



OSF
HEALTHCARE

Peoria Area EMS System Prehospital Care Manual

Pediatric
Protocols

Page

Effective Oct 1, 2021

Pediatric Protocols

PAEMS

Pediatric

Protocols

Peoria Area EMS Pediatric Protocol Section

Table of Contents

Click any heading below to jump to each respective section

Pediatric Assessment	3
Work of Breathing	4
Circulation to Skin	5
Putting it all Together	5
Routine Pediatric Care	10
Pediatric Pulseless Rhythms Protocol	11
Pediatric Bradycardia	12
Pediatric Tachycardia	13
Pediatric Respiratory / ALS Airway Procedure Protocol	14
Pediatric ALOC Protocol	16
Pediatric Seizure Protocol	17
Pediatric Anaphylaxis Protocol	19
Pediatric OD, Toxic Exposure Protocol.....	20
Pediatric Pain Protocol.....	21
Routine Pediatric Trauma Care.....	22
EMR Care, BLS Care, ILS Care, ALS Care	22
Pediatric Glasgow Coma Scale	25
Suspected Child Maltreatment.....	26
EMR Care, BLS Care, ILS Care, ALS Care	26
Suspected SIDS	27
EMR Care, BLS Care, ILS Care, ALS Care	27

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric Assessment		3

A patient **under the age of sixteen (16)** is considered to be a pediatric patient. Utilization of pediatric treatment guidelines and the extent of care rendered is based on the general impression of the pediatric patient’s condition, physical examination findings and the history of the event. *Patients 16 years or older will be treated with adult protocols.*

The goal of the pediatric patient assessment process is similar to that of the adult patient. However, children are not “little adults”. The causes of catastrophic events, such as cardiac arrest, are most often related to respiratory failure, shock or central nervous system injuries. Early recognition and treatment of the pediatric patient’s injuries or illness is important to ensure the best outcome.

Special attention and awareness must be given to the pediatric patient’s exceptional ability to compensate for respiratory failure and shock. Vital signs are valuable in the assessment of the pediatric patient but do have significant limitations and be dangerously misleading. For example, hypotension is a late and often sudden sign of cardiovascular decompensation. Tachycardia (which varies by age group) will persist until cardiac reserve is depleted. Bradycardia is an ominous sign of impending cardiac arrest.

Infants and children are able to maintain their blood pressure by increasing peripheral vascular resistance (shunting) and heart rate. **The pediatric patient can be in compensated shock and exhibit a normal blood pressure and skin condition.** This increases the importance of the EMS provider understanding of pediatric vital signs and behavior patterns.

The EMS provider must establish a general impression of the pediatric patient. This impression, which is critical, should be done from the doorway of the room. Therefore, the pediatric patient will not be disturbed by a “hands-on” assessment. A simple question to ask yourself is, “How sick is this child?”

Three (3) key areas of importance of a general impression are:

- 1. Appearance**
- 2. Work of breathing**
- 3. Circulation to skin**

Pediatric Assessment Triangle (PAT)

Appearance

The appearance of the pediatric patient should be assessed from the doorway. This is the most important aspect to consider when determining how sick or injured the child is. *Appearance* will give the EMS provider insight on oxygenation, neurological status and ventilation. Remember, the sick child may be alert on the conventional AVPU scale, but still have an abnormal appearance. Children need a more subtle assessment tool so that life-threatening injuries can be identified earlier. A good mnemonic to remember when assessing appearance is “tickles” (TICLS):

Characteristic	Features to look for:
Tone	Is he/she moving or resisting examination vigorously? Does he/she have good muscle tone? Or, is he/she limp, listless or flaccid?
Interactiveness	How alert is the child? How readily does a person, object, or sound distract him/her or draw his/her attention? Will he/she reach for, grasp and play with a toy or exam instrument such as a penlight or tongue blade? Or, is he/she uninterested in playing or interacting with the caregiver or prehospital professional?
Consolability	Can he/she be consoled or comforted by the caregiver or by the prehospital professional? Or, is his/her crying or agitation unrelieved by gentle assurance?
Look/Gaze	Does he/she fix his/her gaze on a face? Or, is there a “nobody home,” glassy-eyed stare?
Speech/Cry	Is his/her cry strong and spontaneous, or weak or high-pitched? Is the content of speech age-appropriate, or confused or garbled?

The *TICLS* Mnemonic (PEPP/AAP 2nd Edition 2006)

Work of Breathing

Assessing work of breathing must go beyond the rate and quality of respirations that is used for adult patients. Work of breathing is an accurate indicator of the oxygenation and ventilation status of the pediatric patient. This is another “hands off” evaluation method in order to avoid disturbing the pediatric patient and causing anymore respiratory distress (other than what is already present).

Characteristic	Features to look for:
Abnormal Airway Sounds	Snoring, muffled or hoarse speech; stridor; grunting; wheezing
Abnormal Positioning	Sniffing position, tripodding, refusing to lie down
Retractions	Supraclavicular, intercostal, or substernal retractions of the chest wall; “head bobbing” in infants
Flaring	Flaring of the nares on inspiration

Characteristics of Work of Breathing (PEPP/AAP 2nd Edition 2006)

Circulation to Skin

A rapid circulatory assessment is needed to determine the perfusion status of the pediatric patient. The key is to assess the core perfusion status of the child. Assessing the skin and mucous membranes can do this. Circulation to the skin reflects the overall status of core circulation.

