneic **NARCAN (naloxone) 2mg IN q 30 seconds up to 12 mg IN until adequate respirations return.** If needed contact medical control for additional doses.

ALS

3. Protect airway, **HIGH FiO₂ or VENTILATION**
4. If breathing is **NOT** adequate, or patient is apneic:

Inadequate Respirations	Apneic
<p>NARCAN (naloxone) 1 mg IV/IO (2mg IN) q 1-2 minutes up to 6 mg IV/IO (12 mg IN) until adequate respirations return. If needed contact medical control for additional doses.</p>	<p>NARCAN (naloxone) 2 mg IV/IO/IN q 1-2 minutes up to 12 mg IV/IO/IN until adequate respirations return. If patient remains apneic 12mg consider placement of advanced airway per ADULT ASSISTED INTUBATION – KETAMINE SOP p. 25. If needed contact medical control for additional doses.</p>

NOTE:

- Inadequate respirations defined as **ETCO₂ < 30 or > 50 or rate < 10**
- Additional PPE should be considered on suspected overdose calls when white powder is noted, or the presence of FENTANYL or CARFENTANIL is suspected.

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

ADULT TOXICOLOGIC EMERGENCIES

BLS/ALS

STABLE: alert, oriented, normotensive

1. **Adult Initial Medical Care SOP, p. 4-5**
 - HazMat precautions

For known or suspected OPIOID OVERDOSE with GCS score \leq 8:

2. Protect airway, **HIGH FIO₂ or VENTILATION**, follow **ADULT SUSPECTED OPIOID OVERDOSE SOP p. 35**

ALS

UNSTABLE: altered mental status, airway compromise, and/or hypoperfusion

1. **Adult Initial Medical Care SOP, p. 4-5**
 - HazMat precautions
2. GCS score \leq 8 and evidence of airway compromise, **INTUBATE**. The use of Alternate Airway is contraindicated in ingestion of caustic substance.
3. Unknown etiology with respiratory compromise **ADULT SUSPECTED OPIOID OVERDOSE SOP pg. 35**

CYCLIC ANTIDEPRESSANT / SODIUM CHANNEL BLOCKER OVERDOSE

Hypoperfusion associated with wide QRS complex (possible cyclic ingestion)

4. Administer **NORMAL SALINE 1 L IV bolus**
5. Administer **SODIUM BICARBONATE 8.4% 1 mEq/kg IV/IO, max single dose of 50 mEq**

BETA-BLOCKER / CALCIUM CHANNEL BLOCKER OVERDOSE

Hypoperfusion associated with bradycardia (possible beta blocker or calcium channel blocker ingestion)

4. Administer **GLUCAGON 1 mg slow IV**. May repeat x 1.
5. If no response consider transcutaneous pacing (TCP).

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Standard Operating Procedures**

ADULT TOXICOLOGIC EMERGENCIES

MUSCARINIC POISONING - excessive body secretions

D – Diarrhea	OR	S alivation (excessive production of saliva)
U – Urination		L acrimation (excessive tearing)
M – Miosis		U rination (uncontrolled urine production)
B – Bronchorrhea / Bronchospasm		D efecation (uncontrolled bowel movement)
B – Bradycardia		G astrointestinal distress (cramps)
E – Emesis		E mesis (excessive vomiting)
L – Lacrimation		B reathing Difficulty
S – Salivation		A rrhythmias
		M iosis (pinpoint pupils)

4. Administer **ATROPINE 2 mg rapid IV/IO**
Repeat **q 3** minutes until condition improves (no dose limit)

CYANIDE POISONING

Signs of Cyanide Poisoning

- Altered Mental Status
- Confusion, Disoriented
- Tachypnea/Hyperpnea (early)
- Bradypnea/Apnea (late)
- Seizures or Coma
- Mydriasis (dilated pupils)
- Hypertension (early) / Hypotension (late)
- Cardiovascular collapse
- Vomiting

Symptoms of Cyanide Poisoning

- Headache
- Confusion
- Dyspnea
- Chest Tightness
- Nausea

4. **Initial Medical Care**, considerations:
- Consider **NIPPV / CPAP**, per System-specific procedure
 - Consider **ADVANCED AIRWAY** if the patient has GCS \leq 8, inhalation burns, bradypnea or tachypnea, hoarse voice and/or impending airway closure.
 - Consider **12-LEAD ECG**
5. If signs and symptoms consistent with cyanide poisoning and **if available**, **administer hydroxocobalamin (Cyanokit®)** per dosing schedule **p. 38**
6. If hypotensive or pulseless, **NORMAL SALINE 1 L IV bolus**. If pulseless, refer to appropriate cardiac arrest SOP.

**Illinois Region 8 Emergency Medical Services
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ADULT TOXICOLOGIC EMERGENCIES

CARBON MONOXIDE POISONING

BLS/ALS

4. HIGH FiO₂ or VENTILATION

- Consider cyanide poisoning
- Do not rely on pulse oximetry
- Keep patient as quiet as possible to minimize tissue oxygen demand

ALS (with SPCO monitoring capabilities)

5. Assess CO levels

- 0-3% Normal range
- 3-12%, with **NO** symptoms, observe and reassess V/S and CO readings q 5-10 minutes
- 3-12% **WITH** symptoms, treat with 100% O₂ via NRB mask and transport to the closest appropriate facility
- >12%
 - GCS of ≥ 9, treat with 100% O₂ via NRB
 - GCS ≤ 8 **ADULT DRUG ASSISTED INTUBATION – KETAMINE SOP p. 25**, contact medical control for consideration of bypass to facility with a hyperbaric chamber

6. Any patient presenting with symptoms of CO poisoning should be transported to closest appropriate facility. Additionally, patients with the following should be transported with or without symptoms of CO poisoning:

- Adults with CO of ≥ 25%
- Pediatric patients with CO of ≥ 15%
- Pregnant patients with a CO of ≥ 15%
- Any patient with advanced airway or acute mental status change and a CO of ≥ 15%

SUSPECTED CLUB DRUG OVERDOSE

4. Contact Medical Control for suspected use of club drugs

<p>Illinois Region 8 Emergency Medical Services Central DuPage, Edward, Good Samaritan, Loyola EMS Systems Standard Operating Procedures</p>

Drugs Commonly Seen in Overdose / Poisoning

Opioids	Morphine, Demerol (meperidine), heroin, methadone, codeine, Duragesic (fentanyl), Vicodin/Lortab (APAP and hydrocodone), hydrocodone, Dilaudid (hydromorphone), Percocet (oxycodone and APAP), OxyContin (oxycodone)
Sodium Channel Blockers	Benadryl (diphenhydramine), Dilantin (phenytoin)
Cyclic Antidepressants	Elavil (amitriptyline), Norpramin (desipramine), Tofranil (imipramine), Pamelor (nortriptyline), Sinequan (doxepine)
Benzodiazepines	Halcion (triazolam), Ativan (lorazepam), Restoril (temazepam), Versed (midazolam), Valium (diazepam), Xanax (alprazolam), Librium (chlordiazepoxide), Klonopin (clonazepam), Dalmane (flurazepam), Rohypnol (flunitrazepam), Ambien (zolpidem)
Beta Blockers:	Inderal (propranolol), Corgard (nadolol), Lopressor (metoprolol), Tenormin (atenolol), timolol
Calcium Channel Blockers:	Cardizem (diltiazem), Procardia (nifedipine), Calan/Adalat/Isoptin (verapamil), Norvasc (amlodipine)
Club Drugs	GHB (Liquid G, Liquid Ecstasy), ketamine (Special K, Vitamin K, Super K), MDMA (Ecstasy, XTC, ADAM, E), Foxy Methoxy, AMT, Coricidin (Triple-C)

Poison Control Center 1-800-222-1222

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
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**HYDROXOCOBALAMIN (CYANOKIT®) ADMINISTRATION
(if available)**

Scene Size-up

Scene Safety – If necessary, mitigate any hazardous materials and/or chemicals that may impair, or pose a danger to, the rescuer prior to treatment.

ALS

1. **Adult Initial Medical Care SOP, p. 4-5**
 - Consider need for **ADVANCED AIRWAY** if patient has GCS ≤ 8, inhalation burns, bradypnea / tachypnea, hoarse voice and/or signs of impending airway closure
 - Consider 12-lead ECG
2. If signs and symptoms consistent with cyanide poisoning, **administer HYDROXOCOBALAMIN (CYANOKIT®)** packaged as 2.5 g in 100 mL, concentration of 25 mg/mL
 - **Adult - 5 g over 15 min (15 mL/min)**
 - **Pediatric - 70 mg/kg over 15 min, not to exceed 5 g**
3. Contact Medical Control, transport and monitor patient

Special Considerations: Hydroxocobalamin (Cyanokit®) requires its own dedicated IV line. Do not use existing IV line for administration. Do not piggyback

Signs of Cyanide Poisoning

- Altered Mental Status
- Confused, Disoriented
- Tachypnea / Hypernea (early)
- Bradypnea / Apnea (late)
- Seizures / Coma
- Mydriasis (dilated pupils)
- Hypertension (early)
- Hypotension (late)
- Cardiovascular Collapse
- Vomiting

Symptoms of Cyanide Poisoning

- Headache
- Confusion
- Dyspnea
- Chest Tightness
- Nausea

Wt kg	Dose /	Units	Volume
2	140	mg	5.6 mL
3	210	mg	8.4 mL
4	280	mg	11.2 mL
5	350	mg	14 mL
10	700	mg	28 mL
15	1.1	g	42 mL
20	1.4	g	56 mL
25	1.8	g	70 mL
30	2.1	g	84 mL
35	2.5	g	98 mL
40	2.8	g	112 mL
45	3.2	g	126 mL
50	3.5	g	140 mL

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

SNAKEBITE / ENVENOMATION

BLS/ALS

Scene Size-Up

- Assess scene and personal safety
- Use standard precautions on all patients

1. Adult Initial Medical Care SOP, p. 4-5

- Confirm adequate airway
- **High FiO₂**
- Check pulse and control hemorrhage as indicated
- Assess AVPU and monitor neurological status
- Apply sterile gauze dressing over wound
- Remove all jewelry and/or constrictive clothing
- **Special Considerations:**
 - Allow patient to lie flat and avoid as much movement as possible. Keep patient calm. Allow the bitten limb to rest at level of the patient's heart.
 - Medical Control should be contacted immediately whenever snakebite is suspected.
 - i. Notify Medical Control if antivenin is available at the scene.
 - ii. Request that Medical Control contact toxicologist / Poison Control Center ASAP at **1-800-222-1222**
 - Notify Medical Control of type of snake. If safe to do so, obtain photo of snake for identification.
 - If compression wrap has been applied by special services staff (e.g. animal control or zoological park), do not remove.
 - DO NOT apply ice, heat, tourniquet or incise wound.

ALS

- Observe for respiratory compromise. Provide intervention, if necessary, per appropriate SOP.
- Evaluate cardiac rhythm. Treat dysrhythmias per appropriate SOP.
- Establish two large bore IVs of normal saline in unaffected extremity.
- Use direct pressure to control hemorrhage if present. Avoid elevation of extremities.
- Reassess frequently for mental status changes.

Note: If transport time > 15 minutes, consider contacting specialty transport. If antivenin is available, bring to ED with patient.

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

ADULT NERVE GAS AUTO-INJECTOR GUIDELINES

Purpose:

To provide Illinois EMS agencies with guidelines on the appropriate use of nerve agent kits (**Mark 1 / DuoDote**). Kits contains antidotes to be used in instances of exposure to nerve agents (Sarin, Soman, Tabun, VX) or to muscarinic agents (Ipratropium, Cygon, Delnav malathion, Supracide parathion, Carbopenthion).

Key Provisions:

Only those licensed EMS providers that are governed by the State of Illinois EMS Act (210 ICLS 50) are authorized by any EMS Medical Director to utilize the special equipment and medications needed in WMD incidents, including **Mark 1 / DuoDote** auto-injectors. When appropriate conditions warrant, contact Medical Control. Other organized response teams not governed by the EMS Act may use the **Mark 1 / DuoDote** auto-injectors on themselves or other team members when acting under the Illinois Emergency Management Agency Act (20 ILCS 3305).

Guidelines:

1. To utilize these kits, you must be an EMS agency or provider within an Illinois EMS System and participate within an EMS disaster preparedness plan.
2. The decision to utilize the **Mark 1 / DuoDote** antidote is authorized by this State protocol.
3. At a minimum, an EMS provider must be an Illinois EMT at any level, including First Responder with additional training in the use of the auto-injector.
4. **THE MARK 1 KIT IS NOT TO BE USED FOR PROPHYLAXIS.** The injectors are antidotes, not a preventative device. The **Mark 1 / DuoDote** kit may be self-administered if you become exposed and are symptomatic. Exit immediately to the Safe Zone for further medical attention.
5. Use of the Mark 1 kit is to be based on signs and symptoms of the patient. The suspicion or identified presence of a nerve agent is not sufficient reason to administer these medications.
6. Atropine may be administered IV or IM in situations where **Mark 1 / DuoDote** kits are not available.
7. If available, diazepam (Valium) or midazolam (Versed) may be cautiously given under Medical Control direction or by Standard Operating Procedures, if convulsions are not controlled
8. When the nerve agents have been ingested, exposure may continue for some time due to slow absorption from the lower bowel. Fatal relapses have been reported after initial improvement. Continual medical monitoring and transport is mandatory.

If dermal exposure has occurred, decontamination is critical and should be done with standard decontamination procedures. Patient monitoring should be directed to the signs and symptoms, as with all nerve or muscarinic exposures. Continual medical monitoring and transport is mandatory.

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

ADULT NERVE GAS AUTO-INJECTOR GUIDELINES

Mnemonic for Nerve Agent exposure:

- S**alivation (excessive production of saliva)
- L**acrimation (excessive tearing)
- U**rination (uncontrolled urine production)
- D**efecation (uncontrolled bowel movement)
- G**astrointestinal distress (cramps)
- E**mesis (excessive vomiting)
- B**reathing difficulty
- A**rrhythmias
- M**iosis (pinpoint pupils)

EXPOSURE	CLINICAL	TREATMENT
No signs or symptoms	None	Remove to Safe Zone, decontaminate, observe and transport
Mild Exposure	SOB, wheezing, runny nose	One kit or atropine 2 mg IV/IM and 2-PAM 600 mg IM (1 gram IV)
Moderate Exposure	Vomiting, diarrhea, pinpoint pupils, drooling	1-2 kit or atropine 2-4 mg IV/IM and 2-PAM 600-1200 mg IM (1 gram IV)
Severe Exposure	Unconsciousness, paralysis, cyanosis, seizures	Three kits or atropine 6 mg IV/IM and 2-PAM 1800 mg IM or 2-PAM 1 gram IV repeated twice at hourly intervals. Valium or Versed per Medical Control.

2-PAM solution needs to be prepared from the ampule containing 1 gram of desiccated 2-PAM: inject 3 mL of saline, 5% dextrose, or distilled or sterile water into ampule and shake well. The resulting solution is 3.3 mL of 300 mg/mL.

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

RADIATION INJURIES

BLS/ALS

- 1. FOLLOW DIRECTIONS OF THE HAZMAT COMMAND ON SCENE.**
2. Patient management per appropriate SOP.
3. Contact Medical Control, as soon as practical, and indicate the following:
 - number of victims
 - medical status of victims
 - source of radiation
 - amount and kinds of radioactivity present

For assistance, 24-hour hotline number is available:
Illinois Emergency Management Agency: **1-800-782-7860**

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

ADULT CHRONIC RENAL FAILURE - DIALYSIS PATIENT EMERGENCIES

BLS/ALS

- Do not take BP in same arm as shunt or fistula
- Control obvious hemorrhage from shunt or fistula (arterial bleeding) with tourniquet

ALS

- **IVs should not** be attempted on the extremity with the shunt or fistula
- When emergencies occur during dialysis, the staff may leave the access needles in place, and clamp the tubing. If this is the only accessible site, request their assistance to connect your IV tubing.

ALS

UNSTABLE: altered mental status or signs of hypoperfusion

1. **Adult Initial Medical Care SOP, p. 4-5**
2. If lungs clear, administer **IV FLUID BOLUS of 200 mL**. May repeat if lungs remain clear
3. If widened QRS complex, suspect hyperkalemia and follow **ADULT HYPERKALEMIA SOP p. 46**
4. If unresponsive to IV fluid bolus or pulmonary edema present, treat per **CARDIOGENIC SHOCK SOP, p. 22**

CARDIAC ARREST

1. **Adult Initial Medical Care SOP, p. 4-5**
2. Treat per appropriate cardiac arrest SOP

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

ADULT SUSPECTED HYPERKALEMIA

BLS/ALS

STABLE: Alert, normotensive

1. Adult Initial Medical Care SOP, p. 4-5

Common complaints may include:

- Generalized fatigue
- Weakness
- Paresthesias / paralysis
- Palpitations

Predisposing conditions may include:

- Acute / Chronic renal failure
- Rhabdomyolysis, burns, crush injuries
- Potassium supplements, potassium-sparing diuretics, NSAIDs, beta-blockers, digoxin, digitalis glycosides
- Metabolic acidosis, DKA, catabolic states

ALS

STABLE: (peaked T waves)

1. 12 lead ECG

2. SODIUM BICARBONATE 1 mEq/kg IV/IO

UNSTABLE: altered mental status and/or hypoperfusion with a widened QRS, complete loss of P wave or sine wave

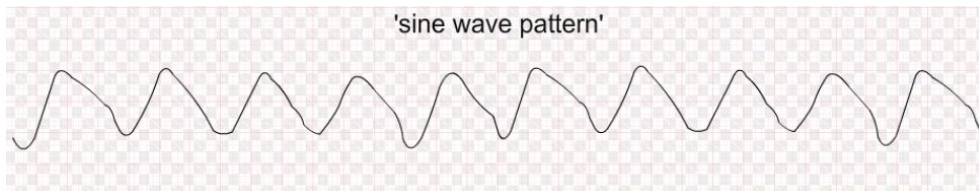
2. ALBUTEROL 5.0 mg (6ml) via nebulizer, may repeat x 1

3. SODIUM BICARBONATE 1 mEq/kg IV/IO

4. If cardiac arrest occurs treat per appropriate SOP

NOTE:

- If digoxin toxicity is suspected administer **MAG SULFATE 2 g IV/IO diluted in 10 ml NS** over 5 minutes



**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

ADULT HEAT EMERGENCIES

HEAT CRAMPS OR TETANY

BLS/ALS

1. **Initial Trauma Care SOP, p. 60-61**
2. Move patient to a cool environment. **DO NOT** massage cramped muscles.
3. If patient awake, alert, and has intact gag reflex, may give oral fluids.

HEAT EXHAUSTION / HEAT STROKE

BLS/ALS

1. Remove as much clothing as possible to facilitate cooling.
2. Initiate rapid cooling:
 - Cold packs to lateral chest wall, groin, axilla, carotid arteries, temples, behind knees
 - Sponge or mist with cool water and fan, or cover body with wet sheet and fan body
 - Discontinue cooling if shivering occurs
3. Check blood glucose level if available. If < 60, treat per **ADULT DIABETIC / GLUCOSE EMERGENCIES, p. 29**

ALS

4. **IV FLUID BOLUS in 200 mL increments**
5. If seizures occur, refer to **ADULT SEIZURES / STATUS EPILEPTICUS, p. 32**

NOTE:

- Warmed fluids should be avoided when administering normal saline

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

**ADULT COLD EMERGENCIES
Frostbite and Hypothermia**

BLS/ALS

1. Initial Trauma Care SOP, p. 60-61

FROSTBITE:

2. Rapidly rewarm frozen areas with tepid water. Hot packs wrapped in a towel may be used. **DO NOT RUB. DO NOT** thaw if there is a chance of refreezing.
3. HANDLE SKIN LIKE A BURN. Protect with light, dry sterile dressings. Do not let affected skin surfaces rub together.
4. If in pain and systolic BP > 100 mmHg, administer:

FENTANYL (Preferred)	KETAMINE
< 65 years of age	
1 mcg/kg SLOW IV OR IM/IO/IN, max first dose 100 mcg. Repeat dose 0.5 mcg/kg SLOW IV OR IM/IO/IN in 5 min, max repeat dose 50 mcg.	0.1 mg kg SLOW IV/IO. Repeat dose 0.05 mg/kg SLOW IV/IO
≥ 65 years of age	
0.5 mcg/kg SLOW IV OR IM/IO/IN, max dose 50 mcg. Repeat dose 0.25 mcg/kg SLOW IV OR IM/IO/IN in 5 min, max repeat dose 25 mcg.	No dose for 65 years of age or older

MILD / MODERATE HYPOTHERMIA: conscious or altered sensorium, shivering

BLS/ALS

2. Check blood glucose level if available. If < 60, treat per **ADULT DIABETIC / GLUCOSE EMERGENCIES, p. 29**
3. Rewarm patient:
 - Place patient in a warm environment. Remove wet clothing.
 - Apply hot packs, wrapped in towels to axilla, groin, neck, thorax. Wrap patient in blankets.

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**ADULT COLD EMERGENCIES
Frostbite and Hypothermia**

SEVERE HYPOTHERMIA: Poor muscle control or rigidity, simulating rigor mortis. There will be **no shivering**. **Sensorium** - confused, withdrawn, disoriented or comatose.

BLS/ALS

◆ **TRIPLE ZERO CANNOT BE CONFIRMED IN THE FIELD ON THESE PATIENTS**

2. Check pulse for 30-60 seconds. Anticipate bradycardia.
3. Begin **CPR** if pulseless.

ALS:

4. If defibrillation indicated by rhythm, **DEFIBRILLATE** at 360 J (or initial biphasic shock at recommended energy) **x 1 only and resume CPR**.
 - Subsequent defibrillation attempts, and all medications, should be delayed until core temperature has been raised to $\geq 86^{\circ}$ F by active rewarming
5. **ALS: Maintain adequate ventilation, if needed place advanced airway**
6. **ALS: Establish vascular access IV/IO.**
7. Transport patient in supine position, very gently to avoid precipitating VF.

NOTE:

- ETCO₂ readings may be low due to decreased metabolic activity.
- Warm fluid should be used if available

**Illinois Region 8 Emergency Medical Services
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ADULT BEHAVIORAL EMERGENCIES

BLS/ALS

1. Assess **SCENE AND PERSONAL SAFETY**. Call law enforcement personnel to scene, if needed. Above all, **DO NOTHING TO JEOPARDIZE YOUR OWN SAFETY**.
2. **Adult Initial Medical Care SOP, p. 4-5**, as situation warrants.
 - Determine and document if patient is a threat to self or others, or if patient is unable to care or provide for self. Do not leave patient alone.
 - Protect patients from harm to self or others.
 - ALS may be waived in favor of basic transport, if patient is uncooperative or dangerous.
3. Verbally attempt to calm and reorient the patient to reality as able. Do not participate in patient delusions or hallucinations.
4. If patient is combative, use restraints as necessary per System-specific policy.
5. Consider medical etiologies of behavior disorder and treat according to appropriate SOP:
 - Hypotension
 - Hypoxia
 - Substance abuse/Overdose
 - Neurologic disease (stroke, intracerebral bleed, head injury, etc.)
 - Metabolic imbalance (hypoglycemia, thyroid disease, etc.)
 - Seizure/Postictal
6. Consult Medical Control from the scene in **ALL** instances where refusal of transport is being considered.

ALS

7. For severe anxiety or agitation:
 - Administer **VERSED** (midazolam) **2 mg increments IV** q 2 minutes up to 10 mg total as necessary.
 - May administer **VERSED** (midazolam) **IM** if unable to start IV
 - ◆ **< 70 kg = 2.5 mg IM**
 - ◆ **≥ 70 kg = 5 mg IM**
8. For excited delirium (patients with aggression, hyperthermia, violence):
 - Administer **KETAMINE 4 mg/kg IM**

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**REGION 8 TRAUMA CENTER SYSTEM
FIELD TRIAGE GUIDELINES**

**★ TIME
SENSITIVE**

General Guidelines

It is **MANDATORY** for Medical Control to notify the Trauma Surgeon immediately upon receiving the field report, if one of the following conditions exist:

- **Sustained hypotension on two consecutive measurements five minutes apart**
 - **Adult systolic BP \leq 90 mmHg or lack of a radial pulse**
 - **Pediatric systolic SBP \leq 70+(age in years x 2)**
- **Cavity penetration of torso or neck**

The following patients or those who in the opinion of the American College of Surgeons Committee on Trauma are known to have an increased mortality/morbidity, if not treated at a Trauma Center. They should, therefore, be classified as trauma patients. These patients require transport to the nearest Trauma Center.

The decision to use aeromedical evacuation must be approved by Medical Control.

Conditions that are marked with a star (★) and in **bold letters** in the following criteria should be **considered** for direct bypass to a Level I Trauma Center. If the transport time to a Level I is greater than 25 minutes, the patient should go to a Level II Trauma Center.

Any patient meeting the criteria for consideration of direct bypass to a Level I Trauma Center should be considered **TIME-SENSITIVE**. **Contact Medical Control at the initial point of contact, as soon as a clinical impression has been formed from assessment findings.**

Patients being bypassed to a Trauma Center need to have an adequate airway (i.e. respirations 12-35 per minute, intubated, cricothyroidotomy). If an airway cannot be established, the patient should be taken to the closest comprehensive Emergency Department.

EMS providers should notify Medical Control ASAP if the need for specialty services exists.

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**REGION 8 TRAUMA CENTER SYSTEM
FIELD TRIAGE GUIDELINES**

**★ TIME
SENSITIVE**

- I. Physiologic Factors
 - A. Adult Trauma Score of 9 or less
 - B. Airway difficulties requiring intubation or other interventions at the scene.
 - C. Trauma with altered respiratory rate (< 12 or > 35 per minute)
 - D. Any multiple trauma patient with signs of hypoperfusion

- II. Anatomic Factors
 - A. Head, face, and eye
 - ★ 1. **HEAD INJURY WITH PERSISTENT UNCONSCIOUSNESS OR FOCAL SIGNS (i.e. SEIZURES, POSTURING, UNABLE TO RESPOND TO SIMPLE COMMANDS)**
 - ★ 2. **PENETRATING INJURY TO THE NECK**
 - 3. Head injury with loss of consciousness or Glasgow Coma Scale score of ≤ 10
 - 4. Traumatic and chemical eye injuries
 - 5. Maxillofacial trauma

 - B. Chest
 - ★ 1. **GUNSHOT WOUND OR OTHER PENETRATING INJURY TO THE CHEST**
 - 2. Blunt chest trauma (significant pain and/or obvious external signs).
 - 3. Flail chest and unstable chest wall

 - C. Abdomen
 - ★ 1. **GUNSHOT WOUND TO THE ABDOMEN**
 - ★ 2. **OTHER PENETRATING INJURY TO THE ABDOMEN, GROIN OR BUTTOCKS**
 - 3. Blunt abdominal trauma (significant pain and/or obvious external signs)

 - D. Spinal Cord
 - ★ 1. **SPINAL CORD INJURY WITH PARALYSIS, PARESTHESIA OF EXTREMITIES AND/OR SENSORY LOSS**
 - 2. Any suspected spinal cord injury in the absence of neurological deficit

 - E. Extremities.
 - ★ 1. **EXTREMITY TRAUMA: MANGLED, CRUSHED, OR DEGLOVED WITH NEUROVASCULAR COMPROMISE**
 - ★ 2. **TRAUMATIC AMPUTATION PROXIMAL TO THE WRIST OR ANKLE**
 - 3. Limb paralysis and/or sensory deficit proximal to the wrist
 - 4. Multiple orthopedic injuries (> 1 long bone fracture)

- III. Deceleration Injury
 - A. High energy dissipation / rapid deceleration with blunt chest or abdominal injury
 - B. Falls ≥ 20 feet with the adult patient
 - C. Falls ≥ 3 times the height of a pediatric patient

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**REGION 8 TRAUMA CENTER SYSTEM
FIELD TRIAGE GUIDELINES**

**★ TIME
SENSITIVE**

IV. Motor Vehicle Crashes

- A. Extrication time \geq 20 minutes
- B. Vehicle passenger space invaded by \geq 12 inches
- C. Ejection
- D. Fatality at the scene within the same motor vehicle
- E. Rollover \geq 180° spin
- F. Child \leq 15 years struck by car
- G. Child \leq 8 years old involved in any MVC without age-appropriate restraint (under age 4 or **< 40 pounds** requires a car seat)
- H. Motorcycle crash $>$ 20 MPH with separation of rider from bike

V. Major Burns

- A. 10% total body surface area of 2nd and 3rd degree burns
- B. Any burn patient with obvious head, neck, or airway involvement

VI. Pediatric Trauma with one or more of the following:

- ★ A. **HEAD TRAUMA WITH PERSISTENT ALTERED LEVEL OF CONSCIOUSNESS**
- ★ B. **OBVIOUS CHEST OR ABDOMINAL TRAUMA, EITHER PENETRATING OR BLUNT**
- C. Pediatric Trauma Score of \leq 8
- D. Child \leq 15 years old, struck by motor vehicle
- E. Child involved in an MVC not appropriately restrained
 - Rear-facing seat from birth to 2 years old or up to **20 lbs**
 - Forward-facing toddler seat from 2 - 4 years or up to **65 lbs**
 - Booster seat from 4 - 8 years or up to 4' 9" tall
 - Safety belts from 8 - 15 years or at least 4'9" tall

VII. Pregnant Trauma Patients

- A. The pregnant patient \geq 20 weeks gestation
- B. Pregnant patient who meets any other trauma criteria

VIII. Blunt and Penetrating Traumatic Arrests are at the discretion of Medical Control

- A. Blunt traumatic arrest patients: **may consider** withholding resuscitative efforts. Refer to **WITHHOLDING OR WITHDRAWING RESUSCITATIVE EFFORTS SOP, P. 12**

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MULTIPLE VICTIM INCIDENT (MVI)

A multiple patient incident exists when:

- responding EMS providers can mitigate life-threats using standard operating procedures, **and**
- the responding EMS agency is able to acquire adequate numbers of responders and ambulances to provide normal levels of care and transportation, **and**
- hospitals that can be reached within the normally accepted transport time can provide adequate patient stabilization until definitive care can be provided. This may require receiving hospitals to activate their internal disaster plans, even though it is not necessary to implement the mass casualty response in the field.

Practical application:

- No triage tags necessary (but may be used)
- Ambulance transport as usual
- Medical Control radio contact by each transporting ambulance as usual
- Patient Care Reports to be completed as usual

1. First EMS Unit on scene:

- One responder begins scene size-up and calls for additional resources
- Other responder(s) begin(s) primary triage using the START or JumpSTART triage process
- Initial contact with Medical Control at the closest hospital and report the nature of the incident and potential number of victims per System-specific policy.

2. Scene command decision:

- Begin transport of 2 of the most critical (red) patients to each of the nearest hospitals (adhering to trauma triage criteria for Level I and II transports) to help clear the scene.
- Transporting EMS providers shall contact the receiving hospital for on-line Medical Control.

3. Remaining patient disposition:

- **Joint decision with Medical Control:** When the number of ill or injured persons exceeds the transport of 2 (of the most critical) patients to each of the nearest hospitals, contact the closest Resource Hospital to coordinate remaining patient distribution. Inform them about the nature of the incident, the number of patients and their acuity levels.
 - ◆ The hospital will assess receiving hospital status and relay receiving availability to scene.
 - ◆ Make all attempts to evenly distribute remaining patients to local hospitals; do not overburden one facility.
 - ◆ While it is preferable to keep families together, it is not always in the best interest of patient care to do so.
 - ◆ The hospitals will consider time of day, hospital resources available, patient acuity and trauma triage criteria in determining patient destinations.
 - ◆ Follow System-specific policy regarding contact of EMS Medical Director and/or EMS System Coordinator.

4. Complete a patient care report on each patient transported.

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MASS CASUALTY INCIDENTS / DISASTERS (MCI)

Mass Casualty Incidents in Region VIII are governed by MABAS Divisions and County or System Mass Casualty Plans. Roles will vary. It is recommended that at least the following are designated for EMS purposes: Triage, Treatment and Transportation Groups.

A mass casualty incident exists when the:

- number of patients and the nature of their injuries make the normal prehospital level of stabilization and care unachievable; **and/or**
- resources that can be brought to the field within primary and secondary response times are insufficient to manage the scene under normal operating procedures; **and/or**
- stabilization capabilities of area hospitals are insufficient to handle all the patients.

Practical application:

- Triage tags are to be used on all patients
- May transport more than one BLS patient in each ambulance
- No radio reports to hospitals; treat per SOPs
- No individual run reports necessary

1. First EMS unit on scene establishes temporary scene command:

- One responder begins scene size up and calls for additional resources
- Other responder(s) begin(s) primary triage using START or JumpSTART and SMART Tag™ systems

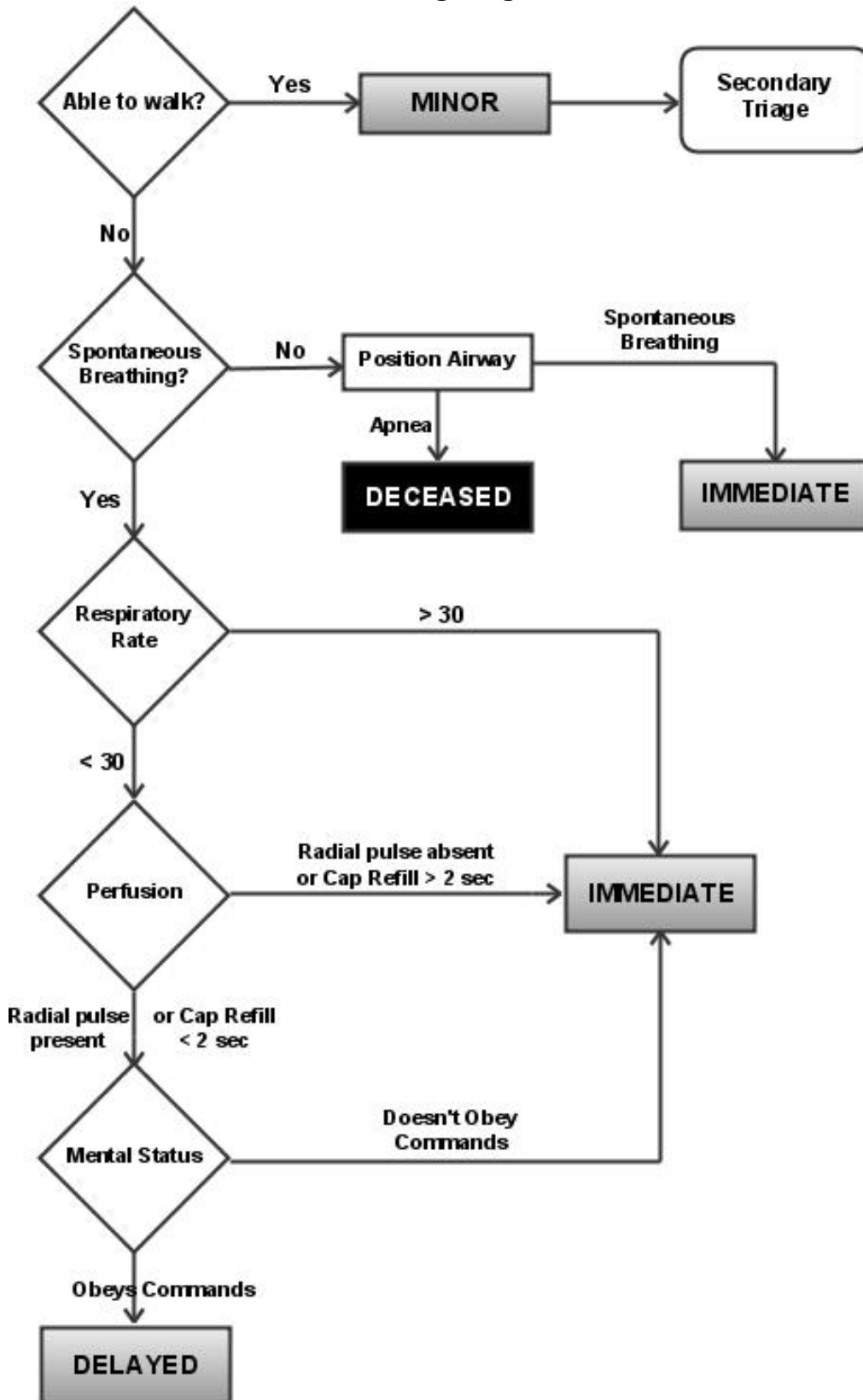
2. Scene command / Joint decisions with Medical Control:

- Call Resource Hospital from scene.
 - ◆ Relay nature of incident; number of victims; general acuity; age groups, special needs and estimated time of arrival.
 - ◆ Maintain communications with hospital once established.
 - ◆ Keep line open for updates.
- Resource Hospital shall assess receiving hospital status and relay receiving availability to scene.
- Transportation officer should determine hospital destinations based on time of day, hospital resources available, and patient acuity.
 - ◆ Make all attempts to evenly distribute remaining patients to area hospitals; do not overburden one facility.
 - ◆ This may mean transports of longer than 25 minutes depending on patient volume.
 - ◆ Preferable, but not necessary, to keep families together.
 - ◆ Trauma triage criteria to Level I and Level II trauma centers no longer apply.

- 3. Depending on the nature and magnitude of an incident, the EMS Medical Director or State Medical Director may suspend all EMS operations as usual and direct that all care be conducted by SOP and/or using personnel and resources as available.**

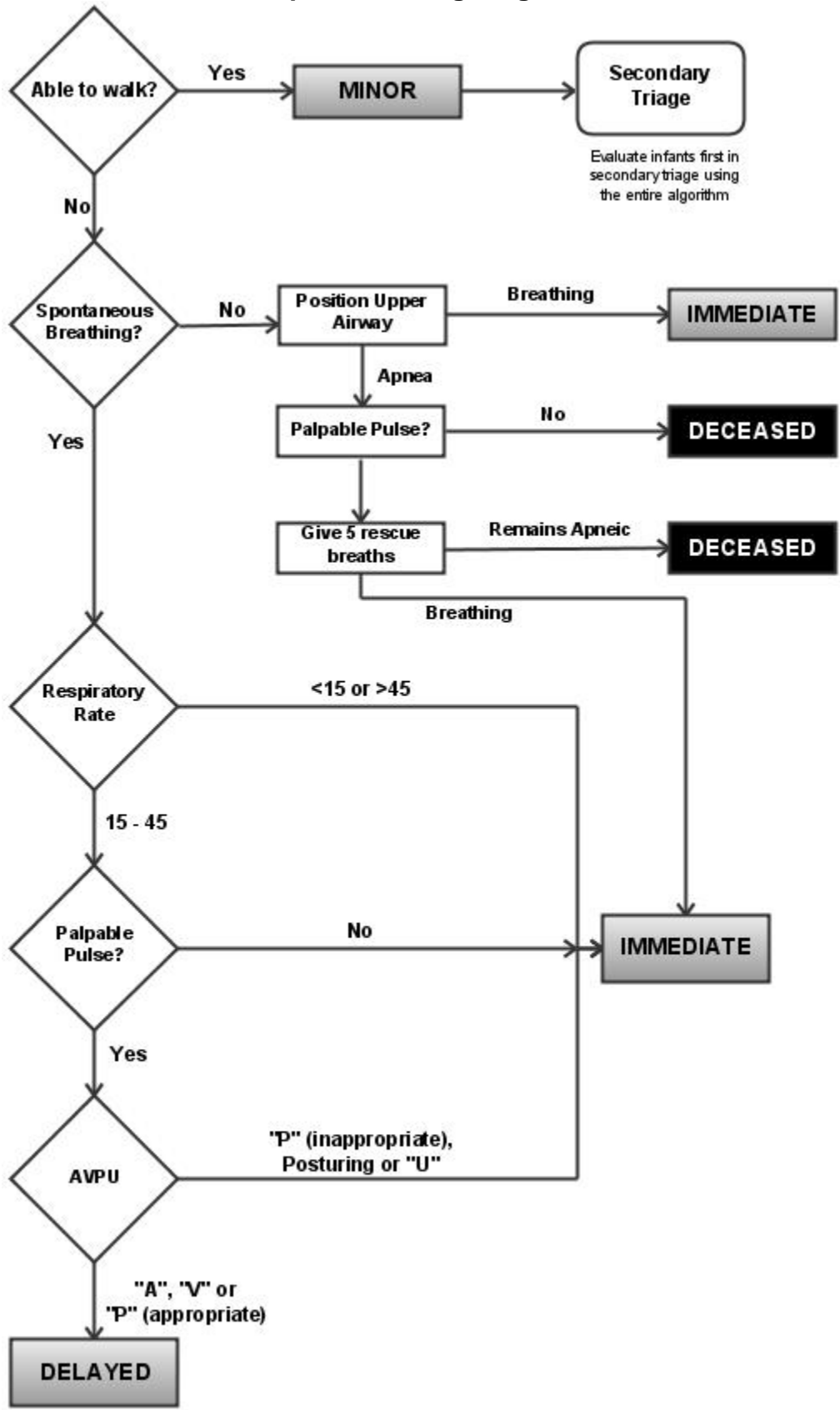
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START Triage Algorithm



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JumpSTART Triage Algorithm



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SPECIALTY TRANSPORT

BLS/ALS

GENERAL CONSIDERATION

1. In appropriate situations, EMS providers may request from Medical Control the dispatch of specialty transportation services (helicopter or hospital-based ground units) to the scene of a prehospital emergency in accordance with the following criteria:
 - The patient meets trauma center criteria and transport time by the specialized unit to the desired center is less than a EMS providers transport time

OR

 - Benefits to the patient due to the increased level of expertise of the specialized unit staff outweigh increased transport times
2. If EMS providers conclude that specialty transport services are necessary, the provider agency may contact the specialty service and place the unit on standby prior to contacting Medical Control.
 - A prolonged extrication alone is not sufficient reason to call a specialty transport service. Serious injuries must accompany prolonged extrication.
 - At no time shall a patient be transported from the scene via specialty service without authorization from Medical Control.
3. Assess the need for specialty transport services based upon:
 - Patient history
 - The course of events (mechanism of injury, extrication times, etc.)
 - The patient's condition as assessed at the scene
 - Current local traffic patterns
 - Weather conditions
4. Follow SOPs in providing care until the arrival of the specialty transport unit
5. Medical Control will establish a prioritized listing of specialty transport services available in their geographic area

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SPECIALTY TRANSPORT

BLS/ALS

REQUESTING SPECIALTY TRANSPORT

SPECIALTY TRANSPORT CONSIDERATIONS:

If the EMS provider feels the patient would benefit from specialty transport services, the EMS provider should:

1. Request for specialty transport to be placed on standby.
2. Contact Medical Control. Relay the following information:
 - History of event
 - Patient's vital signs and present condition
 - Reason for requesting specialty transport
 - Name and whether or not the specialty service has been placed on standby
3. Medical Control shall make the decision authorizing specialty transport and the receiving facility.
4. If the specialty unit is approved, the most common mechanism is for the EMS provider to communicate directly with the specialty provider. If Medical Control is handling the relay of information, be prepared to relay the following information:
 - a. number of patients
 - b. type and extent of injuries
 - c. vital signs and pertinent history
 - d. proposed landing site/scene location
 - e. unusual circumstances, e.g. hazardous materials

Region VIII Critical Care Vehicle Service Providers

Aeromedical

Air Methods LifeStar 1-866-480-6030

Ground Critical Care

**Advanced Critical Transport (ACT) 708-387-0817
Edward Ambulance 630-646-3000
Good Samaritan STT 1-800-URGENT 5**

Bariatric

**Advanced Critical Transport (ACT) 708-387-0817 (BLS only)
Edward Ambulance 630-646-3000
Loyola Medicine Transport 844-381-2620**

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ADULT INITIAL TRAUMA CARE

BLS/ALS

SCENE SIZE UP

- **Assess and secure scene safety.**
- Use standard precautions on all patients.
- If indicated, follow department HazMat protocols
- If a potential crime scene, make efforts to preserve integrity of possible evidence
- Anticipate potential injuries based on the mechanism of energy transfer

INITIAL ASSESSMENT:

1. **AIRWAY/C-SPINE:** Consider **Spinal Motion Restriction**. Position airway and suction as needed. Advanced airway procedures as indicated. If unable to secure by other means, consider **CRICOTHYROIDOTOMY**.
2. **BREATHING/VENTILATION:** Assess ventilation and oxygenation; expose chest as needed.
 - Auscultate breath sounds
 - Consider need for supplemental oxygen, especially for patients with dyspnea, suspected hypoxemia or altered mental status
 - ◆ Evaluate oxygen saturation if pulse oximetry available
 - ◆ Target SpO₂ 94-98% (92% if hx of COPD)

Respiratory Assessment / Findings	Oxygen Administration
Adequate rate/depth, minimal distress, mild hypoxia, baseline SpO ₂ 92-94% (88-91% COPD)	Low FiO ₂
Adequate rate/depth, moderate/severe distress, SpO ₂ < 92% (< 88% COPD)	High FiO ₂
Inadequate rate/depth with moderate/severe distress, unstable	High FiO ₂ by BVM ventilation

- ◆ Hyperoxia contraindicated in uncomplicated myocardial infarction / STEMI, post-cardiac arrest, acute exacerbations of COPD, stroke, newly born / neonatal resuscitation. If supplemental oxygen is used in these patients, the goal is to relieve hypoxemia without causing hyperoxia (target SpO₂ 94%, not 100%).
 - **ALS:** refer to **DRUG ASSISTED INTUBATION – KETAMINE SOP, p. 25**, if needed
 - **ALS:** if **tension pneumothorax**, perform **PLEURAL DECOMPRESSION** of affected side
3. **CIRCULATION:** assess cardiovascular status.
 - If no carotid pulse, follow **ADULT TRAUMATIC ARREST SOP, p. 67**
 - Control all external hemorrhage
 - ◆ For severe hemorrhage, apply **TOURNIQUET** for extremity injury and/or **HEMOSTATIC GAUZE** (if available) **with direct pressure**; do not release tourniquet or remove dressings once applied, note time applied
 - **ALS: Obtain VASCULAR ACCESS.** Infusion rate as follows:
 - ◆ **Inadequate perfusion** (altered mental status or signs of hypoperfusion): Attempt vascular access (large bore IV or IO if the patient meets all other criteria) enroute. Titrate IV fluid for a SBP of 90 mmHG (unless S/S of herniation are present, then SBP target of 110 should be attempted). Use warm fluids unless hyperthermic

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ADULT INITIAL TRAUMA CARE

- ◆ **Adequate perfusion:** Attempt IV enroute. Titrate fluid volume to patient condition.
- **Monitor ECG** as appropriate
 - ◆ 12-Lead in chest injuries and electrical injuries / burns
- Place a pelvic stabilizing device for suspected pelvic instability.

4. **DISABILITY/MINI-NEUROLOGICAL EXAM:** Assess AVPU along with Glasgow Coma Scale and evaluate neurological function

ALS

- If GCS score ≤ 8 , see **ADULT HEAD INJURIES SOP, p. 63**
- **No neurological impairment:** Reassess periodically and document changes
- **Altered Mental Status:** Seizure and vomiting precautions. Check glucose level. If glucose < 60 , treat per **ADULT DIABETIC EMERGENCIES SOP, p. 29**

BLS/ALS

5. Expose and examine as indicated. Consider potential injuries based on mechanism of injury.
6. Identify priority transport.
7. **Spine Motion Restriction** as indicated.
8. Assess pain score on a scale from 0-10. Treat pain per appropriate SOP.

TRANSPORT DECISION: Once the initial assessment and resuscitative interventions are initiated, a decision must be made whether to continue with the rapid trauma survey and the need for additional interventions on scene, or to transport rapidly with interventions enroute. Document the patient condition(s) or behavior(s) that necessitated this decision.

Transport to closest appropriate facility per TRAUMA REGION FIELD TRIAGE GUIDELINES, p. 51

RAPID TRAUMA SURVEY (as allowed by time and patient condition)

1. Systematic head-to-toe assessment
2. SAMPLE history
3. Recheck and record vital signs and patient condition at least q 15 minutes as able, and after each ALS intervention. For unstable patients, more frequent reassessment may be needed. Note the time obtained.

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ADULT GLASGOW COMA SCALE		
EYE OPENING	Spontaneous	4
	To voice	3
	To pain	2
	None	1
VERBAL RESPONSE	Oriented	5
	Confused speech	4
	Inappropriate words	3
	Incomprehensible sounds	2
	None	1
MOTOR RESPONSE	Obeys commands	6
	Localizes pain	5
	Withdraws to pain	4
	Abnormal flexion to pain	3
	Abnormal extension	2
	None	1
TOTAL GLASGOW COMA SCALE SCORE: (3-15)		

ADULT REVISED TRAUMA SCORE		
Glasgow Coma Score Conversion Points	GCS 13-15	4
	GCS 9-12	3
	GCS 6-8	2
	GCS 4-5	1
	GCS 3	0
Respiratory Rate	10-29	4
	> 29	3
	6-9	2
	1-5	1
	0	0
Systolic Blood Pressure	> 89	4
	76-89	3
	50-75	2
	1-49	1
	0	0
TOTAL REVISED TRAUMA SCORE: (0-12)		

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ADULT HEAD INJURIES

BLS/ALS

1. Adult Initial Trauma Care SOP, p. 60-61

- Assure adequacy of ventilation
- **ADULT SPINE MOTION RESTRICTION p. 65**
- Keep patient flat
- Take vomiting and seizure precautions
- Assess Glasgow Coma Scale (GCS) score
- Identify deficits
- Obtain and record blood glucose level, if available. If glucose < 60, treat per **ADULT DIABETIC / GLUCOSE EMERGENCIES, p. 29**

2. Begin expeditious transport and contact Medical Control enroute

Altered Mental Status

ALS

- 3. If GCS score \leq 8, maintain adequate ventilation, if needed place advanced airway using in-line procedure. Refer to **ADULT DRUG ASSISTED INTUBATION – KETAMINE SOP, p. 25**, if indicated. If unable to INTUBATE, consider use of **ALTERNATE AIRWAY DEVICE**.**
- 4. If signs or symptoms of herniation are present (HTN, bradycardia, posturing) ventilate with a target ETCO₂ of 30 mmHg. Elevate head of backboard 20-30 degrees unless unsafe to do so.**
- 5. If seizure activity, treat per **ADULT SEIZURES / STATUS EPILEPTICUS, p. 32****
- 6. For the combative patient, consider **VERSED** (midazolam) **2 mg increments IV q 2 minutes** up to 10 mg total as necessary.**
- May administer **VERSED** (midazolam) **IM** if unable to start IV
 - ◆ **< 70 kg = 2.5 mg IM**
 - ◆ **≥ 70 kg = 5 mg IM**

ADULT SPINE INJURIES

BLS/ALS

1. **Adult Initial Trauma Care SOP, p. 60-61**
 - **ADULT SPINE MOTION RESTRICTION p. 65**
 - Keep patient flat
 - Take vomiting and seizure precautions
 - Glasgow Coma Scale (GCS) score
 - Obtain and record blood glucose level, if available. If glucose < 60, treat per **ADULT DIABETIC / GLUCOSE EMERGENCIES, p. 29**
2. Mark on patient where sensation is lost and note time.

ALS

If signs of hypoperfusion (consider neurogenic shock):

3. **Systolic BP < 90 mmHg**
 - **IV FLUID BOLUS in 200 mL increments as needed up to 2 L**

If hypoperfusion continues with bradycardia:

4. **Continue IV fluids and administer DOPAMINE IV/IO piggyback 5-20 mcg/kg/min** titrated for patient condition.

Altered Mental Status

5. If GCS score \leq 8, **maintain adequate ventilation, if needed place advanced airway** using in-line procedure. Refer to **ADULT DRUG ASSISTED INTUBATION – KETAMINE SOP, p. 25**, if indicated. If unable to INTUBATE, consider use of **ALTERNATE AIRWAY DEVICE**.
6. If seizure activity, treat per **ADULT SEIZURES / STATUS EPILEPTICUS, p. 32**

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ADULT SPINE MOTION RESTRICTION

1. Apply cervical collar if point spine tenderness / anatomical abnormality is noted, or any of the following exist:



NOTE: If following this SOP would jeopardize crew or patient safety, follow to the best of the crews ability and document reasons why steps could not be completed.

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ADULT CHEST INJURIES

BLS/ALS

1. **Adult Initial Trauma Care SOP, p. 60-61**
 - **HIGH FiO₂ or VENTILATION**
2. Begin expeditious transport to appropriate facility and contact Medical Control enroute

SUCKING CHEST WOUND/OPEN PNEUMOTHORAX

3. Apply occlusive dressing / chest seal per System-specific procedure
4. If patient deteriorates, remove dressing temporarily to allow air to escape
5. **ALS**: Consider intubation, **do NOT place patient on CPAP**

FLAIL CHEST

3. If respiratory distress, appropriately **VENTILATE WITH HIGH FIO₂ VIA BVM** to provide internal splinting.
4. **ALS**: Consider intubation, **do NOT place patient on CPAP**

TENSION PNEUMOTHORAX

3. Suspect when patient presents with severe respiratory distress or difficulty ventilating, with any of the following: hypotension, distended neck veins, absent breath sounds on the involved side, and/or tracheal deviation.
4. **ALS**: **PLEURAL DECOMPRESSION of affected side**, per System-specific procedure
5. Assess for PEA. If present, refer to **ADULT ASYSTOLE / PEA SOP, p. 20**

PERICARDIAL TAMPONADE

3. Large bore **IV** access, **IV NS 200 ml NS boluses titrated for a SBP of 90 mmHg.**
4. If cardiac arrest occurs, treat per appropriate SOP

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ADULT TRAUMATIC ARREST

BLS/ALS

1. **If obviously dead, consider referring to Withholding or Withdrawal of Resuscitative Efforts SOP, p. 9**
2. If injury is incompatible with life (e.g. massive brain matter visible), contact Medical Control for possible scene pronouncement.

ALS

3. If patient experiences loss of pulses under direct paramedic observation during transport:
 - **Adult Initial Trauma Care SOP, p. 60-61**
 - **BILATERAL PLEURAL DECOMPRESSION**
 - Consider appropriate cardiac arrest SOP
 - Verify tube placement if intubated

Note: After Spine Motion Restriction and airway control is established, procedures are to be performed enroute.

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ADULT OPHTHALMIC EMERGENCIES

GENERAL APPROACH

BLS/ALS

1. Adult Initial Trauma Care SOP, p. 60-61

- Assess pain on a 0-10 scale
- Quickly obtain gross visual acuity in each eye: light perception, motion, acuity
- Discourage patient from sneezing, coughing, straining or bending at the waist
- Elevate head of cot or backboard Semi-Fowler's position unless contraindicated
- Vomiting precautions

ALS

2. If patient is in pain and systolic BP > 100 mmHg, administer:

FENTANYL (Preferred)	KETAMINE
< 65 years of age	
1 mcg/kg SLOW IV OR IM/IO/IN, max first dose 100 mcg. Repeat dose 0.5 mcg/kg SLOW IV OR IM/IO/IN in 5 min, max repeat dose 50 mcg.	0.1 mg kg SLOW IV/IO. Repeat dose 0.05 mg/kg SLOW IV/IO
≥ 65 years of age	
0.5 mcg/kg SLOW IV OR IM/IO/IN, max dose 50 mcg. Repeat dose 0.25 mcg/kg SLOW IV OR IM/IO/IN in 5 min, max repeat dose 25 mcg.	No dose for 65 years of age or older

CHEMICAL SPLASH/BURN

2. **BLS/ALS**: Immediately irrigate affected eye(s) using copious amounts of normal saline. Continue irrigation while enroute to hospital.
3. **ALS**: Instill **0.5% TETRACAINE 1 drop** in each affected eye. May repeat until pain relief achieved.
4. **ALS**: Irrigate per appropriate System-specific procedure.

SUSPECTED CORNEAL ABRASIONS

2. **ALS**: Instill **0.5% TETRACAINE 1 drop** in each affected eye. May repeat until pain relief achieved.
3. Patch affected eye(s).

PENETRATING INJURY/RUPTURED GLOBE

2. **Do not** remove impaled objects; **do not** irrigate or instill tetracaine.
3. Avoid any pressure on the injured eye(s). Cover with cup, or metal or plastic protective shield.
4. Patch unaffected eye.

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ADULT BURN INJURIES

BLS/ALS

1. **Adult Initial Trauma Care SOP, p. 60-61**
2. **Unresponsive patients found at the scene of a fire, consider cyanide poisoning.** Refer to **ADULT TOXICOLOGIC EMERGENCIES SOP, p. 36-39**
3. Evaluate depth of burn and estimate extent using rule of nines or palm method (patient's palm equals 1% BSA). Assess need for transport to Burn Center.
4. Ensure burning process has stopped

ALS

5. If patient is in pain and systolic BP > 100 mmHg, administer:

FENTANYL (Preferred)	KETAMINE
< 65 years of age	
1 mcg/kg SLOW IV OR IM/IO/IN, max first dose 100 mcg. May repeat dose 0.5 mcg/kg SLOW IV OR IM/IO/IN in 5 min, max repeat dose 50 mcg.	0.1 mg kg SLOW IV/IO. Repeat dose 0.05 mg/kg SLOW IV/IO
≥ 65 years of age	
0.5 mcg/kg SLOW IV OR IM/IO/IN, max dose 50 mcg. May repeat dose 0.25 mcg/kg SLOW IV OR IM/IO/IN in 5 min, max repeat dose 25 mcg.	No dose for 65 years of age or older

6. Consider aggressive fluid resuscitation per Parkland Formula (4 ml x kg x % BSA burned = amount IV fluid delivered in first 24 hour period. Half of the amount to be infused over first 8 hours, other half to be infused over last 16 hours).

THERMAL BURNS

5. **If burned area ≤ 10% TBSA:**
 - Cool burned area for no longer than five minutes with water or saline, if burn occurred within 15 minutes. **Wet dressing may be applied for local pain relief.**
6. Wear gloves and mask until burn wounds are covered.
7. **DO NOT** break blisters. **If > 10% TBSA affected**, cover burn with DRY, sterile dressings.
8. Open dry sheet on stretcher before placing patient for transport. Cover patient with dry sheets and blanket to maintain body temperature.

INHALATION BURNS

5. Note presence of wheezing, hoarseness, stridor, carbonaceous (black) sputum / cough, singed nasal hair / eyebrows / eyelashes.
6. Monitor ET/CO₂ waveform (if available)

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ADULT BURN INJURIES

7. HIGH FiO₂ or VENTILATION

ALS

8. Consider **INTUBATION** if severe respiratory distress. If intubation unsuccessful, consider **CRICOTHYROIDOTOMY**.
9. If wheezing, consider **ALBUTEROL 2.5 mg (3 mL) via nebulizer**. May repeat x 1.

ELECTRICAL BURNS

4. **Spine Motion Restriction p. 65** as indicated

ALS

5. Assess ECG for dysrhythmias and treat according to appropriate SOP
6. Assess for wounds, including neurovascular status
7. Cover wounds with dry sterile dressing (cooling not necessary)

CHEMICAL BURNS

4. HazMat precautions
5. If powdered chemical, brush away excess. Remove clothing, if possible.
6. Irrigate with copious amounts of sterile water or NS ASAP and while enroute.
7. Transport information from MSDS/SDS if available

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EMD (TASER) WEAPONS INJURIES

BLS/ALS

This SOP is to be used for patients who have been subdued by the use of any electromuscular disruption (EMD) weapon (i.e. TASER®)

1. **Assess scene and personal safety.** Obtain baseline behavior from PD / LEO prior to EMD (i.e. TASER®) event
2. **Adult Initial Trauma Care SOP, p. 60-61**
 - Assess for injury and/or altered mental status and treat per appropriate SOP.
 - Obtain baseline vital signs.
 - ◆ If ALS, include ECG monitoring for cardiac abnormalities
 - ◆ If ALS and patient > 35 years of age, consider 12-lead ECG.
 - Identify location of probes on the patient's body. Evaluate depth of skin penetration.
3. **If darts are embedded in any of the following areas, stabilize in place and transport patient:**
 - lid/globe of the eye
 - face or neck
 - genitalia
 - bony prominence
 - spinal column
4. If darts are found to be superficially embedded in other locations, they may be removed as follows:
 - Place one hand on the patient where the dart is embedded to stabilize the skin surrounding the puncture site.
 - Firmly grasp the probe with your other hand.
 - Remove by gently pulling the dart straight out along the same plane it entered the body.
 - Assure that the dart is intact
 - Repeat procedure with second dart, if embedded.
 - Return the darts to law enforcement officials, utilizing standard precautions.
5. Control minor hemorrhage and cleanse the wound area with normal saline.
6. If indicated, cover wound area with a dry dressing.
7. Transport decision:
 - Transport decisions regarding patients subdued by EMD weapons should be based on patient condition.
 - If the patient has not had a tetanus immunization in the last five years, they should be advised to get one.

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ADULT MUSCULOSKELETAL INJURIES

BLS/ALS

1. **Adult Initial Trauma Care SOP, p. 60-61**
2. **ALS:** Consider analgesia, if patient SBP > 100 mmHg
 - **NITROUS OXIDE** per System-specific policy for MILD pain
 - **For SEVERE pain:**

FENTANYL (Preferred)	KETAMINE
< 65 years of age	
1 mcg/kg SLOW IV OR IM/IO/IN, max first dose 100 mcg. Repeat dose 0.5 mcg/kg SLOW IV OR IM/IO/IN in 5 min, max repeat dose 50 mcg.	0.1 mg kg SLOW IV/IO. Repeat dose 0.05 mg/kg SLOW IV/IO
≥ 65 years of age	
0.5 mcg/kg SLOW IV OR IM/IO/IN, max dose 50 mcg. Repeat dose 0.25 mcg/kg SLOW IV OR IM/IO/IN in 5 min, max repeat dose 25 mcg.	No dose of 65 years of age or older

3. Splint or immobilize injuries as indicated. If pulses are lost after applying a traction splint, leave splint in place. Do not release traction. Notify Medical Control of change in status.
4. Elevate extremity and or apply cold pack after splinting when appropriate.
5. **ALS:** If long bone fracture with displacement/muscle spasm, and hemodynamically stable, consider **VERSED** (midazolam) **2 mg increments IV/IM/IN** q 2 minutes up to 10 mg total as necessary.

AMPUTATION / DEGLOVING INJURIES

6. If amputation is incomplete, stabilize with bulky dressing.
7. If serious bleeding is present, apply tourniquet above amputation as close as possible to the injury. Note time tourniquet applied. **DO NOT** release tourniquet once it has been applied.
8. Care of amputated parts:
 - Wrap in normal saline moistened gauze or towel. Place in plastic bag and seal. **DO NOT** immerse tissue directly in water or normal saline.
 - Place plastic bag in second container filled with ice or cold water or place on cold packs and bring with patient to the hospital.

ADULT MUSCULOSKELETAL INJURIES

INCAPACITATING BACK PAIN (traumatic and non-traumatic origin)

BLS/ALS

1. **Adult Initial Trauma Care SOP, p. 60-61**
 - Severe pain = the patient is unable to move or be moved due to pain
2. Assess patient to differentiate musculoskeletal back pain from aortic aneurysm pain.
 - history of onset and character of pain
 - hypotension or syncope
 - pain described as “tearing” or “ripping”
 - presence or absence of femoral pulses and mottling of lower extremities
 - any negative neurological finding
3. Assess for injury and consider **Spine Motion Restriction p. 65** as indicated. Check for distal vascular, motor, and sensory function.

ALS

9. Consider analgesia, if patient SBP > 90 mmHg
 - **NITROUS OXIDE** per System-specific policy for MILD pain
 - **For SEVERE pain:**

FENTANYL (Preferred)	KETAMINE
< 65 years of age	
1 mcg/kg SLOW IV OR IM/IO/IN, max first dose 100 mcg. Repeat dose 0.5 mcg/kg SLOW IV OR IM/IO/IN in 5 min, max repeat dose 50 mcg.	0.1 mg kg SLOW IV/IO. Repeat dose 0.05 mg/kg SLOW IV/IO
≥ 65 years of age	
0.5 mcg/kg SLOW IV OR IM/IO/IN, max dose 50 mcg. Repeat dose 0.25 mcg/kg SLOW IV OR IM/IO/IN in 5 min, max repeat dose 25 mcg.	No dose of 65 years of age or older

4. If patient is experiencing nausea or vomiting, consider administering **ZOFRAN** (ondansetron) **ODT 4 mg tab or 4 mg slow IV** x 1 dose only.

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ADULT CRUSH INJURY / ENTRAPMENT

BLS/ALS

1. **Adult Initial Trauma Care SOP, p. 60-61**
2. Start treatment as soon as safely possible to do so (if safe start while patient is still entrapped or encased)
3. Identify any severe hemorrhage. If found on limb, place tourniquet as close to injury as possible (never on a joint). If unable to assess limb and there is a probable mechanism for crush / amputation, place tourniquet.
4. Administer high flow O2 via NRB unless unsafe to do so.

ALS

5. **Establish large bore IV/IO x 2, administer NS initial bolus of 10 ml/kg (prior to extrication if possible). If pulmonary edema occurs, STOP bolus and treat per ADULT PULMONARY EDEMA SOP pg. 21**
6. For significant crush injuries or prolonged entrapped extremity, consider **SODIUM BICARBONATE 50 mEq IV/IO over 5 minutes**
7. ECG monitoring during entrapment, if possible. If signs/symptoms of hyperkalemia are noted, treat per **ADULT HYPERKALEMIA SOP p. 46**. Once removed, 12 lead ECG should be obtained and repeated as indicated.
8. Consider analgesia, if patient SBP > 100 mmHg

FENTANYL (Preferred)	KETAMINE
< 65 years of age	
1 mcg/kg SLOW IV OR IM/IO/IN, max first dose 100 mcg. Repeat dose 0.5 mcg/kg SLOW IV OR IM/IO/IN in 5 min, max repeat dose 50 mcg.	0.1 mg kg SLOW IV/IO. Repeat dose 0.05 mg/kg SLOW IV/IO
≥ 65 years of age	
0.5 mcg/kg SLOW IV OR IM/IO/IN, max dose 50 mcg. Repeat dose 0.25 mcg/kg SLOW IV OR IM/IO/IN in 5 min, max repeat dose 25 mcg.	No dose of 65 years of age or older

9. After initial NS fluid bolus, administer **NS 1 L/hr**. If pulmonary edema occurs, **STOP NS** and treat per **ADULT PULMONARY EDEMA SOP p. 21**
10. If cardiac arrest occurs, treat per appropriate SOP

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ADULT SUSPENSION INJURIES

BLS/ALS

1. **Adult Initial Trauma Care SOP, p. 60-61**
2. Coach patient to keep knees elevated until, during and post rescue **DO NOT ALLOW PATIENT TO STAND.**
3. Place patient in fowlers position, with knees to chest during transport. If patient is unresponsive place in lateral position with knees to chest. If patient needs to be placed supine, knees should be placed or held to chest.
4. Administer high flow O2 via NRB unless contraindicated

ALS

5. Establish IV, **administer 1 L NS after rescue, if pulmonary edema occurs, STOP 1 L bolus and treat per ADULT PULMONARY EDEMA SOP p. 21**
6. Assess ECG, **if signs and symptoms of hyperkalemia treat per ADULT HYPERKALEMIA SOP p. 46**
7. Consider analgesia, if patient SBP > 90 mmHg

FENTANYL (Preferred)	KETAMINE
< 65 years of age	
1 mcg/kg SLOW IV OR IM/IO/IN, max first dose 100 mcg. Repeat dose 0.5 mcg/kg SLOW IV OR IM/IO/IN in 5 min, max repeat dose 50 mcg.	0.1 mg kg SLOW IV/IO. Repeat dose 0.05 mg/kg SLOW IV/IO
≥ 65 years of age	
0.5 mcg/kg SLOW IV OR IM/IO/IN, max dose 50 mcg. Repeat dose 0.25 mcg/kg SLOW IV OR IM/IO/IN in 5 min, max repeat dose 25 mcg.	No dose of 65 years of age or older

8. If cardiac arrest occurs, treat per appropriate SOP.

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ADULT NEAR DROWNING

BLS/ALS

1. **Adult Initial Trauma Care SOP, p. 60-61**
2. **Remove wet clothing**
3. **Assess patient's temperature**
 - **If NORMOTHERMIC, treat cardiac dysrhythmias per appropriate SOP, p. 15-21**
 - **If HYPOTHERMIC, treat per ADULT COLD EMERGENCIES SOP, p. 48-49**
4. **Treat any respiratory symptoms per appropriate SOP**

Inadequate Ventilation and
Respiratory Effort

- In water, start rescue breathing / ventilations
- When out of water, begin CPR
 - Single rescuer – 30:2
 - Two rescuers – 15:2
- Apply AED / defibrillator and check rhythm

If Breathing resumes -----▶

If breathing does not resume



- Refer to appropriate adult cardiac and respiratory SOPs **pg. 15-27**

Adequate Ventilation and
Respiratory Effort



- Complete initial assessment
- Remove wet clothing
- Prevent further heat loss
- Provide supplemental oxygen as indicated
- Refer to **ADULT COLD EMERGENCIES SOP, p. 48** as needed
- Contact Medical Control
- Transport
 - Support ABCs
 - Observe
 - Keep warm

5. **Treat other symptoms per appropriate SOP**

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**SUSPECTED ABUSE OR NEGLECT
DOMESTIC, SEXUAL, ELDER**

BLS/ALS

1. **Adult Initial Medical Care SOP, p. 4-5, or Adult Initial Trauma Care SOP, p. 60-61**
2. Treat obvious injuries per appropriate SOP
3. History, physical exam, scene survey. Document findings on patient care report.

SUSPECTED DOMESTIC / SEXUAL ABUSE

4. Provide information on services available to victims of suspected abuse. See Domestic Crime victim information forms.
5. Encourage victim to seek medical attention.
6. If patient is a victim of suspected abuse and age < 18 years of age, DCFS must be contacted by EMS providers.

Illinois Department of Children & Family Services Child Abuse Hotline:

- **1-800-25-ABUSE (1-800-252-2873)**

SUSPECTED ELDER ABUSE HOTLINE

4. Reporting is mandatory in a case of suspected elder abuse. EMS providers must notify one of the following:

Illinois Department on Aging, Elder Abuse Hotline:

- **1-866-800-1409**

Illinois Nursing Home Abuse Hotline

- **1-800-252-4343**

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**TRAUMA IN PREGNANCY
MATERNAL TRAUMATIC CARDIAC ARREST**

**TIME
SENSITIVE**

BLS/ALS

1. **Adult Initial Trauma Care SOP, p. 60-61**
 - Be aware that the mother may appear stable, but the fetus may be in jeopardy
 - Reference **Field Trauma Guidelines, p. 51**
2. **Visualize** externally for vaginal bleeding, leaking amniotic fluid or crowning. Assess for fetal movements and uterine contractions.
3. Raise right side of backboard with 4-6 inches of padding to place patient on left side.
4. **If CPR indicated, manually displace uterus to left side.** Follow appropriate **Cardiac Arrest SOP, p. 18-20.**
5. Notify Medical Control ASAP in order to mobilize appropriate hospital personnel.

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OBSTETRICAL COMPLICATIONS - BLEEDING

BLS/ALS

1. **Adult Initial Medical Care SOP, p. 4-5**
2. **HIGH FiO₂ or VENTILATION**
 - **ALS**: If altered mental status or signs of hypoperfusion, **IV FLUID BOLUS IN 200 mL increments** titrated to patient response.
 - Palpate abdomen to determine uterine tone and presence of contractions.
 - Place mother on left side or raise right side of backboard 20-30°. Insert second IV line if no response to initial fluids.

BLEEDING IN PREGNANCY

3. Note type, color and amount of bleeding and/or vaginal discharge. If tissue passes, collect and bring to the hospital with the patient.

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**OBSTETRICAL COMPLICATIONS – TOXEMIA / PREGNANCY INDUCED
HYPERTENSION**

BLS/ALS

1. **Adult Initial Medical Care SOP, p. 4-5**
2. **HIGH FiO₂ or VENTILATION**
 - **ALS:** If altered mental status or signs of hypoperfusion, **IV FLUID BOLUS IN 200 mL increments** titrated to patient response.
 - Palpate abdomen to determine uterine tone and presence of contractions.
 - Place mother on left side or raise right side of backboard 20-30°. Insert second IV line if no response to initial fluids.

ALS

3. **HANDLE PATIENT GENTLY.** Minimize CNS stimulation (avoid lights and siren). DO NOT check pupil response. Seizure precautions.
4. **Pre-eclampsia (SBP > 160 and or DBP > 110), with any of the following:**
 - ◆ Headache
 - ◆ Visual changes
 - ◆ Altered mental status
 - ◆ Abdominal pain
 - ◆ Pulmonary Edema
 - Administer **MAGNESIUM SULFATE 4g DILUTED IN 10 ml NS IV/IO over 20 minutes**
5. **Eclampsia (seizure activity) / Postpartum Eclampsia**
 - Administer **MAGNESIUM SULFATE 4g DILUTED IN 10 ml NS IV/IO over 10 minutes**
 - If seizure persists after infusion of **MAGNESIUM SULFATE** administer **VERSED** (midazolam) **2 mg IV/IO (4 mg IN)** q 2 minutes up to 10 mg as necessary, titrated to control seizures.

NOTES:

- If signs of magnesium toxicity occur (hypotension with respiratory depression, or somnolence / slurred speech, or cardiac arrest) **STOP infusion**

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EMERGENCY CHILDBIRTH - PHASE I: UNCOMPLICATED LABOR

PHASE I: UNCOMPLICATED LABOR

BLS/ALS

1. Obtain history and determine if there is adequate time to transport
 - Gravida (number of pregnancies) and Para (number of live births).
 - Number of miscarriages, stillbirths, and multiple births.
 - Due date (expected date of confinement, "EDC") or date of LMP (last menstrual period).
 - Onset, duration, and frequency of contractions (time from beginning of one contraction to beginning of the next).
 - Length of previous labors in hours.
 - Status of membranes, intact or ruptured. If ruptured, inspect for prolapsed cord or evidence of meconium.
 - HIGH RISK CONCERNS:
 - ◆ maternal drug abuse
 - ◆ teenage pregnancy
 - ◆ history of diabetes/hypertension/cardiovascular disease/other pre-existing diseases that may compromise mother and/or fetus
 - ◆ preterm labor (< 37 weeks)
 - ◆ previous breech or C-section.
2. Inspect for bulging perineum, crowning, or whether patient is involuntarily pushing with contractions. If contractions are two minutes apart with crowning or any of the above are present, prepare for delivery. If delivery is not imminent, transport on left side. **DO NOT ATTEMPT TO RESTRAIN OR DELAY DELIVERY UNLESS PROLAPSED CORD IS NOTED.**

IF DELIVERY IS IMMINENT:

3. **Adult Initial Medical Care SOP, p. 4-5**
 - If patient is hyperventilating, coach her to take slow deep breaths
 - **ALS:** If patient becomes hypotensive or lightheaded at any time, **IV FLUID BOLUS in 200 mL increments**
 - **Request additional ALS unit for second patient**
4. Position patient supine on a flat surface, if possible. Use standard precautions.
5. Open OB pack. Place drapes over the patient's abdomen and beneath perineum. Prepare bulb syringe, cord clamps and Chux to receive newly born. Have newly born / neonatal-sized BVM with oxygen supply ready.

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EMERGENCY CHILDBIRTH - PHASE II: DELIVERY

PHASE II: DELIVERY

6. Control rate of delivery by placing palm of one hand over occiput. Protect perineum with pressure from other hand.
7. If amniotic sac is still intact, gently twist or tear the membrane. Note presence or absence of meconium.
8. Once the head is delivered, allow it to passively turn to one side.
9. Feel around the neck for the umbilical cord (nuchal cord). If present, attempt to gently lift it over the head. If unsuccessful, double clamp and cut the cord between the clamps.
10. To facilitate delivery of the upper shoulder, gently guide to head downward. Once the upper shoulder is delivered, support and lift the head and neck slightly to deliver the lower shoulder. Allow head to deliver passively.
11. The rest of the newly born should deliver quickly with one contraction. Firmly grasp the newly born as it emerges. Newly born will be wet and slippery.
12. Keep newly born level with vagina until cord stops pulsating and is double clamped.

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EMERGENCY CHILDBIRTH - PHASE III: CARE OF THE NEWLY BORN

PHASE III: CARE OF THE NEWLY BORN

NOTE: The majority of newborns require no resuscitation beyond maintenance of temperature, mild stimulation, and suctioning of the airway. Transport is indicated as soon as the airway is secured and resuscitative interventions, if needed, are initiated. If the APGAR score is < 6 at 1 minute or meconium is present, begin resuscitation.

BLS / ALS

1. **Pediatric Initial Medical Care SOP, p. 87**
2. Deliver head and body
3. Clamp and cut cord
4. Assess newly born risk factors:
 - Term gestation?
 - Clear amniotic fluid?
 - Breathing or crying?
 - Good muscle tone?
5. Provide basic care:
 - Provide warmth
 - Position; clear airway as needed with bulb syringe or suction, mouth before nose
 - Dry the newly born, stimulate and reposition as needed
6. Assess condition and respirations:
 - If non-vigorous, apneic or gasping/labored breathing, **suction airway** as needed and begin **positive pressure ventilation** on room air for 30 seconds
 - Begin cardiac monitoring
 - Consider SpO2 monitoring, if available
 - The goal is a positive trend with a target SpO2 of 85% - 95% at 10 minutes
7. Check heart rate

<u>HR < 60</u>	<u>HR 60 – 100</u>	<u>HR > 100</u>
<ul style="list-style-type: none"> • CPR for 30 seconds at a ratio of 3:1 with ventilations (FiO2 of 21–30%) • consider ENDOTRACHEAL INTUBATION • consider VASCULAR ACCESS <p style="text-align: center;">↓</p> <p style="text-align: center;"><u>HR remains < 60</u></p> <ul style="list-style-type: none"> • attempt ENDOTRACHEAL INTUBATION and VASCULAR ACCESS • EPINEPHRINE 1:10,000 0.1 mL/kg IV/IO or 0.3 mL/kg ET • repeat EPINEPHRINE q 3 min with continuous CPR as long as HR remains < 60 	<ul style="list-style-type: none"> • continue ventilations for 1-2 minutes, reassess <p style="text-align: center;">↓</p> <p style="text-align: center;"><u>HR remains 60 – 100</u></p> <ul style="list-style-type: none"> • Continue ventilations • Contact Medical Control • Support ABCs • Provide basic care 	<p style="text-align: center;">↓</p> <ul style="list-style-type: none"> • Contact Medical Control • Support ABCs • Provide basic care

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EMERGENCY CHILDBIRTH - PHASE IV: POSTPARTUM CARE

PHASE IV: POSTPARTUM CARE

1. Placenta should deliver in 20-30 minutes. If delivered, collect in plastic bag from OB kit and transport to hospital for inspection. Do **NOT** pull on cord to facilitate delivery of the placenta. **DO NOT DELAY TRANSPORT AWAITING DELIVERY OF PLACENTA.**
2. If perineum is torn and/or bleeding, apply direct pressure with sanitary pads, and have patient bring her legs together. Apply cold pack or ice bag to perineum (over pad) for comfort and to reduce swelling.
3. If estimated blood loss > 500 mL:
 - **ALS: IV FLUID BOLUS in 200 mL increments** titrated to patient response.
 - Massage top of uterus (fundus) until firm.
 - Breast-feeding may increase uterine tone. Allow newly born to nurse.
4. If signs of hypoperfusion despite above treatment, start second IV enroute and fluid boluses.

SPECIAL CONSIDERATIONS:

- Focus should be on newborns appearance, not the presence of meconium
- **Consider APGAR at 1 and 5 minutes, but do not interrupt resuscitation to obtain**
- Per Medical Control, consider:
 - **DEXTROSE 10% 5 mL/kg IV/IO**
 - **IV FLUID BOLUS of 10 mL/kg**
 - **NARCAN (naloxone) 0.1 mg/kg IV/IN/IO**

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APGAR SCORING	0	1	2	1 minute	5 minute
Appearance (skin color)	Blue or Pale	Blue Hands or Feet	Entirely Pink		
Pulse (heart rate)	Absent	< 100/min	> 100/min		
Grimace (reflex irritability)	Limp	Grimace	Cough / Sneeze or Appropriate to Stimuli		
Activity (muscle tone)	Limp	Some Flexion of Extremities	Active Movement		
Respiration	Absent	Weak Cry / Hypoventilation	Strong		
TOTALS					

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DELIVERY COMPLICATIONS

BLS/ALS

1. **Adult Initial Medical Care SOP, p. 4-5**
 - **HIGH FiO₂ or VENTILATION**
 - **LOAD AND GO SITUATION** with treatment enroute
 - **Contact Medical Control enroute as soon as possible**

SHOULDER DYSTOCIA

2. Place mother supine with knees to shoulders and reattempt delivery
3. If unsuccessful, return to supine position. Provide supplemental oxygen to newly born and protect head

BREECH BIRTH

2. **NEVER ATTEMPT TO PULL THE NEWLY BORN FROM THE VAGINA BY THE LEGS OR TRUNK**
3. As soon as the legs are delivered, support the body wrapped in a towel.
4. After the shoulders are delivered, if face down, gently elevate the legs and trunk to facilitate delivery of the head.
5. Head should deliver in 30 seconds with the next contraction. If NOT, reach two gloved fingers into the vagina to locate the mouth, and push vaginal wall away from mouth to form an airway. Keep fingers in place and transport immediately. Alert receiving hospital ASAP.
6. Apply gentle pressure to the fundus. If head does NOT deliver in two minutes, keep your fingers in place to maintain the airway. Keep exposed part of the fetus warm and dry.
7. If the head delivers, anticipate newly born distress. Refer to **EMERGENCY CHILDBIRTH - PHASE III: CARE OF THE NEWLY BORN, p. 83**

PROLAPSED CORD

2. Place mother in Trendelenburg position with knees-to-chest.
3. DO NOT push cord back into vagina.
4. Place gloved fingers into vagina between pubic bone and presenting part, with the cord in between two fingers to monitor cord pulsations and exert counter pressure on the presenting part.
5. Cover exposed cord with moist dressing and keep warm.
6. Maintain hand placement until relieved at Emergency Department.

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PEDIATRIC INITIAL MEDICAL CARE

In this document, pediatric patients are defined as age 15 years and younger, consistent with the Emergency Medical Services and Trauma Center Code adopted by the Illinois Department of Public Health. Other terms commonly applied to the pediatric population include: "newly born" (less than 24 hours), "neonate" (1-28 days) and "infant" (1-12 months).

BLS / ALS

1. Assess scene safety
2. Use standard precautions
3. Assess Airway, Breathing and Circulation and intervene as indicated
4. Assess Level of Consciousness
5. Consider need for supplemental oxygen
 - If no distress, consider supplemental **OXYGEN AT LOW FiO₂** (blow-by method or nasal cannula)
 - If unstable or in distress, administer **HIGH FiO₂ BY MASK** or **ASSIST WITH HIGH FiO₂ BVM**
 - Consider nasal cannula waveform capnography for spontaneously breathing patients with respiratory distress and/or metabolic disorders
6. Obtain blood glucose if indicated
 - Treat hypoglycemia per **PEDIATRIC ALTERED MENTAL STATUS SOP, p. 92**
7. Assess ECG rhythm (if indicated and if available)
8. Assess pulse oximetry
9. Assess ETCO₂ value and waveform (if available)
9. If age > 1 year and patient is experiencing nausea or vomiting, consider administering **ZOFRAN** (ondansetron):
 - ≥ 40 kg: **ODT 4 mg tab or 4 mg slow IV** x 1 dose only
 - < 40 kg: **2 mg slow IV** x 1 dose only (no oral dose for < 40 kg)

PEDIATRIC BRADYDYSRHYTHMIAS

BLS / ALS

1. Pediatric Initial Medical Care SOP, p. 87

- Complete initial assessment. Assess for:
 - Weak, thready or absent peripheral pulses
 - Decreasing consciousness
 - Tachypnea/Respiratory difficulty
 - Central cyanosis and coolness
 - Hypotension (late sign)
- Search for and treat potentially reversible causes:
 - Hypovolemia
 - Hypoxia or ventilation problems
 - Hypoglycemia
 - Hypothermia
 - Hyperkalemia
 - Toxins (overdose)
 - Tamponade (pericardial)
 - Tension pneumothorax
 - Trauma

If cardiopulmonary compromise present:

2. Administer **HIGH FiO₂ BY MASK** or **SUPPORT WITH BVM VENTILATIONS**
3. If heart rate remains < 60 with hypoperfusion despite adequate ventilation, **administer CPR**

ALS

4. Establish **VASCULAR ACCESS IV/IO**
5. If cardiopulmonary compromise continues, administer **EPINEPHRINE 1:10,000 0.1 mL/kg (0.01 mg/kg) IV/IO. Repeat every 3-5 minutes if no response.**
6. If increased vagal tone or primary AV block, administer **ATROPINE 0.02 mg/kg IV/IO.** Minimum dose 0.1 mg. Maximum single dose 0.5 mg.
 - **May repeat ATROPINE x 1 after 3-5 minutes**
7. If hypotension / hypoperfusion continues, administer **IV FLUID BOLUS of 20 mL/kg x 1**
 - **May REPEAT IV FLUID BOLUS x 2** to a total of 60 mL/kg if patient condition indicates
8. Contact Medical Control
9. Transport
 - Support ABCs
 - Keep warm
 - Observe

Special Considerations:

- Hypoglycemia has been known to cause bradycardia in infants and children
- Hypothermia can cause bradycardia in infants and children. Refer to **PEDIATRIC COLD EMERGENCIES SOP, p. 110**
- Monitor IO fluid volumes carefully when using a pressure infuser

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**PEDIATRIC TACHYCARDIA
(> 180 BPM for age 1-15, > 220 BPM for < 1 year)**

1. Pediatric Initial Medical Care SOP, p. 87

- Complete initial assessment. Assess for:
 - Weak, thready or absent peripheral pulses
 - Decreasing consciousness
 - Tachypnea/Respiratory difficulty
 - Central cyanosis and coolness
 - Hypotension (late sign)
 - Search for and treat potentially reversible causes:
 - Hypovolemia
 - Hypoxia or ventilation problems
 - Hypoglycemia
 - Hypothermia
 - Toxins (overdose)
 - Tamponade (pericardial)
 - Tension pneumothorax

Stable

BLS / ALS

2. Place on cardiac monitor and/or pads
3. Contact Medical Control
4. Transport
 - Support ABCs
 - Keep warm

**Narrow QRS (≤ 0.08 sec) – Possible SVT
Unstable**

BLS

2. Contact Medical Control
3. Transport
 - Support ABCs
 - Keep warm

ALS

2. Establish **VASCULAR ACCESS IV/IO**
3. Attempt vagal maneuver
4. If probable SVT, give **ADENOCARD** (adenosine) **0.1 mg/kg rapid IV/IO push** (max dose 6 mg) ▲
5. If no conversion, repeat **ADENOCARD** (adenosine) at **0.2 mg/kg rapid IV/IO push** (max dose 12 mg) ▲
6. If **ADENOCARD** (adenosine) unsuccessful and patient remains unstable:
 - Begin transport, and contact Medical Control
 - **SYNCHRONIZED CARDIOVERSION 1 J/kg** while enroute
 - If no response, may repeat **SYNCHRONIZED CARDIOVERSION 2 J/kg**
 - Consider sedation with **VERSED** (midazolam) **0.1 mg/kg slow IV/IO or 0.2 mg/kg IN (maximum dose 6 mg < 5 years, 10 mg \geq 5 years)**, but do not delay cardioversion

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**Wide QRS (> 0.08 sec) – Possible VT
Unstable**

ALS

2. Establish **VASCULAR ACCESS IV/IO**
3. **SYNCHRONIZED CARDIOVERSION** at 1 J/kg
 - Consider sedation with **VERSED (midazolam) 0.1 mg/kg slow IV/IO or 0.2 mg/kg IN (maximum dose 6 mg < 5 years, 10 mg ≥ 5 years)**, but don't delay cardioversion
4. If no conversion, administer **SYNCHRONIZED CARDIOVERSION** at 2 J/kg
5. If no conversion, consider **ADENOCARD (adenosine) 0.1 mg/kg rapid IV/IO push ▲**
6. Begin transport and contact Medical Control

Differential diagnosis of narrow complex rhythms in pediatrics

**Probable Supraventricular
Tachycardia**

- Vague, nonspecific history
- P waves absent/abnormal
- HR not variable
- History of abrupt rate changes
- <1 year: rate usually > 220 BPM
- 1-15 years: rate usually > 180 BPM

Probable Sinus Tachycardia

- History consistent with known cause
- P waves present/normal
- Variable R-R; constant P-R
- < 1 year: rate usually < 220 BPM
- 1-15 years: rate usually < 180 BPM

▲ Follow all Adenocard (adenosine) administrations by an immediate rapid normal saline flush of ≥ 5 mL

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**PEDIATRIC AED
for age > 1 year**

BLS

1. Pediatric Initial Medical Care SOP, p. 87

- Establish unresponsiveness.
- If unresponsive, check pulse for a maximum of 10 seconds. If pulseless, start chest compressions (rate of 100 - 120 per minute) at the appropriate ratio
 - ◆ Single rescuer – 30 compressions: 2 ventilations
 - ◆ Two rescuers – 15 compressions: 2 ventilations
 - ◆ Give 2 ventilations (over 1 second each) that cause the chest to rise (if chest does not rise, reposition, reattempt). Allow for adequate exhalation time.
 - ◆ **CPR emphasis is to provide continuous high quality CPR with no delays and minimal interruptions**
- 2. Attach AED and analyze rhythm as soon as available.
 - Attach pads to bare dry skin in proper position. (NOTE: It is always desirable to utilize an AED with pediatric capabilities and pads. If unavailable, use of any AED and pad is appropriate.)
 - If PEDS pads available: Apply to anterior chest with proper contact without overlap of pads. If overlap of pads (or within one inch of each other), use anterior / posterior pad placement with Spinal Motion Restriction if neck/back injury suspected.
 - If ADULT pads only: Consider whether the size of the pediatric patient would allow anterior / anterior pad placement as above. Otherwise apply anterior / posterior with Spinal Motion Restriction if neck/back injury suspected.
- 3. Press analyze button (if present) and stand clear of patient.
 - If shock advised:
 - ◆ Continue CPR until ready for **SHOCK**
 - ◆ Ensure that all are “clear” of patient and press **SHOCK** button
 - ◆ Resume CPR immediately beginning with compressions
 - ◆ Every 2 minutes, analyze / shock as indicated / resume CPR
 - If no shock advised:
 - ◆ Check airway, breathing and other signs of circulation; resume CPR if indicated.
- 4. Contact Medical Control
- 5. Transport
 - Support ABCs
 - Observe
 - Keep warm

Special Considerations:

- If injury or neck/back trauma suspected, consider **Spinal Motion Restriction**
- Remove patient from hazardous environment or standing water prior to use of AED
- If AED In place, EMS personnel should let AED complete rhythm analysis prior to switching from AED to manual defibrillator (switch during CPR interval)

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PEDIATRIC PULSELESS ARREST

BLS / ALS

1. **Pediatric Initial Medical Care SOP, p. 87**
2. Initiate CPR at rate of 100-120 compressions per minute
 - Single rescuer – 30:2
 - Two rescuers – 15:2
3. Check cardiac rhythm
 - If BLS, go to **PEDIATRIC AED SOP, p. 83**

SHOCKABLE RHYTHM (VTACH, VFIB)

ALS:

4. **Shock x 1 at 2 J/kg and immediately resume CPR for 2 minutes**
5. Recheck rhythm.
 - If organized electrical rhythm, check pulse. If no pulse or heart rate < 60 BPM, resume CPR.
 - If shockable rhythm, resume CPR while defibrillator charging. When defibrillator ready, **SHOCK X 1 at 4 J/kg** and resume CPR for 2 minutes.
6. Establish **VASCULAR ACCESS IV/IO, Maintain adequate ventilation, if needed place advanced airway.**
7. Administer **EPINEPHRINE 1:10,000 0.1 mL/kg (0.01 mg/kg) IV/IO ♥** while continuing CPR
 - Repeat every 3 to 5 minutes
8. Repeat cycle of 2 minute CPR and rhythm recheck. **DEFIBRILLATE at 4 J/kg** when indicated by shockable rhythm.
9. Transport

NON-SHOCKABLE RHYTHM

ALS:

4. Resume CPR immediately for 2 minutes
5. Recheck rhythm.
 - If organized electrical rhythm, check pulse. If no pulse or heart rate < 60 BPM, resume CPR.
 - If shockable rhythm occurs at any time, switch to that treatment column
6. Establish **VASCULAR ACCESS IV/IO, Maintain adequate ventilation, if needed place advanced airway.**
7. Administer **EPINEPHRINE 1:10,000 0.1 mL/kg (0.01 mg/kg) IV/IO ♥** while continuing CPR
 - Repeat every 3 to 5 minutes
8. Re-verify rhythm every 2 minutes. If organized electrical rhythm or rhythm change, check pulse.
9. Transport

Special Considerations:

- Search for and treat potentially reversible causes:
 - Hypovolemia
 - Hypoxia or ventilation problems
 - Hypoglycemia
 - Hypothermia
 - Hyperkalemia
 - Toxins (overdose)
 - Tamponade (cardiac)
 - Tension pneumothorax
 - Trauma (hypovolemia, increased intracranial pressure)
- If advanced airway is placed, give continuous chest compressions without pause for breaths. After 2 minutes of CPR, recheck rhythm. If organized and non-shockable rhythm, check pulse.
- Defibrillation energy should not exceed adult energy.
- ♥ If no vascular access, may consider **EPINEPHRINE 1:1000 0.1 mL/kg (0.1 mg/kg) ET** diluted with 2 mL normal saline.

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PEDIATRIC DRUG ASSISTED INTUBATION - KETAMINE

ALS

1. Pediatric Initial Medical Care SOP, p. 87

- The following are situations which may require the use of this SOP to facilitate intubation:
 - ◆ Pediatric Glasgow Coma Scale (PCGS) score \leq 8
 - ◆ Imminent respiratory arrest or imminent tracheal / laryngeal closure from any cause

ALWAYS HAVE CRICOTHYROIDOTOMY EQUIPMENT AVAILABLE

2. Prepare patient and equipment for procedure

- Position patient in sniffing position unless cervical spine injury suspected
- Have suction with Yankauer or other rigid tip ready
- Prepare all intubation and cricothyroidotomy equipment per System-specific procedure
- **HIGH FiO₂ VENTILATION prior to and in-between steps of this procedure as able**

3. Administer **KETAMINE 2 mg/kg SLOW IV/IO, may repeat 0.5mg/kg SLOW IV/IO after 30 seconds if needed.**

4. **BENZOCAINE spray to posterior pharynx (0.5-1 second spray x 2, 30 seconds apart)**

5. Attempt oral or oral in-line intubation via System-specific procedure

6. After passing of tube, verify placement:

- Adequate chest expansion bilaterally and symmetrically
- Positive bilateral breath sounds
- Negative epigastric sounds
- Waveform capnography, end tidal CO₂ detector and/or esophageal detection device per System-specific procedure

7. Secure ET tube and reassess placement

8. Continuous waveform ETCO₂ monitoring (if available)

POST INTUBATION SEDATION

9. Administer **VERSED (midazolam) 0.1 mg/kg slow IV/IO or 0.2 mg/kg IN q 2 minutes to a maximum total dose **6 mg < 5 years, 10 mg \geq 5 years, including initial sedation)****

If unsuccessful, continue HIGH FiO₂ VENTILATION, contact Medical Control, and be prepared for CRICOTHYROIDOTOMY per System-specific procedure.

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PEDIATRIC RESPIRATORY ARREST

BLS / ALS

1. **Pediatric Initial Medical Care SOP, p. 87**
2. Perform appropriate airway maneuver
 - Modified jaw thrust or chin lift/head tilt
 - Suction
 - Oropharyngeal airway
3. Consider **Spinal Motion Restriction** as indicated.
4. If foreign body suspected:
 - Open mouth and remove foreign body if visible
 - Reposition airway
 - Consider back slaps / abdominal thrusts (age-dependent)
5. If not breathing **ASSIST WITH HIGH FiO₂ BVM**
 - Consider airway insertion
6. Chest rise inadequate
 - Reposition airway
 - Consider airway insertion

BLS

7. Cardiopulmonary compromise
 - Refer to **PEDIATRIC SHOCK SOP, p. 103, PEDIATRIC AED SOP, p. 91, or PEDIATRIC PULSELESS ARREST SOP, p. 92**, as appropriate
 - If heart rate < 60 BPM, go to **PEDIATRIC BRADYDYSRHYTHMIAS SOP, p. 88**

ALS

7. Cardiopulmonary compromise
 - Establish **VASCULAR ACCESS IV/IO** at rate of 20 mL/hr
 - Refer to **PEDIATRIC SHOCK SOP, p. 103** or **PEDIATRIC PULSELESS ARREST SOP, p. 92**
 - If heart rate < 60 BPM, go to **PEDIATRIC BRADYDYSRHYTHMIAS SOP, p. 88**
8. **Maintain adequate ventilation, if needed place advanced airway.** If intubation needed see **PEDIATRIC DRUG ASSISTED INTUBATION SOP p. 93**
9. Consider **AGE-APPROPRIATE CRICOTHYROIDOTOMY**

SPECIAL CONSIDERATIONS:

- Respiratory arrest may be a presenting sign of a toxic ingestion, metabolic disorder or anaphylaxis
- Consider **NARCAN** (naloxone) or **GLUCOSE** as indicated

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PEDIATRIC RESPIRATORY DISTRESS

BLS / ALS

1. **Pediatric Initial Medical Care SOP, p. 87**
2. Complete primary and secondary assessment.
 - Assess for signs of:

Complete Airway Obstruction

- suspected foreign body
- obstruction or epiglottitis
- anaphylaxis

Partial Airway Obstruction

- suspected foreign body
- obstruction or epiglottitis
- anaphylaxis
- stridor
- history of choking episode
- drooling
- hoarseness
- retractions
- tripod position

Reactive Airway Disease

- wheezing
- grunting
- retractions
- tachypnea
- diminished respirations
- decreased breath sounds
- tachycardia / bradycardia
- decreasing consciousness

- Refer to **PEDIATRIC RESPIRATORY DISTRESS WITH A TRACHEOSTOMY SOP, p. 89**, as indicated

Complete Airway Obstruction

BLS / ALS

3. If foreign body suspected, open mouth and remove foreign body if visible
4. Reposition airway
5. Consider back slaps, chest/abdominal thrusts (age dependent)

ALS

6. Direct laryngoscopy, foreign body removal with Magill forceps if indicated
7. Secure airway as appropriate
8. Consider **AGE-APPROPRIATE CRICOTHYROIDOTOMY**

Partial (Upper) Airway Obstruction

3. Avoid any agitation
4. Position of comfort
5. Consider alternate oxygen methods, i.e. blow by oxygen
6. If wheezing, consider:
 - **BLS**: assist patient with prescribed beta-agonist MDI if available
 - **ALS**: administer **ALBUTEROL (2.5 mg) via nebulizer**
7. If cyanosis or other signs of respiratory insufficiency:
 - **ALS**: administer **EPINEPHRINE 1:1000 3 mg (3 mL) via nebulizer**
8. **DO NOT** attempt intubation, invasive glottic visualization, or venous access

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PEDIATRIC RESPIRATORY DISTRESS

Reactive (Lower) Airway Disease

3. Position of comfort

- **BLS**: assist patient with prescribed beta-agonist MDI if available
- **ALS**: administer **ALBUTEROL (2.5 mg) via nebulizer**

4. Reassess. If no response to ALBUTEROL or patient in severe respiratory distress:

EPINEPHRINE 1:1000 IM

≤ 10 kg	= 0.1 mg (0.1 mL)
11-20 kg	= 0.2 mg (0.2 mL)
≥ 20 kg	= 0.3 mg (0.3 mL)

Special Considerations

- If stable croup is suspected, consider **NORMAL SALINE 6 mL nebulizer** by mask or aim mist (blow by) at child's face
- If assisting patient with a beta-agonist MDI, it should be administered through a holding chamber or spacer device, if available. Beta-agonist MDI inhalers include, among others, albuterol (Proventil®, Ventolin®) and levalbuterol (Xopenex®).

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PEDIATRIC RESPIRATORY DISTRESS WITH A TRACHEOSTOMY TUBE

BLS / ALS

1. **Pediatric Initial Medical Care SOP, p. 87**
2. **ADMINISTER HIGH FiO₂** per tracheostomy collar
 - Suction and reassess airway adequacy
 - If still obstructed, repeat suction, after removing inner cannula if present
 - Still obstructed, have caregiver change trach tube, or insert appropriately sized ET tube into stoma
 - Reassess airway adequacy
3. **If adequate airway: HIGH FiO₂ BY MASK or ASSIST WITH HIGH FiO₂ BVM**
 - Perform frequent reassessment for obstruction:
 - Retractions
 - Grunting/wheezing/stridor
 - Tachypnea
 - Decreasing consciousness
 - Apnea
 - Cyanosis
4. **Continued Obstruction:**
 - **VENTILATE** with **HIGH FiO₂** using bag valve to trach tube
 - If unable to ventilate to trach tube, ventilate with BVM to mouth (cover stoma)
 - If no chest rise, ventilate with BVM (infant mask) to stoma
 - Chest must rise and fall with each ventilation

BLS

5. Refer to **PEDIATRIC RESPIRATORY ARREST SOP, p. 94**, or **PEDIATRIC PULSELESS ARREST SOP, p. 92**, as indicated.
6. Contact Medical Control and consider ALS backup if available

ALS

5. If wheezing, consider **ALBUTEROL 2.5 mg (3 mL) via nebulizer**
6. Refer to **PEDIATRIC RESPIRATORY ARREST SOP, p. 94**, or **PEDIATRIC PULSELESS ARREST SOP, p. 92**, as indicated.

For Transport BLS/ALS:

- Support ABCs
- Observe
- Keep warm
- Transport in position of comfort
- Consider allowing caregiver to remain with child regardless of child's level of responsiveness

Special Considerations

- If chest rise inadequate:
 - Reposition the airway
 - If using mask to stoma, consider inadequate volume delivered. Compress bag further and/or depress pop-off valve.

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PEDIATRIC RESPIRATORY DISTRESS WITH A VENTILATOR

BLS / ALS

1. **Pediatric Initial Medical Care SOP, p. 87**
2. Open airway
3. Remove patient from ventilator and **VENTILATE** with **HIGH FiO₂** using bag valve to tracheostomy tube

Able to Ventilate

4. Contact Medical Control (if BLS, consider ALS backup)
5. Transport
 - Support ABCs
 - Observe
 - Keep warm

Unable to Ventilate

6. Go to **PEDIATRIC RESPIRATORY DISTRESS WITH A TRACHEOSTOMY TUBE SOP, p. 97**, for obstructed airway guidelines

Special Considerations

- Consider using parent / caregivers / home health nurses as medical resources at home and enroute
- Consider alerting Medical Control of parent / caregiver participation in care
- Consider allowing caregiver to remain with child regardless of child's level of responsiveness
- Bring ventilator to the hospital or have parents/caregivers bring the ventilator to the hospital

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PEDIATRIC ALLERGIC REACTION / ANAPHYLAXIS

BLS / ALS

1. **Pediatric Initial Medical Care SOP, p. 87**
2. Apply ice/cold pack to bite or injection site

ALS

Localized allergic reaction without systemic symptoms – urticarial, hives or edema NOT involving mouth, lips or airway

3. Administer **BENADRYL** (diphenhydramine) **1 mg/kg IM or slow IV**. Max dose 50 mg.

ALS

Allergic reaction with systemic signs: wheezing, diffuse hives, or prior history of systemic reaction, **without signs of hypoperfusion**

3. Administer **EPINEPHRINE 1:1000 IM**
 ≤ 10 kg = 0.1 mg (0.1 mL)
 11 – 20 kg = 0.2 mg (0.2 mL)
 ≥ 20 kg = 0.3 mg (0.3 mL)
4. If wheezing, consider **ALBUTEROL 2.5 mg (3 mL) via nebulizer**
5. May **REPEAT EPINEPHRINE q 15 min** as symptoms persist
6. Administer **BENADRYL** (diphenhydramine) **1 mg/kg IM or slow IV/IO**. Max dose 50 mg.

BLS / ALS

Anaphylaxis: multisystem reaction with signs of hypoperfusion: altered mental status or severe respiratory distress / wheezing / hypoxia

BLS

3. BLS: consider the administration of one dose **EPINEPHRINE auto-injector** (EpiPen®)
4. BLS: consider assisting with patient prescribed Beta-agonist inhaler (albuterol, Proventil, etc.) if available

ALS

3. **IV FLUID BOLUS of 20 mL/kg**
 - May **REPEAT IV FLUID BOLUS x 2** to a total of 60 mL/kg if patient condition indicates
4. Administer **EPINEPHRINE 1:10,000 0.1 mL/kg (0.01 mg/kg) IV/IO**
 - May repeat q 5 minutes
 - If no vascular access, give **EPINEPHRINE 1:1000 0.01 mL/kg (0.01 mg/kg) IM**.
5. Administer **BENADRYL** (diphenhydramine) **1 mg/kg slow IV/IO**. Max dose 50 mg. If no vascular access, give IM.
6. If wheezing, consider **ALBUTEROL 2.5 mg (3 mL) via nebulizer**
 - If severe or continued wheezing, repeat ALBUTEROL to provide continuous treatments

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**PEDIATRIC ALTERED MENTAL STATUS
PEDIATRIC DIABETIC HYPOGLYCEMIA**

BLS/ALS

1. Pediatric Initial Medical Care SOP, p. 87

- Spinal Motion Restriction as indicated
- Consider other causes of altered mental status and treat per appropriate SOP
- Assess respiratory effort

2. Obtain and record blood glucose level

ALS

3. Establish VASCULAR ACCESS IV/IO

4. If blood glucose \leq 60, administer:

- **DEXTROSE 10% 5ml/kg (0.5g/kg, max 25g) slow IV. May repeat x 1 after 5 minutes if patient remains hypoglycemic and symptomatic.**

OR

- **GLUCAGON**

- > 8 years: **1 mg IM**
- \leq 8 years: **0.5 mg IM**

5. Reassess respiratory effort. If inadequate, administer NARCAN (naloxone):

- **\leq 20 kg 0.1 mg/kg IV/IN/IO/IM up to a maximum of 2 mg**
- **> 20 kg 2 mg IV/IN/IO/IM**

6. If no response to NARCAN (naloxone), secure the airway as appropriate

Special Considerations

- Consider causes:

A Alcohol, Abuse

E Epilepsy, Electrolytes,
Encephalopathy

I Insulin

O Opiates, Overdose

U Uremia

T Trauma, Temperature

I Infection, Inborn errors

P Psychogenic

P Poison

S Shock, Seizures, Stroke, Space-
occupying lesion, Subarachnoid
hemorrhage, Shunt

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PEDIATRIC BRIEF RESOLVED UNEXPLAINED EVENT (BRUE)

History of any of the following:

- Apnea
- Loss of consciousness
- Color change
- Loss of muscle control
- Episode of choking or gagging
- Acute mental status change

Important information to relay to Medical Control and document:

- Parental / caregiver actions at the time of the event
- What resuscitative measures were taken
- Prior history of similar events.

The typical age for such events is 2 years or less, and is most commonly seen in infants under 12 months. A BRUE is an event that is frightening to the observer and usually involves some combination of the above symptoms. It may present as a symptom of a variety of pediatric conditions including seizures, upper airway compromise, gastroesophageal reflux, metabolic problems, anemia and cardiac disease.

BLS/ALS

1. Pediatric Initial Medical Care SOP, p. 87

- Support ABC's
- Perform a complete secondary assessment including:
 - ◆ General appearance
 - ◆ Work of breathing
 - ◆ Circulation to skin
 - ◆ Evidence of trauma
 - ◆ Extent of interaction with the environment
 - ◆ NOTE: Exam may be normal by the time of patient contact with EMS
- Treat any reversible causes identified, including blood glucose abnormalities, per appropriate SOP
- **All BRUE patients should be transported for medical evaluation, even the well appearing child**

2. Transport

- Support ABCs
- Observe
- Keep warm

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**PEDIATRIC SEIZURES / STATUS EPILEPTICUS
Non-traumatic origin**

BLS/ALS

- **Pediatric Initial Medical Care SOP, p. 87**
- Clear and protect airway. Vomiting/aspiration precautions.
- Protect the patient from injury. Do not place anything in mouth if seizing.
- Position patient on side unless contraindicated
- Obtain and record blood glucose level, if available. If < 60, treat per **PEDIATRIC ALTERED MENTAL STATUS SOP, p. 100.**

IF ACTIVELY SEIZING:

ALS

- Administer **VERSED** (midazolam):
- **VERSED** (midazolam) **0.1 mg/kg slow IV/IO**
OR
- **VERSED** (midazolam) **0.2 mg/kg IN/IM**
- Maximum **VERSED** (midazolam) dose 6 mg < 5 years, 10 mg ≥ 5 years)

- If seizures continue for > 5 minutes, administer **VERSED** (midazolam) **0.1 mg/kg slow IV/IO or 0.2 mg/kg IN/IM q 2 minutes** up to a **maximum dose of 6 mg < 5 years, 10 mg ≥ 5 years** unless otherwise ordered by Medical Control.
- Monitor airway for need for airway insertion / intubation.

FEBRILE SEIZURES:

- Cool patient by removing clothing. Place towel or sheet moistened with tepid (room temperature) water over patient and fan the child. **DO NOT** induce shivering. **DO NOT** rub with alcohol or place in cold/ice water.
- Give nothing by mouth

ALS ONLY – Use of patient prescribed DIASTAT® (rectal Valium)

1. Trained paramedics may administer **DIASTAT® (rectal Valium)** to patients:
 - ◆ The patient should be actively seizing for > 3 minutes, or having repeated seizures without regaining consciousness, i.e. status epilepticus.
 - ◆ The identity of the patient and the name on the prescription must match.
- The paramedic may assist and or administer **DIASTAT®** at the dose prescribed.
- If any of these criteria are not met, follow regular **PEDIATRIC SEIZURES / STATUS EPILEPTICUS SOP, p. 102**
2. Transport all patients who received this medication; if consent for transport is refused by parent/guardian/power of attorney for health care, contact Medical Control.
3. Call Medical Control for assistance with any refusals.

Note: If suspected that seizure is secondary to opioid overdose, see **PEDIATRIC TOXICOLOGIC EMERGENCIES SOP, p. 104**

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

PEDIATRIC SHOCK

BLS / ALS

1. **Pediatric Initial Medical Care SOP, p. 87**
2. Supine position
3. Control bleeding as appropriate

ALS

4. Secure airway as appropriate

Obstructive Shock (Tension Pneumothorax)

5. **PLEURAL DECOMPRESSION**

Distributive Shock (Suspected Sepsis)

5. Establish **VASCULAR ACCESS IV/IO**
6. Administer **IV FLUID BOLUS of 20 mL/kg**
7. If suspected allergic reaction, refer to **PEDIATRIC ALLERGIC REACTION / ANAPHYLAXIS SOP, p. 99**
8. If no response to initial fluid bolus, **repeat IV fluid bolus of 20 mL/kg**. May repeat x 2 to a maximum of 60 mL/kg.

Cardiogenic Shock (Congenital Heart Disease / Cardiac Surgery / Post-Cardiac Arrest)

5. Establish **VASCULAR ACCESS IV/IO**
6. Treat any cardiac rhythm disturbance per appropriate SOP
7. Consider **IV FLUID BOLUS of 20 mL/kg**
 - Caution: fluids may need to be restricted in cardiogenic shock

Hypovolemic Shock (Suspected Dehydration/Volume Loss/Hemorrhagic Shock)

5. Establish **VASCULAR ACCESS IV/IO**
6. Administer **IV FLUID BOLUS of 20 mL/kg**
7. If no response to initial fluid bolus, **repeat IV fluid boluses of 20 mL/kg**. May repeat x 2 to a maximum of 60 mL/kg.

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PEDIATRIC TOXICOLOGIC EMERGENCIES

BLS/ALS

STABLE: alert, normotensive

1. Pediatric Initial Medical Care SOP, p. 87

- HazMat precautions
- Do not initiate vomiting

BLS

2. Contact Medical Control
3. Initial interventions per Medical Control as indicated for identified exposure
4. For altered level of consciousness or seizures, refer to appropriate SOP
5. Bring container(s) of drug or substance to the ED
6. Transport
 - Support ABCs
 - Observe
 - Keep warm

BLS / ALS

UNSTABLE: altered mental status, airway compromise, and/or hypoperfusion

1. Pediatric Initial Medical Care SOP, p. 87

- HazMat precautions
- Do not initiate vomiting

For known or suspected OPIOID OVERDOSE or unknown etiology with respiratory compromise:

2. Protect airway, **HIGH FiO₂** or **VENTILATION**
3. Consider **NARCAN** (naloxone):

BLS

2 mg IN

ALS

≤ 20 kg	0.1 mg/kg IV/IN/IO/IM up to a maximum of 2 mg
> 20 kg	2 mg IV/IN/IO/IM

ALS

- PGCS score ≤ 8 and evidence of airway compromise: **CONSIDER INTUBATION / ADVANCED AIRWAY INSERTION.**
- Consider delaying intubation if known opioid exposure.
- The use of Alternate Airway is contraindicated if ingestion of caustic substance.

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PEDIATRIC TOXICOLOGIC EMERGENCIES

CYCLIC ANTIDEPRESSANT / SODIUM CHANNEL BLOCKER OVERDOSE

Hypoperfusion associate with wide QRS complex (possible cyclic ingestion)

2. Administer **IV FLUID BOLUS of 20 mL/kg** in increments
3. Administer **SODIUM BICARBONATE 8.4% 1 mEq/kg IV**

BETA-BLOCKER / CALCIUM CHANNEL BLOCKER OVERDOSE

Hypoperfusion associated with bradycardia (possible beta blocker or calcium channel blocker ingestion)

2. Administer **GLUCAGON 0.5 mg IV/IO**. May repeat x 1

POTENTIAL EXPOSURES

Burning overstuffed furniture	= Cyanide
Old burning buildings	= Lead fumes and carbon monoxide
Pepto-Bismol™ like products	= Aspirin
Pesticides	= Muscarinics and Carbamates
Common Plants	= Treat symptoms and bring plant/flower to ED

SMELLS

Almond	= Cyanide
Fruit	= Alcohol
Garlic	= Arsenic, parathion, DMSO
Mothballs	= Camphor
Natural gas	= Carbon monoxide
Rotten eggs	= Hydrogen sulfide
Silver polish	= Cyanide
Stove gas	= Think CO (CO and methane are odorless)
Wintergreen	= Methyl salicylate

MUSCARINIC POISONING - excessive body secretions

D – Diarrhea	OR	Salivation (excessive production of saliva)
U – Urination		Lacrimation (excessive tearing)
M – Miosis		Urination (uncontrolled urine production)
B – Bronchorrhea / Bronchospasm		Defecation (uncontrolled bowel movement)
B – Bradycardia		Gastrointestinal distress (cramps)
E – Emesis		Emesis (excessive vomiting)
L – Lacrimation		Breathing Difficulty
S – Salivation		Arrhythmias
		Miosis (pinpoint pupils)

2. **ATROPINE 0.02 mg/kg (minimum 0.1 mg) rapid IV/IO q 3 minutes** (no dose limit)

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PEDIATRIC TOXICOLOGIC EMERGENCIES

CYANIDE POISONING - For known or suspected cyanide poisoning;

Signs of Cyanide Poisoning

- Altered Mental Status
- Confusion, Disoriented
- Tachypnea / Hyperpnea (early)
- Bradypnea / Apnea (late)
- Seizures or Coma
- Mydriasis (dilated pupils)
- Hypertension (early)/ Hypotension (late)
- Cardiovascular collapse
- Vomiting

Symptoms of Cyanide Poisoning

- Headache
- Confusion
- Dyspnea
- Chest Tightness
- Nausea

2. **Ensure scene safety** – If necessary, mitigate any hazardous materials and/or chemicals that may impair or endanger the rescuer prior to treatment
3. If available, **administer HYDROXOCOBALAMIN (CYANOKIT®) 70 mg/kg** (reconstituted solution is 25 mg/mL)
4. If hypotensive or pulseless, **IV FLUID BOLUS of 20 mL/kg**
If no response to initial fluid bolus, **repeat IV FLUID BOLUS of 20 mL/kg**. May repeat **up to total infusion of 60 mL/kg**

CARBON MONOXIDE POISONING

- **HIGH FiO₂ BY MASK or ASSIST WITH HIGH FiO₂ BVM**
- Do not rely on pulse oximetry
- Keep patient as quiet as possible to minimize tissue oxygen demand

SUSPECTED CLUB DRUG OVERDOSE

2. Contact Medical Control for suspected use of club drugs

**Illinois Region 8 Emergency Medical Services
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Drugs Commonly Seen in Overdose / Poisoning

Opioids	Morphine, Demerol (meperidine), heroin, methadone, codeine, Duragesic (fentanyl), Vicodin/Lortab (APAP and hydrocodone), hydrocodone, Dilaudid (hydromorphone), Percocet (oxycodone and APAP), OxyContin (oxycodone)
Sodium Channel Blockers	Benadryl (diphenhydramine), Dilantin (phenytoin)
Cyclic Antidepressants	Elavil (amitriptyline), Norpramin (desipramine), Tofranil (imipramine), Pamelor (nortriptyline), Sinequan (doxepine)
Benzodiazepines	Halcion (triazolam), Ativan (lorazepam), Restoril (temazepam), Versed (midazolam), Valium (diazepam), Xanax (alprazolam), Librium (chlordiazepoxide), Klonopin (clonazepam), Dalmane (flurazepam), Rohypnol (flunitrazepam), Ambien (zolpidem)
Beta Blockers:	Inderal (propranolol), Corgard (nadolol), Lopressor (metoprolol), Tenormin (atenolol), timolol
Calcium Channel Blockers:	Cardizem (diltiazem), Procardia (nifedipine), Calan/Adalat/Isoptin (verapamil), Norvasc (amlodipine)
Club Drugs	GHB (Liquid G, Liquid Ecstasy), ketamine (Special K, Vitamin K, Super K), MDMA (Ecstasy, XTC, ADAM, E), Foxy Methoxy, AMT, Coricidin (Triple-C)

Poison Control Center 1-800-222-1222

**Illinois Region 8 Emergency Medical Services
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PEDIATRIC NERVE AGENT ANTIDOTE GUIDELINE

	PATIENT AGE	ANTIDOTES (IV/IM)	
		MILD/MODERATE	SEVERE
INFANT	0-6 months (< 7 kg)	0.25mg Atropine 2 PAM [†] 15 mg/kg	0.5mg Atropine* 2 PAM [†] 25 mg/kg
INFANT	7 months-2 years (7-13 kg)	0.5mg Atropine* 2 PAM [†] 15 mg/kg	1mg Atropine* 300 mg 2 PAM [†]
CHILD	3-7yrs (14-25kg)	1mg Atropine* 300mg 2 PAM [†]	2mg Atropine 600 mg 2 PAM [†]
CHILD	8-14 yrs (26-50kg)	2mg Atropine 600 mg 2 PAM [†]	4mg Atropine 1200 mg 2 PAM [†]
ADOLESCENT	> 14 yrs (> 51 kg)	2mg Atropine 600 mg 2 PAM [†]	4mg Atropine 1200 mg 2 PAM [†]

* Appropriate dose Atropen auto injector can be used if available

[†] 2 PAM=Pralidoxime

DENOTES ONE MARK I KIT

DENOTES TWO MARK I KITS

2mg Atropine
600mg 2 PAM[†]

4mg Atropine
1200 mg 2 PAM[†]

NOTES:

For nerve agents the doses are:

- Atropine dose 0.05 mg/kg
- 2 PAM[†] dose 25 mg/kg

For children > 3 yrs with severe symptoms:

- 1 Mark I Kit will give 0.08 — 0.13 mg/kg Atropine
- 24-46 mg/kg 2 PAM[†]

2 PAM[†] solution can be prepared from the vial containing 1 gram of dessicated 2 PAM[†]. Inject 3 ml of NS or sterile water into the vial and shake well. This results in 3.3ml of 300 mg/ml.

Mild	Moderate	Severe
SOB, wheezing, runny nose	Vomiting, drooling, pinpoint pupils	Unconscious, cyanosis, seizures

PEDIATRIC HEAT EMERGENCIES

BLS/ALS

1. Pediatric Initial Medical Care SOP, p. 87

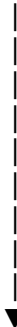
- Complete Secondary Assessment:
 - Hot, dry, flushed or ashen skin
 - Tachycardia
 - Tachypnea
 - Diaphoresis
 - Decreasing consciousness
 - Headache
 - Weak, thready or absent peripheral pulse
 - Hypotension
 - Profound weakness / fatigue
 - Vomiting
 - Muscle cramps

2. Assess scene for environmental risks to patient and rescuers
3. Place patient in cool environment and remove clothing as appropriate
4. Apply cool packs to axilla and groin

Altered Mental Status

- Check blood glucose, treat per **PEDIATRIC ALTERED MENTAL STATUS SOP, p. 100**
- Continue cooling
 - ◆ Apply cool pack to side of neck, axilla and groin
 - ◆ Tepid water per sponge / spray
 - ◆ Manually fan body to evaporate and cool
 - ◆ **Stop active cooling if shivering occurs**

Normal Mental Status

- 
- Support ABC's
 - Give cool liquids by mouth if no nausea / vomiting (age dependent)
 - Observe
 - Transport

**Illinois Region 8 Emergency Medical Services
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PEDIATRIC COLD EMERGENCIES

BLS/ALS

1. Pediatric Initial Medical Care SOP, p. 87

- Complete Secondary Assessment

Hypothermia Signs & Symptoms

- Pt complains of cold
- Shivering
- Decreased respiratory rate
- Dysrhythmias
- Dilated, sluggish pupils
- Decreased reflexes
- May mimic death

Signs of Cardiopulmonary Compromise

- Weak, thready or absent peripheral pulse
- Decreasing consciousness
- Tachypnea/respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)

2. Place patient in warm environment. Remove wet clothing. Prevent further heat loss.

No Cardiopulmonary Compromise

3. Warm trunk
4. Place heat packs to axilla and groin, taking care to avoid direct skin contact

Cardiopulmonary Compromise

3. Support with BVM ventilations as indicated; secure airway as appropriate
4. Avoid unnecessary manipulation and rough handling
5. If pulseless, begin CPR

BLS

- Consider AED if available
- If advised, give **ONE SHOCK ONLY**
- Resume CPR, do not re-analyze rhythm

ALS

- For VF or pulseless VT consider **DEFIBRILLATION at 2 J/kg**
- Give **ONE SHOCK ONLY**, then resume CPR
- Do not re-analyze rhythm or give any additional shocks

6. Refer to appropriate SOP as indicated
7. Warm trunk. Place heat packs to axilla and groin, taking care to avoid direct skin contact
8. **ALS**: Establish **VASCULAR ACCESS IV/IO**
9. Contact Medical Control
10. Transport
- Support ABCs
 - Observe
 - Keep warm

**Illinois Region 8 Emergency Medical Services
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PEDIATRIC INITIAL TRAUMA CARE (PITC)

BLS / ALS

1. If a potential crime scene, make efforts to preserve integrity of potential evidence
2. Anticipate potential injuries based on the mechanism of energy transfer
3. **AIRWAY/C-SPINE: Spinal Motion Restriction** as indicated. Position for optimal airway and suction as needed.
4. **BREATHING/VENTILATION:** Assess ventilations and respiratory effort; expose chest as needed:

If inadequate ventilation, respiratory effort

- Open airway using modified jaw thrust
- Relieve upper airway obstruction as indicated
- **VENTILATE WITH HIGH FiO₂** via BVM
- Consider need for advanced airway placement
 - If PGCS score \leq 8, **INTUBATE** using in-line procedure
 - **Refer to PEDIATRIC DRUG ASSISTED INTUBATION - KETAMINE SOP, p. 85**, if indicated

If adequate ventilation / respiratory effort

- Auscultate breath sounds
 - Administer oxygen:
 - **SUPPLEMENTAL OXYGEN** via nasal cannula or blow-by method
 - If altered mental status, hemodynamically unstable, or meets Trauma Region Field Triage Criteria, **increase OXYGEN TO HIGH FiO₂** (increase LPM flow or use mask)
5. **CIRCULATION / PERFUSION:**
 - Assess central and peripheral pulses, circulation to skin
 - Assess type, amount and source(s) of hemorrhage
 - Apply direct pressure, pressure dressings to control hemorrhage
 - Consider **TOURNIQUET** for extremity injury; do not release once applied, note time applied
 6. Complete initial assessment, including:
 - Pediatric Trauma Score
 - Pediatric Glasgow Coma Scale (PCGS)

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PEDIATRIC INITIAL TRAUMA CARE (PITC)

If adequate ventilation, respiratory effort, or ventilations being provided as above

- Control hemorrhage
- Splint or immobilize injuries as indicated and time permits

ALS

7. Establish **VASCULAR ACCESS IV/IO**
8. Administer **IV FLUID BOLUS of 20 mL/kg**
9. Reassess perfusion. May repeat **IV FLUID BOLUS of 20 mL/kg x 2 up to total of 60 mL/kg as indicated.**
10. If unable to maintain airway with manual methods, consider intubation or age-appropriate cricothyroidotomy. **Do not delay transport to attempt invasive airway.**

If Cardiopulmonary Compromise

- Refer to **PEDIATRIC SHOCK SOP, p. 103** or **PEDIATRIC PULSELESS ARREST SOP, p. 92**

If Seizure Activity

- Refer to **PEDIATRIC SEIZURE / STATUS EPILEPTICUS SOP, p. 102**

Suspected Spine Injury / Suspected Neurogenic Shock

11. If patient remains hypoperfused and remains bradycardic, consider **ATROPINE 0.02 mg/kg rapid IV/IO**. Minimum dose 0.1 mg. Maximum single dose 0.5 mg.
 - May repeat **ATROPINE q 3 minutes x 2**. Maximum total dose 1.5 mg.

Chest Injury

11. If sucking chest wound, apply occlusive dressing / chest seal per System-specific procedure
12. If suspected tension pneumothorax, **PLEURAL DECOMPRESSION** of affected side

Musculoskeletal Injuries

11. Consider analgesia, if patient hemodynamically stable:
 - Mild Pain: **NITROUS OXIDE** if available, per System-specific procedure
 - Moderate to Severe Pain: Administer **FENTANYL 1 mcg/kg SLOW IV or IO/IM/IN**, no repeat dose. Max dose 100 mcg. Immobilize and/or splint. Monitor extremity perfusion. Elevate extremity and/or apply cold pack after splinting when appropriate.
12. If long bone fracture with displacement / spasm, and hemodynamically stable, consider administration of:
 - **VERSED (midazolam) 0.1 mg/kg slow IV/IO or IN q 2 minutes to a maximum dose of 6 mg < 5 years, 10 mg ≥ 5 years**
 - If no other route, **VERSED (midazolam) 0.2 mg/kg IM x 1** in unaffected limb.

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PEDIATRIC INITIAL TRAUMA CARE (PITC)

Amputation / Degloving Injuries

11. Stabilize with bulky dressing.
12. If uncontrolled bleeding continues, apply tourniquet above amputation as close as possible to the injury. Note time tourniquet applied. DO NOT release tourniquet once it has been applied.
13. Care of amputated parts:
 - Wrap in normal saline moistened gauze or towel. Place in plastic bag and seal. DO NOT immerse tissue directly in water or saline
 - Place plastic bag in second container filled with ice or cold water or place on cold packs and bring with patient to the hospital

Signs of Cardiopulmonary Compromise

- Tachycardia
- Weak, thready or absent peripheral pulse
- Decreasing consciousness
- Tachypnea/Respiratory difficulty
- Central cyanosis and coolness
- Hypotension (late sign)
- Bradycardia and/or no palpable BP (ominous sign)

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PEDIATRIC HEAD TRAUMA

BLS / ALS

1. Pediatric Initial Trauma Care SOP, p. 111-113

- Maintain supine position
- Consider **Spinal Motion Restriction** as indicated
- Assess Pediatric Glasgow Coma Scale (PGCS)
- **BLS**: Contact Medical Control

<u>PGCS 13-15 (Mild)</u>	<u>PGCS 9-12 (Moderate)</u>	<u>PGCS ≤ 8 (Severe)</u>
<ul style="list-style-type: none"> • Administer HIGH FiO₂ • Control hemorrhage • Reassess PGCS • Transport <ul style="list-style-type: none"> • Support ABCs • Observe • Keep warm 	<ul style="list-style-type: none"> • Administer HIGH FiO₂ • Support ventilation with BVM as indicated • Control hemorrhage • Reassess PGCS • Transport <ul style="list-style-type: none"> • Support ABCs • Observe • Keep warm 	<ul style="list-style-type: none"> • Administer HIGH FiO₂ • Support ventilation with BVM • <u>ALS</u>: INTUBATE orally as indicated • Control hemorrhage • Reassess PGCS • Refer to PEDIATRIC SEIZURE / STATUS EPILEPTICUS SOP, p. 102 as indicated • Transport <ul style="list-style-type: none"> • Support ABCs • Observe • Keep warm

2. For the combative head injured patient, consider **VERSED (midazolam) 0.1 mg/kg slow IV/IO or 0.2 mg/kg IN/IM q 2 minutes to a maximum dose of 6 mg < 5 years, 10 mg ≥ 5 years**

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
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PEDIATRIC GLASGOW COMA SCALE (PGCS)				
	> 1 Year	< 1 Year	Score	
EYE OPENING	Spontaneously	Spontaneously	4	
	To verbal command	To shout	3	
	To pain	To pain	2	
	No response	No response	1	
MOTOR RESPONSE	Obeys	Spontaneous	6	
	Localizes pain	Localizes pain	5	
	Flexion-withdrawal	Flexion-withdrawal	4	
	Flexion-abnormal (decorticate rigidity)	Flexion-abnormal (decorticate rigidity)	3	
	Extension (decerebrate rigidity)	Extension (decerebrate rigidity)	2	
	No response	No response	1	
	> 5 Years	2-5 Years	0-23 months	
VERBAL RESPONSE	Oriented	Appropriate words/phrases	Smiles/coos appropriately	5
	Disoriented/confused	Inappropriate words	Cries and is consolable	4
	Inappropriate words	Persistent cries and screams	Persistent inappropriate crying and/or screaming	3
	Incomprehensible sounds	Grunts	Grunts, agitated, and restless	2
	No response	No response	No response	1
TOTAL PEDIATRIC GLASGOW COMA SCORE:			(3-15)	

PEDIATRIC TRAUMA SCORE (PTS)			
Component	+ 2	+ 1	- 1
Size	Child/adolescent > 20 kg	Toddler 11 – 20 kg	Infant ≤ 10 kg
Airway	Normal	Maintainable	Unmaintained or Intubated
Systolic BP	> 90 mmHg	50 – 90 mmHg	< 50 mmHg
CNS	Awake	Obtunded/Lost consciousness	Coma/Unresponsive
Skeletal Injury	None	Closed Fracture	Open/Multiple Fractures
Open Wounds	None	Minor	Major/Penetrating

**Illinois Region 8 Emergency Medical Services
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PEDIATRIC BURNS (THERMAL, ELECTRICAL, CHEMICAL)

BLS / ALS

1. Assess scene safety
 - Remove patient to safety
 - Use standard precautions
2. **Pediatric Initial Trauma Care SOP, p. 111-113**
 - Stop the burning process
 - Complete primary assessment, assess for:
 - Stridor
 - Retractions
 - Wheezing
 - Carbonaceous sputum
 - Grunting
 - Tachypnea
 - Decreased respirations or apnea
 - Decreasing consciousness
 - Assess percentage / depth of burn
 - Remove constricting jewelry and clothes

Thermal Burns

3. Establish **VASCULAR ACCESS**

Age	IV Fluid Rate
<5 y/o	125mL/hr
6-13 y/o	250mL/hr
>14 y/o	500mL/hr

4. Calculate TBSA (do not include 1st degree burns in calculation)
5. Cover burn wound with DRY dressings or clean sheets
6. Obtain glucose and treat per **PEDIATRIC ALTERED MENTAL STATUS SOP, p. 100**
7. Place patient on clean sheet on stretcher and cover patient with dry clean sheets and blanket to maintain body temperature.
8. Refer to **PEDIATRIC SHOCK SOP, p. 103** as indicated.
9. Contact Medical Control
10. Transport
 - Support ABCs
 - Observe
 - Keep warm

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
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PEDIATRIC BURNS (THERMAL, ELECTRICAL, CHEMICAL)

Inhalation Burns

3. Consider need for **SPINAL MOTION RESTRICTION**
4. Monitor cardiac rhythm and treat according to appropriate SOP
5. Assess neurovascular status of affected part
6. Establish **VASCULAR ACCESS**

Age	IV Fluid Rate
<5 y/o	125mL/hr
6-13 y/o	250mL/hr
>14 y/o	500mL/hr

7. Cover wounds with dry dressings
8. Contact Medical Control
9. Transport
 - Support ABCs
 - Observe
 - Keep warm

Chemical Burns

3. Refer to System-specific HazMat Procedure
4. If powdered chemical, brush away excess
5. Remove clothing if possible
6. Flush burn area with copious amounts of sterile water or saline ASAP and during transport

ALS

7. If EYE INVOLVEMENT:
 - Assess visual acuity
 - Remove contact lens and **IRRIGATE EYE WITH SALINE**
 - ◆ Do not contaminate the uninjured eye with contaminated irrigation solution
8. Contact Medical Control
9. Transport
 - Support ABCs
 - Observe
 - Keep warm

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

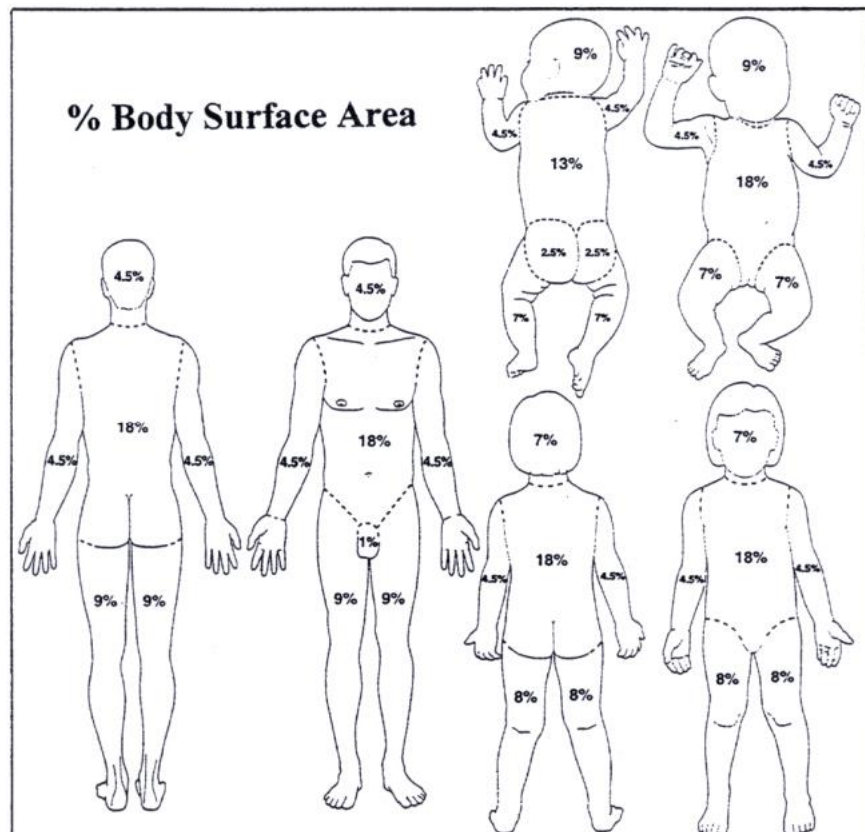
PEDIATRIC BURNS (THERMAL, ELECTRICAL, CHEMICAL)

Electrical Burns

3. **Spine Motion Restriction** as indicated
4. Identify and document any entrance and exit wounds
5. Assess neurovascular status of affected part
6. Cover wounds with dry dressings
7. Contact Medical Control
8. Transport
 - Support ABCs
 - Observe
 - Keep warm

SPECIAL CONSIDERATIONS:

- Assess for potential child abuse and follow appropriate reporting mechanism.
 - Keep the child warm and protect from hypothermia. Be cautious with cool dressings.
- Consider **FENTANYL 1 mcg/kg SLOW IV or IO/IM/IN, max dose 100 mcg. No repeat dose.**
- Consider transport to a Burn Center



Palm of hand (including fingers) of infant or child ~ 1% of the total body surface area

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

PEDIATRIC NEAR DROWNING

BLS / ALS

1. Pediatric Initial Trauma Care SOP, p. 111-113

- Consider need for **SPINAL MOTION RESTRICTION**, and airway maneuvers that will not compromise that restriction

Inadequate Ventilation and
Respiratory Effort

- In water, start rescue breathing / ventilations
- When out of water, begin CPR
 - Single rescuer – 30:2
 - Two rescuers – 15:2
- Apply AED / defibrillator and check rhythm

If Breathing resumes -----▶

If breathing does not resume

- Refer to appropriate pediatric cardiac arrest SOP (**PEDIATRIC AED, p. 91** or **PEDIATRIC PULSELESS ARREST, p. 92**)

Adequate Ventilation and
Respiratory Effort

- Complete initial assessment
- Remove wet clothing
- Prevent further heat loss
- Provide supplemental oxygen as indicated
- Refer to **PEDIATRIC COLD EMERGENCIES SOP, p. 110** as needed
- Contact Medical Control
- Transport
 - Support ABCs
 - Observe
 - Keep warm

**Illinois Region 8 Emergency Medical Services
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SUSPECTED CHILD ABUSE / NEGLECT

BLS/ALS

1. **Pediatric Initial Medical Care SOP, p. 87, or Pediatric Initial Trauma Care SOP, p. 111-113**
2. Treat obvious injuries per appropriate SOP
3. History, physical exam, scene survey as usual, and document findings on patient care report
4. **TRANSPORT.** Report your suspicions to ED staff upon arrival.
 - Transport is mandatory
 - Contact Medical Control if parent/legal guardian is refusing
5. Notify Illinois Department of Children and Family Services (DCFS):
 - **1-800-25-ABUSE** (24-hour phone line)

**Illinois Region 8 Emergency Medical Services
Central DuPage, Edward, Good Samaritan, Loyola EMS Systems
Standard Operating Procedures**

ADDENDUM SECTION

In order to move the science of Emergency Medical Services forward, the EMS Medical Directors have added this section to the SOPs.

Here, the Region will place protocols that are presently "System-specific." These SOPs may be used within a System in the Region, but at the present time are **not universally in effect** for all the Systems. Medical Control direction for these SOPs must come from a hospital in the System that uses these SOPs.

Examples:

- Use of Morgan Lens in Chemical Splash / Burns to the Eyes
- Adult Drug Assisted Intubation - Ketamine

It is our intention to distribute the System-specific SOPs to the entire Region to see, examine, evaluate and discuss so that they may be discussed within your primary System and evaluate their usefulness to the provider in the field.

We anticipate that all SOPs will be reviewed biennially. When this process takes place, the EMS Medical Directors will evaluate the Addendum Section and determine which of the System-specific SOPs will be added Region-wide.

Our intention is to utilize this section for the advancement of the Region as a whole, and to develop the finest EMS Region in the State.

Respectfully,

The Region 8 EMS Medical Directors

**Illinois Region 8 Emergency Medical Services
Central DuPage / Edward EMS System
Standard Operating Procedures**

**ADDENDUM - USE OF MORGAN LENS IN
CHEMICAL SPLASH / BURNS TO THE EYES**

ALS

1. Instill **0.5% TETRACAINE 1 drop** to each affected eye. May repeat until pain is relieved.
2. Insert **MORGAN LENS** into eye using 1 L Normal Saline IV solution as irrigation fluid.
3. Open IV tubing roller clamp and adjust flow to a level that is well tolerated by the patient.
4. Continue irrigation while enroute to the hospital.
5. Patch unaffected eye.

Note: If the patient has exposed eye to adhesive/glue, do not force eyelids open. Gently irrigate using manual flushing until eye can be opened without difficulty. Contact Medical Control for further instructions.

**Illinois Region 8 Emergency Medical Services
Central DuPage / Edward EMS System
Standard Operating Procedures**

**USE OF AUTOMATIC TRANSPORT VENTILATORS (ATV)
(optional equipment)**

ALS

Indications for ATV use: Intubated adult apneic / non-traumatic cardiopulmonary arrest patients that require ventilator support. Medical control must approve use on pediatric patients.

Contraindications for ATV use:

- patients with suspected pneumothorax or tension pneumothorax
- traumatic arrest patients

Required equipment:

- approved ATV connected to oxygen source
- tools for intubation including method(s) of verifying tube placement

ATV procedure

1. Establish definitive airway
2. Assemble components of ATV and ensure proper working order
3. Determine proper tidal volume and respiratory rate using the following guidelines:
 - tidal volume: 10 mL/kg – when in doubt, round down
 - rate: 8-10 per minute (may increase to 12-20 per minute if perfusing rhythm returns)
4. Remove BVM and connect ATV to endotracheal tube. Continually assess for proper functioning of the ATV and return of spontaneous respirations.
5. If the patient should begin spontaneous respirations, stop the use of the ATV and assist ventilations with BVM.

Special Information:

- Specific ATVs are to receive System approval prior to their use.
- Providers using this equipment must follow the manufacturer's guidelines regarding the use, maintenance, cleaning and regular testing of the device.
- During patient care, providers shall chart the initial settings, and any subsequent changes on the patient care report.
- Specific ATV training programs are to be submitted and to receive approval from the respective EMS System. Initial annual training shall be documented.
- This is an optional piece of equipment. The purchase and maintenance is the responsibility of the provider. All ATVs shall be lightweight and rugged in design, capable of operating under common environmental conditions and extremes of temperature.

DRUG NAME

ADULT DOSE / ROUTE

PEDIATRIC DOSE / ROUTE

ACTION(S)

INDICATIONS

CONTRA-INDICATIONS

SIDE EFFECTS

DRUG APPENDIX

<p>Adenocard (adenosine)</p> <p>Classification: Antiarrhythmic</p>	<p>Initial dose of 6 mg rapid IV (over 1-2 seconds) followed immediately by 10 mL rapid saline flush and extremity elevation.</p> <p>If first dose does not eliminate rhythm in 1-2 minutes, give 12 mg rapid IV followed by 10 mL rapid saline flush and extremity elevation.</p> <p>May repeat second dose (12 mg) once (3 doses total).</p>	<p>Initial dose of 0.1 mg/kg rapid IV/IO over 1-2 seconds followed immediately by ≥ 5 mL rapid saline flush and extremity elevation. Max initial dose 6 mg.</p> <p>If first dose does not eliminate rhythm in 1-2 minutes, give 0.2 mg/kg rapid IV/IO followed immediately by ≥ 5 mL rapid saline flush and extremity elevation. Max repeat dose 12 mg.</p> <p>May repeat second dose (0.2 mg/kg) once (3 doses total).</p>	<p>Slows conduction of electrical impulses at AV node.</p>	<p>Stable reentry SVT, including that associated with accessory bypass tracts (Wolff-Parkinson-White Syndrome), unresponsive to vagal maneuvers.</p> <p>Does not convert atrial fibrillation, atrial flutter or ventricular tachycardia.</p>	<p>Sick sinus syndrome, 2nd or 3rd degree AV block or poison- or drug-induced tachycardia.</p> <p>Atrial fibrillation/flutter with underlying WPW syndrome.</p> <p>Symptomatic bradycardia except those with functioning pacemakers.</p>	<p>Common reactions are generally mild and short-lived: sense of impending doom, flushing, chest pressure, throat tightness, numbness. Patients will have a brief episode of one or more transient dysrhythmias, which may include asystole, following administration.</p> <p>Adenosine is a respiratory stimulant; can exacerbate asthma.</p>
<p>Albuterol (Proventil, Ventolin)</p> <p>Classification: Bronchodilator, beta agonist</p>	<p>Asthma, bronchitis with bronchospasm, COPD with wheezing, allergic reaction/anaphylaxis with wheezing 2.5 mg of 0.083% (3 mL) via nebulizer (6 LPM oxygen) until mist stops, usually 5-15 minutes.</p>	<p>NOT FOR PEDIATRIC USE</p>	<p>Binds to and stimulates beta-2 receptors, resulting in bronchial smooth muscle relaxation and bronchodilation.</p>	<p>Asthma, bronchitis with bronchospasm, COPD with wheezing, allergic reaction/anaphylaxis with wheezing, hyperkalemia.</p>	<p>Angioedema, Laryngomalacia, hypersensitivity to albuterol or levalbuterol. Use with caution in lactating patients, cardiovascular disease history.</p>	<p>Hyperglycemia, hypokalemia, palpitations, tachydysrhythmia, anxiety, tremors, nausea/vomiting, throat irritation, dry mouth, hypertension, insomnia, headache, paradoxical bronchospasm.</p>
<p>Amiodarone (Cordarone)</p> <p>Classification: Antiarrhythmic</p>	<p><u>Ventricular Tachycardia with a Pulse:</u> 150 mg IV/IO over 10 minutes</p> <p><u>Pulseless Ventricular Tachycardia/ Ventricular Fibrillation:</u> 300 mg IV/IO bolus. Repeat dose of 150 mg IV/IO bolus.</p>	<p>NOT FOR PEDIATRIC USE</p>	<p>Increases the cardiac refractory period without influencing the resting membrane potential. Relaxes smooth muscles, reduces peripheral vascular resistance, and slightly increases cardiac index.</p>	<p>Pre- and post-defibrillation in ventricular fibrillation and unstable ventricular tachycardia, persistent stable ventricular tachycardia.</p>	<p>Hypokalemia, hypomagnesemia, cardiogenic shock, sinus bradycardia, 2nd or 3rd degree AV block.</p>	<p>Hypotension, bradycardia, AV block, dysrhythmias, acute respiratory distress syndrome (ARDS), malaise, ataxia, dizziness, paresthesia, nausea, vomiting. May prolong QT.</p>

DRUG NAME	ADULT DOSE / ROUTE	PEDIATRIC DOSE / ROUTE	ACTION(S)	INDICATIONS	CONTRA-INDICATIONS	SIDE EFFECTS
<p>Aspirin</p> <p>Classification: Antiplatelet agent</p>	<p>324 mg (4 x 81 mg chewable tablets), chewed and swallowed.</p> <p>NOTE: Supplement dose to ensure patient has received 324 mg within the past 8 hours.</p>	<p>NOT FOR PEDIATRIC USE</p>	<p>Given as an early potent anticoagulant. Blocks formation of thromboxane alpha-2, which causes platelets to aggregate and form plugs that cause obstruction or constriction of small coronary arteries. Reduces overall mortality of acute MI and reduces non-fatal re-infarction.</p>	<p>Suspected acute coronary syndrome (ACS) or chest pain suspicious of cardiac origin.</p>	<p>GI bleeding/active ulcers, hemorrhagic stroke, history of bleeding or clotting disorders, known hypersensitivity. Use with caution if history of asthma.</p> <p>Pregnancy: use with caution, except for third trimester, contraindicated unless ordered by Medical Control.</p>	<p>Anaphylaxis, angioedema, bronchospasm, bleeding, stomach irritation, nausea and vomiting, tinnitus.</p>
<p>Atropine</p> <p>Classification: Anticholinergic</p> <p>NOTE: Nerve gas dosages not included in drug appendix.</p>	<p><u>Bradycardia:</u> 0.5 mg rapid IV/IO q 3 minutes up to 3 mg total.</p> <p><u>Muscarinic Poisoning:</u> 2 mg rapid IV/IO q 3 minutes. No max dose.</p>	<p><u>Bradycardia / Spinal/Neurogenic Shock:</u> 0.02 mg/kg rapid IV/IO. Minimum dose 0.1 mg. May repeat x 1 in 3-5 minutes in bradycardia, repeat x 2 in spinal/neurogenic shock.</p> <p>Max <u>single</u> dose 0.5 mg. Max <u>total</u> dose 1 mg in bradycardia, 1.5 mg in spinal / neurogenic shock.</p> <p><u>Muscarinic Poisoning:</u> 0.02 mg rapid IV/IO q 3 minutes. Minimum dose 0.1 mg. No max dose.</p>	<p>Competes with acetylcholine at the site of the muscarinic receptor. Receptors affected include salivary, bronchial, sweat glands, eyes, heart and GI tract (most-to-least sensitive). Increases SA and AV node conduction.</p>	<p>Symptomatic bradycardia, nerve agent exposure, muscarinic poisoning.</p>	<p>Acute myocardial infarction, myasthenia gravis, GI obstruction, closed-angle glaucoma, known sensitivity to atropine/belladonna alkaloids or sulfites. Not effective for infranodal heart blocks (2nd degree type II or 3rd degree).</p>	<p>Decreased secretions/dry mouth, intense facial flushing and hot skin temperature, blurred vision or pupil dilation and photophobia, tachycardia, restlessness. May cause paradoxical bradycardia if dose administered is too low or given too slowly.</p>

DRUG NAME	ADULT DOSE / ROUTE	PEDIATRIC DOSE / ROUTE	ACTION(S)	INDICATIONS	CONTRA-INDICATIONS	SIDE EFFECTS
Benadryl (diphenhydramine) Classification: Antihistamine	50 mg IM or slow IV	1 mg/kg IM or slow IV/IO. Max dose 50 mg.	Binds and blocks histamine-1 receptors.	Allergic reactions and anaphylaxis.	Acute asthma (thickens bronchial secretions). Caution in presence of CNS depressants like alcohol and drugs, cardiac history, known sensitivity.	Drowsiness/sedation, dizziness, headache, excitable state (paradoxical reaction in some children), wheezing/thickening of bronchial secretions, chest tightness, palpitations, hypotension, blurred vision, dry mouth, nausea/vomiting, diarrhea.
Benzocaine (Cetacaine, Hurracaine, Endocaine) Classification: Local (topical) anesthetic	0.5-1 second spray in posterior pharynx. May repeat x 1 in 30 seconds.		Topical anesthetic for mucous membranes.	Drug assisted intubation. Blunts the gag reflex.	Sensitivity	Suppression of gag reflex. DO NOT EXCEED dosing to avoid risk of possible methemoglobinemia.
Dextrose Classification: Antihypoglycemic	Dextrose 10% 12.5 g/125 mL solution IV. During critical drug shortages of Dextrose 10%, administer 25 g/50 mL of 50% solution IV push.	Dextrose 10% 5 mL/kg (0.5 g/kg, max 25 g) slow IV. Repeat Dextrose 10% 5 mL/kg (0.5 g/kg, max 25 g) slow IV.	Increases blood glucose concentrations.	Hypoglycemia	Intracranial and intraspinal hemorrhage, hypovolemia, hypotension secondary to tachydysrhythmia, delirium tremens.	Hyperglycemia, warmth/burning from IV injection, diuresis, thrombophlebitis, tissue necrosis if IV/IO infiltrates.

DRUG NAME	ADULT DOSE / ROUTE	PEDIATRIC DOSE / ROUTE	ACTION(S)	INDICATIONS	CONTRA-INDICATIONS	SIDE EFFECTS
Diastat (Diazepam rectal gel) Classification: Benzodiazepine, sedative-hypnotic, CNS depressant, anticonvulsant	Dosing of the AcuDial™ dosing system is set according to the prescription. There are two delivery systems, capable of delivering up to 10 (5, 7.5 or 10) or 20 (12.5, 15, 17.5 or 20) mg. Compare the label dose to the dose window on the side of the device before administering.		Suppresses seizures, precise mechanism unknown	If pt has Diastat prescribed and is having active seizures for > 3 min, Paramedics who have been trained may assist or administer at prescribed dose per System-specific procedure	Known hypersensitivity to diazepam, acute narrow angle glaucoma	Excessive CNS depression, rash, dizziness, headache, pain, abdominal pain, nervousness, vasodilation, diarrhea, ataxia, euphoria, incoordination, asthma, rhinitis
Dopamine (Intropin) Classification: Adrenergic agonist, inotrope	IV/IO piggyback infusion of 5-20 mcg/kg/min 1600 mcg/mL concentration premix infusion (400 mg/250 mL OR 800 mg/500 mL)	NOT FOR PEDIATRIC USE	Stimulate dopaminergic, beta-1 and alpha receptors in a dose-related fashion, Used in beta-1 range for positive chronotropic and inotropic effect, to raise blood pressure.	Symptomatic hypotension in the absence of hypovolemia, secondary to cardiogenic/neurogenic/septic shock, bradycardia refractory to atropine.	Known sensitivity, including sulfites. Pheochromocytoma, hypotension due to hypovolemia or tachydysrhythmia.	Tachydysrhythmia, palpitations, ventricular irritability, nausea and vomiting, hypertension, headache, angina, tissue necrosis if IV/IO infiltrates.
Epinephrine (adrenalin) Cardiac Arrest Classification: Adrenergic agonist, inotrope	Cardiac Arrest: 1 mg (10 mL) of 1:10,000 solution IV/IO Repeat q 3-5 min during pulselessness	Cardiac Arrest: 0.1 mL/kg (0.01 mg/kg) 1:10,000 solution IV/IO (also for bradycardias) If no IV/IO, consider 0.1 mL/kg (0.1 mg/kg) of 1:1000 ET (dilute with 2 mL of NS) Repeat q 3-5 min during pulselessness	Stimulates alpha and beta receptors, can increase coronary and cerebral perfusion pressure during CPR	Cardiac arrest	None in cardiac arrest	None in cardiac arrest
Epinephrine (adrenalin) Newly Born Resuscitation Classification: Adrenergic agonist, inotrope	N / A	Newly Born Resuscitation: 0.1 mL/kg (0.01 mg/kg) 1:10,000 solution IV/IO OR 0.3 mL/kg (0.03 mg/kg) of 1:10,000 ET Repeat q 3 min during pulselessness	Stimulates alpha and beta receptors, can increase coronary and cerebral perfusion pressure during CPR	Cardiac arrest	None in cardiac arrest	None in cardiac arrest

DRUG NAME	ADULT DOSE / ROUTE	PEDIATRIC DOSE / ROUTE	ACTION(S)	INDICATIONS	CONTRA-INDICATIONS	SIDE EFFECTS
Epinephrine (adrenalin) Allergic Reaction, Anaphylaxis, Croup, Epiglottitis Classification: Adrenergic agonist, inotrope	<u>Allergic Reaction/ Bronchospasm:</u> 0.3 mg (0.3 mL) of 1:1000 solution IM <u>Anaphylaxis:</u> 0.1 mg (5 mL) 1:10,000 IV/IO q 3 minutes up to 0.5mg OR 0.3 mg (0.5 mL) 1:1000 IM. May repeat q 3 minutes. <u>Croup/Epiglottitis:</u> 3 mg (3 mL) of 1:1000 via nebulizer	<u>Allergic Reaction/ Bronchospasm:</u> 1:1000 (1 mg/1 mL) IM: ≤ 10 kg = 0.1 mg 11-20 kg = 0.2 mg ≥ 21 kg = 0.3 mg <u>Anaphylaxis:</u> 0.1 mL/kg (0.01 mg/kg) 1:10,000 solution IV/IO OR 0.01 mL/kg (0.01 mg/kg) 1:1000 IM May repeat IV q 3 min <u>Croup/Epiglottitis:</u> 3 mg (3 mL) of 1:1000 solution via nebulizer	Stimulates alpha and beta receptors. Results in increased blood pressure, increased heart rate, bronchodilation.	Allergic reaction, anaphylaxis, acute asthma/COPD with wheezing, croup/epiglottitis.	None in anaphylaxis. Use with caution if patient has history of hypertension, angina, CAD or hyperthyroidism.	Palpitations, tachycardia, hypertension, angina, anxiety, tremors, headache.
Etomidate (Amidate) Classification: Hypnotic <u>FOR USE DURING CRITICAL KETAMINE SHORTAGES ONLY</u>	<u>Intubation—Head Injury/Medical:</u> 0.6 mg/kg IV/IO. Max dose 40 mg. No repeat dose.	NOT FOR PEDIATRIC USE	Non-barbiturate hypnotic without analgesic properties. Has minimal effects on cardiac or respiratory symptoms, Onset 10-20 seconds, duration 3-5 minutes.	Sedation for endotracheal intubation.	Hypersensitivity. Use in pregnancy only if potential benefits justify potential risk to fetus.	Hypotension, respiratory depression, injection site pain, temporary involuntary muscle movements, frequent nausea and vomiting, hyper- or hypo-ventilation, short duration apnea, hiccups, laryngospasm, snoring, tachypnea, hypertension, dysrhythmias.
Fentanyl (Sublimaze) Classification: Opioid analgesic	1 mcg/kg (max 100 mcg) slow IV (over 1-2 minutes) or IM/IO/IN. Repeat dose of 0.5 mcg/kg (max 50 mcg) slow IV or IM/IO. <u>> 65 years old:</u> 0.5 mcg/kg (max 50 mcg) slow IV or IM/IO/IN. Repeat dose of 0.25 mcg/kg (max 25 mcg) slow IV or IM/IO.	1 mcg/kg slow IV or IM/IO/IN, not to exceed adult max dose. No repeat dose.	Potent opioid analgesic with rapid onset and short duration (30-60 minutes). Binds to opiate receptors creating analgesia and sedation.	Moderate-to-severe pain (≥ 4/10) management.	Known hypersensitivity to fentanyl or other opioid analgesics. Do not give to pediatrics less than 2 years of age. Hypotension. Note: Normal pediatric systolic BP = 70 + 2x age	Respiratory depression, hypotension, bradycardia, muscle rigidity, delirium, dizziness, headache, nausea, vomiting. Rapid infusion may cause chest wall rigidity.

DRUG NAME	ADULT DOSE / ROUTE	PEDIATRIC DOSE / ROUTE	ACTION(S)	INDICATIONS	CONTRA-INDICATIONS	SIDE EFFECTS
Glucagon (GlucaGen) Classification: Hormone, antihypoglycemic agent	<u>Diabetic/Glucose Emergencies:</u> 1 mg IM <u>Beta/Calcium Channel Blocker Overdose:</u> 1 mg slow IV/IO, may repeat x 1	<u>Diabetic/Glucose Emergencies:</u> > 8 years: 1 mg IM ≤ 8 years: 0.5 mg IM <u>Beta/Calcium Channel Blocker Overdose:</u> 0.5 mg IV/IO, may repeat x 1	Causes a breakdown of stored glycogen into glucose. Independent of beta blockade, positive inotropic and chronotropic and improved AV conduction.	Hypoglycemic patient without venous access. Beta or calcium channel blocker overdose with symptomatic bradycardias including AV blocks (dosage required usually exceeds that available in pre-hospital setting).	Hypersensitivity to glucagon or proteins.	Nausea/vomiting, dizziness, headache.
Glucose, oral (Glucose 15) Classification: Oral antihypoglycemic agent	One tube (15 g of delivered glucose)		Carbohydrate, increases serum glucose level (onset of approximately 10 minutes).	Hypoglycemia in patients with normal mental status and intact gag reflex.	Altered mental status, no gag reflex.	Nausea, potential for aspiration in patients with impaired airway reflexes.
Ketamine (Ketalar) Classification: Nonbarbituate anesthetic	<u>Intubation</u> 2 mg/kg slow IV/IO (over 30-60 seconds), may repeat 1mg/kg after 60 seconds if insufficient sedation achieved. <u>Pain</u> ≥15 years of age and < 65 years of age 0.1mg/kg slow IV/IO (over 30-60 seconds), may repeat 0.05mg/kg after 5 minutes if insufficient pain control achieved. <u>Excited delirium</u> 4mg/kg IM	<u>Intubation</u> 2 mg/kg slow IV/IO (over 30-60 seconds), may repeat 1mg/kg after 60 seconds if insufficient sedation achieved.	Produces anesthetic state characterized by profound analgesia with minimal cardiovascular or respiratory effects. Rapid onset (< 1 min) and short-duration (half-life ~ 10 min).	Drug Assisted Intubation requiring sedation, excited delirium, adult (≤15 years of age, < 65 years of age).	Known or suspected schizophrenia	Muscular tonicity with random purposeless movements, hiccoughing, transient laryngospasm, transient apnea or respiratory depression, nausea & vomiting, recovery agitation.

DRUG NAME	ADULT DOSE / ROUTE	PEDIATRIC DOSE / ROUTE	ACTION(S)	INDICATIONS	CONTRA-INDICATIONS	SIDE EFFECTS
Lidocaine (Xylocaine) Classification: Antiarrhythmic (Class 1b) <u>FOR USE DURING CRITICAL AMIODARONE SHORTAGES ONLY</u>	1 mg/kg (max dose 100 mg) increments up to 3 mg/kg IV/IO IV/IO rebolus at 0.5 mg/kg increments (max dose 50 mg)	NOT FOR PEDIATRIC USE	Exerts antidysrhythmic action by suppressing automaticity in the His-Purkinje system and by elevating electrical stimulation threshold for ventricular dysrhythmias. Use to lower the threshold for electrical conversion.	Pre-and post-defibrillation in ventricular fibrillation and unstable ventricular tachycardia, persistent stable ventricular tachycardia.	AV blocks, ST-elevation in leads II, III and aVF (possible Inferior Wall MI), bleeding, thrombocytopenia, known sensitivity to lidocaine, sulfite or paraben. Use with caution if history of liver or renal disease, CHF, hypoxia or elderly.	Toxicity (signs may include anxiety, apprehension, euphoria, nervousness, disorientation, dizziness, blurred vision, other CNS changes), seizures without warning, hypotension, pain at injection site.
Magnesium Sulfate Classification: Antidysrhythmic, smooth muscle relaxant, electrolyte	<u>Asthma</u> 2g IV/IO over 5-10 minutes <u>Torsades de Pointes</u> 2g IV/IO diluted in 10 ml NS over 5 minutes <u>Pre-eclampsia</u> 4g IV/IO over 20 minutes <u>Eclampsia</u> 4g IV/IO over 20 minutes	NOT FOR PEDIATRIC USE	Controls convulsions by blocking neuromuscular transmission. Slows rate of SA node impulse in myocardium and prolongs conduction time. Smooth muscle relaxant.	Torsades de Pointes, status asthmaticus, hyperkalemia, digoxin toxicity, eclampsia, pre-eclampsia.	Hypermagnesemia, heart block.	Depressed reflexes, hypotension, flushing, drowsiness, depressed cardiac function, hypocalcemia, hyperkalemia, visual changes.
Morphine Sulfate <u>FOR USE DURING CRITICAL FENTANYL AND KETAMINE SHORTAGES ONLY</u>	2 mg slow IV/IO up to total of 10 mg.	0.1 mg/kg slow IV/IO increments up to 10 mg total.	Narcotic analgesic which blocks the sensation of pain, vasodilatory effects.	Moderate to severe pain, pulmonary edema, ischemic chest pain.	Hypersensitivity to opiates, undiagnosed head injury or acute abdominal pain, hypotension or volume depletion.	Lightheadedness, dizziness, sedation, N/V, respiratory depression. Use with caution in patients with chronic respiratory compromise.

DRUG NAME	ADULT DOSE / ROUTE	PEDIATRIC DOSE / ROUTE	ACTION(S)	INDICATIONS	CONTRA-INDICATIONS	SIDE EFFECTS
Narcan (naloxone) Classification: Opioid antagonist	<u>BLS</u> 2mg IN q 30 seconds until adequate respirations return. <u>ALS</u> <u>Inadequate Resp.</u> 1mg IV/IO (2 mg IN) q 30 seconds up to 6mg IV/IO (12mg IN) until adequate respirations return <u>Apneic</u> 2mg IV/IO/IN q 30 seconds, up to 12mg until adequate respirations return.	<u>BLS</u> 2 mg IN <u>ALS</u> <u>≤ 20 kg or < 5 YO:</u> 0.1 mg/kg IV/IO/IM/IN up to a max of 2 mg <u>>20 kg or ≥ 5 YO:</u> 2 mg IV/IO/IM/IN	Binds to the opioid receptor and blocks the effects of opioids.	Opioid overdoses, reversal of administered opioids.	None	Withdrawal symptoms, tachycardia, hypertension, seizures. Consider restraint use.
Nitroglycerin (NitroStat) Classification: Antianginal agent	0.4 mg sublingual tablet (1/150 gr) <u>OR</u> 0.4 mg SL spray	CONTACT MEDICAL CONTROL	Smooth muscle relaxant resulting in peripheral vasodilation.	Ischemic chest pain (angina, AMI), pulmonary edema.	↑ ICP, hypotension, ST-elevation in leads II, III and aVF (possible inferior wall MI), hypovolemia. Caution of history of glaucoma. Oral medications for erectile dysfunction (Viagra, Levitra, Cialis, Adcirca, Staxyn, sildenafil, tadalafil, vardenafil) or pulmonary hypertension (Revatio, Adempas, sildenafil, riociguat) may potentiate the effect of nitrates.	Headache, hypotension, nausea/vomiting, flushing, orthostatic hypotension/syncope.
Nitrous Oxide (Nitronox) Classification: Inhaled anesthetic	Provides 50% oxygen and 50% nitrous oxide. Self-administered by demand valve mask.		CNS depressant. Alters perception of pain. Rapid onset and short duration of effect.	Musculoskeletal injuries with mild-to-moderate pain (≥ 4/10).	Altered mental status, history of pulmonary disease, chest injury, alcohol or drug intoxication, face injuries, pregnant females.	Numbness, lightheadedness, drowsiness/sedation, numbness/tingling in face, slurred speech, headache, nausea/vomiting.

DRUG NAME	ADULT DOSE / ROUTE	PEDIATRIC DOSE / ROUTE	ACTION(S)	INDICATIONS	CONTRA-INDICATIONS	SIDE EFFECTS
Sodium Bicarbonate 8.4% Classification: Electrolyte replacement	<u>Cardiac Arrest, Hyperkalemia, Crush / Entrapment Injuries, Suspension Injuries:</u> 50 mEq of 8.4% solution IV/IO <u>Cyclic Antidepressant / Sodium Channel Blocker Overdoses:</u> 1 mEq/kg of 8.4% solution IV/IO up to 50 mEq.	1 mEq/kg of 8.4% solution IV/IO. <u>Cyclic Antidepressant / Sodium Channel Blocker Overdoses:</u> Consider additional dose for hypotension, altered mental status, dysrhythmias.	Bicarbonate ion buffers acidosis and raises serum pH. Slows uptake of cyclic antidepressants.	Cyclic antidepressant / sodium channel blocker overdose. Hyperkalemia Persistent cardiac arrest. Crush injuries, suspension injuries, entrapment.	None when used as indicated.	Minimal when used as indicated.
Tetracaine Classification: Local anesthetic	1 drop of 0.5% solution in affected eye(s).		Topical anesthetic for the eye.	Non-penetrating eye trauma with pain.	Hypersensitivity to tetracaine or ester-type anesthetics, inflamed or infected tissue, ruptured globe or penetrating injury.	Transient stinging for 30 seconds after instillation. Epithelial damage if excessive or prolonged use.
Toradol (Ketorolac Tromethamine) Classification: Nonsteroidal anti-inflammatory <u>FOR USE DURING CRITICAL FENTANYL, KETAMINE AND MORPHINE SHORTAGES ONLY</u>	<u>15-65 years</u> 15 mg IM or SLOW IVP <u>> 65 years</u> No dosing	<u>15-18 years</u> 15 mg IM or SLOW IVP <u>< 15 year</u> No dosing	Non-steroidal anti-inflammatory agent; inhibits platelet function	Severe pain Expect longer onset of action when compared to an opiate	Impaired renal function, dialysis patient, multi system trauma, hypotension due to sepsis, allergy, aspirin sensitivity, pregnancy, GI bleed	Acute kidney injury, risk of bleeding

DRUG NAME	ADULT DOSE / ROUTE	PEDIATRIC DOSE / ROUTE	ACTION(S)	INDICATIONS	CONTRA-INDICATIONS	SIDE EFFECTS
<p>Versed (midazolam)</p> <p>Classification: Benzodiazepine, CNS depressant</p>	<p><u>Sedation and Seizures:</u> 2 mg increments IV/IO q 2 minutes, up to 10 mg total as needed.</p> <p>If no IV/IO, 10 mg diluted to 2 mL via nasal atomizer.</p> <p>In some SOPs, may give IM if unable to establish IV/IO: < 70 kg = 2.5 mg IM ≥ 70 kg = 5 mg IM</p>	<p><u>Seizures</u> 0.1 mg/kg slow IV/IO or 0.2 mg/kg IN/IM.</p> <p>If seizures continue > 5 minutes, may repeat IV/IO/IN/IM 0.1 mg/kg q 2 minutes.</p> <p><u>Procedural Sedation</u> 0.1 mg/kg slow IV/IO or 0.2 mg/kg IN.</p> <p>All Patients - maximum total patient dose: <ul style="list-style-type: none"> • < 5 years = 6 mg • ≥ 5 years = 10 mg </p> <p>Dilute all intranasal Versed to a total of 1-2 mL, and admin half in each nare, max 1 mL each</p>	<p>Short acting benzodiazepine with CNS depressant, muscle relaxant, amnestic and anticonvulsant effects.</p>	<p>To induce sedation and amnesia prior to procedures. Anticonvulsant for seizure patients. Skeletal muscle relaxant for long bone fractures with muscle spasm. Sedative for combative or agitated psychiatric or head injured patients.</p>	<p>Hypersensitivity, narrow-angle glaucoma.</p> <p>Caution in COPD, renal failure, CHF, elderly, pregnancy, concomitant alcohol or CNS depressant medication use.</p>	<p>Amnesia, respiratory depression, agitation, tremors, dizziness, hypotension.</p>
<p>Zofran (ondansetron)</p> <p>Classification: Antiemetic</p>	<p>4 mg oral disintegrating tablet (ODT) x 1 dose only or 4 mg slow IV x 1 dose only.</p>	<p>≥ 40 kg: 4 mg oral disintegrating tablet (ODT) x 1 dose only or 4 mg slow IV x 1 dose only.</p> <p>< 40 kg: 2 mg slow IV x 1 dose only. No oral dose for < 40 kg.</p>	<p>Selective serotonin 5-HT₃ receptor antagonist.</p>	<p>Nausea, vomiting.</p>	<p>Hypersensitivity</p>	<p>Diarrhea, headache, lightheadedness, prolonged QT interval.</p>

Defibrillation & Cardioversion Energies

DEFIBRILLATION & CARDIOVERSION ENERGIES			
All energies in joules except where weight-based dose noted			
Manufacturer	Medtronic ADAPTIV	Philips SMART	Zoll
Energy Waveform	Biphasic Truncated Exponential (BTE)	Biphasic Truncated Exponential (BTE)	Rectilinear Biphasic (RB)
Adult Defibrillation Initial Shock (AD1)	200 j	All shocks at 150 j	120 j
Adult Second Shock (AD2)	300 j		150 j
Adult Third and Subsequent Shocks (AD3)	360 j		200 j
Adult Synchronized Cardioversion Initial Dose	100 j	100 j	100 j
Adult Synchronized Cardioversion Dose Progression	150 j, 200 j, 300 j, 360 j	150 j, 200 j	120 j, 150 j, 200 j
Pediatric Defibrillation Initial Shock Dose	2 j/kg	2 j/kg	2 j/kg
Pediatric Defibrillation Subsequent Shocks Dose	4 j/kg	4 j/kg	4 j/kg
Pediatric Synchronized Cardioversion Initial Dose	1 j/kg	1 j/kg	1 j/kg
Pediatric Synchronized Cardioversion Dose Progression	2 j/kg, 4 j/kg	2 j/kg, 2 j/kg	2 j/kg, 4 j/kg

EMERGING INFECTIOUS DISEASE GUIDANCE

	Influenza-Like Illness (ILI)	Ebola (EVD)	Middle East Respiratory Syndrome (MERS-CoV)	Severe Acute Respiratory Syndrome (SARS-CoV)
Onset	Sudden	Symptoms appear 2-21 days after exposure (average 9 days)	Symptoms appear following close contact with infected host, 2-13 days after contact (average 5 days)	The incubation period is typically 2-7 days, although as long as 14 days has been reported.
Signs & Symptoms	Fever, chills, cough, sore throat, runny or stuffy nose, muscle or body aches, headache, fatigue, vomiting and diarrhea	Fever, severe headache, muscle pain, vomiting, diarrhea, stomach pain, unexplained bleeding and bruising	Fever, chills / rigor, headache, nonproductive cough, dyspnea, muscle pain. Can be asymptomatic.	Initially fever. Headache, overall feeling of discomfort, body and muscle aches, respiratory symptoms, diarrhea. After 2-7 days, may develop dry cough. Most develop pneumonia.
Transmission	Mainly droplet contact from sneezing, coughing or talking. Less common is droplet on a surface.	Direct contact with body or body fluids (including but not limited to feces, saliva, urine, emesis, semen). Infected persons are not contagious until symptomatic.	Travel within 14 days to or contact with someone who has traveled to affected area, or with infected person. Close contact while not applying strict hygiene standards.	Direct contact with respiratory secretions or body fluids of infected person, including droplet contact through close proximity.
PPE	Surgical or N95 mask and gloves. Place surgical mask on pt.	Ebola-level PPE includes isolation suit, PAPR / N-95 mask with surgical hood / CBRN mask, double-gloving, rubber boots or surgical shoe covers, CDC guidelines for donning / doffing.	Gown, goggles, PAPR / N-95 / CBRN mask, surgical mask with visor (over N-95 if used), double gloving, standard + contact + airborne isolation precautions. Place surgical mask on pt.	Gown, goggles, PAPR / N-95 / CBRN mask, surgical mask with visor (over N-95 if used), double gloving, standard + contact + airborne isolation precautions. Place surgical mask on pt.
BLS	IMC, appropriate PPE	IMC, isolation, early Medical Control notification.	IMC, isolation, early MC notification.	IMC, isolation, early MC notification.
ALS	IMC, appropriate PPE, consider treating for dehydration.	IMC, isolation, early MC notification. Treat per SOPS, but no procedures in a moving ambulance.	IMC, isolation, early MC notification. Treat per SOPS,	MC, isolation, early MC notification. Treat per SOPS,
PIPS required?	No	Yes	No	No
Cleaning	All surfaces cleaned and disinfected.	Vehicle decontamination per CDC guidelines.	Vehicle decontamination per CDC guidelines.	Vehicle decontamination per CDC guidelines.

PIPS = Patient Isolation Packaging System

Illinois Firefighter Peer Support information
Last page of addendum section or inside/outside back cover of SOPs



Call Toll Free at 855-90 SUPPORT

Illinois Fire Fighter Peer Support's (ILFFPS) mission is to recognize that all fire service and emergency medical service members are human beings who will be exposed to, and experience emotions. ILFFPS will provide a safe, non-judgmental and confidential environment where members can engage in a healing conversation with a peer. ILFFPS also seeks to share the concept of peer support and the structure of our program with those that request.