<i>Characteristic</i>	<i>Features to look for:</i>
Pallor	White or pale skin/mucous membrane coloration from inadequate blood flow
Mottling	Patchy skin discoloration due to vasoconstriction/vasodilation
Cyanosis	Bluish discoloration of skin and mucous membranes

Characteristics of Circulation to Skin (PEPP/AAP 2nd Edition 2006)

Putting it all Together

The goal of pediatric patient care is to identify patients in shock or at risk of shock, initiating care that will directly assist maintaining the patient's perfusion and safely transporting the patient to an emergency department or trauma center in a timely manner. The benefit of remaining on scene to establish specific treatments versus prompt transport to a definitive care facility should be a consideration of each patient contact. Requesting advanced assistance is another important resource that BLS & ILS providers should consider.

<i>Mechanism</i>	<i>Medical</i>	<i>Traumatic</i>
Hypovolemia	Blood Loss – Internal Bleeding Fluid Loss – Dehydration	Blood Loss – Trauma Fluid Loss – Burns
Cardiogenic (Pump Failure)	Respiratory Failure Airway Obstruction Dysrhythmia	Chest Trauma Pneumothorax Pericardial Tamponade
Vessel Failure	Sepsis Anaphylaxis Chemical/Poisoning Endocrine Dysfunction	Spinal Cord Injury (Neurogenic)

Neonate (0-1 Month):

- Utilization of APGAR Scoring is helpful in assessing the neonate patient.

Infant (1-12 Months):

- Approach the infant slowly and calmly. Fast motion and loud noises may startle or agitate the infant.
- Use warm hands and assessment tools.
- Avoid doing anything potentially painful or distressing until after the assessment is completed.
- Have the caregiver assist in care – this is less threatening to the infant.
- Children over six (6) months of age are usually best examined in the arms of a parent. “Stranger anxiety” may be present and could eliminate other assessment options.
- If needed, calm the infant with a pacifier, blanket or favorite toy.

Toddler (1-3 Years):

- Approach the toddler slowly. Keep physical contact at a minimum until he/she feels familiar with you.
- Perform the assessment at the level of the toddler by sitting or squatting next to them and **allow the toddler to remain in the caregiver’s lap** whenever possible.
- Assessment should be **toe to head**. This is less threatening to the toddler.
- Give limited choices such as “Do you want me to listen to your chest or feel your wrist first?”
- Use simple, concrete terms and continually reassure the toddler.
- Do not expect the toddler to sit still and cooperate – be flexible.

Preschooler (3-5 Years):

- A preschool aged child is a “magical thinker.” Concrete concepts must be described in short, simple terms.
- A preschooler is often very cooperative during the assessment process and may be able to provide a history.
- Questions should be simple and direct.
- Allow the child to handle equipment.
- Use distractions.
- **Do not lie to the child. If the procedure is going to hurt, tell them.**
- Set limits on behavior (*e.g.* “You can cry or scream, but don’t bite or kick.”).

School Age (5-13 Years):

- The school aged child is usually cooperative and can be the primary sources for the patient history.
- Explain all procedures simply and completely and respect the patient’s modesty.
- Substance abuse issues may be present in this age group and should be considered during the care of altered level of consciousness cases.
- Children at this age are afraid of losing control, so let him/her be involved in the care. However, do not negotiate patient care unless the child really has a choice.
- Reassure the child that being ill or injured is not a punishment and praise them for cooperating.

Adolescent (13-16 Years):

- **The adolescent is more of an adult than a child and should be treated as such.** Depending on the nature of the problem, an accurate history may not be possible with parents observing. It may be necessary to separate the parent and child during the assessment.
- Regardless of who is present, respect the patient's modesty. Avoid exposing the adolescent unnecessarily.
- Explain what you are doing and *why* you are doing it!
- Show respect – speak to the adolescent directly. Do not turn to the caregiver for the initial information.

Pediatric Assessment

1. Scene Size-Up

- Note anything suspicious at the scene (*e.g.* medications, household chemicals, other ill family members, etc.).
- Assess for any discrepancies between the history and the patient presentation (*e.g.* infant fell on hard floor but there is carpet throughout the house).

2. General Approach to the Stable/Conscious Pediatric Patient

- Utilize the *PAT (Pediatric Assessment Triangle)* to gain a general impression of the child.
- Assessments and interventions must be tailored to each child in terms of age, size and development.
- Smile, if appropriate to the situation.
- Keep voice at an even, quiet tone – do not yell.
- Speak slowly. Use simple, age appropriate terms.
- Keep small children with their caregiver(s) whenever possible and complete assessment while the caregiver is holding the child.
- Kneel down to the level of the child if possible.
- Be cautious in the use of touch. In the stable child, make as many observations as possible before touching (and potentially upsetting) the child.
- Adolescents may need to be interviewed without their caregivers present if accurate information is to be obtained regarding drug use, alcohol use, LMP, sexual activity or child abuse.
- ❖ Observe general appearance and determine if behavior is age appropriate.
- ❖ Observe for respiratory distress or extreme pain.
- ❖ Look at the position of the child.
- ❖ What is the level of consciousness?
- ❖ Muscle tone: good vs. limp.
- ❖ Movement: spontaneous, purposeful or symmetrical.
- ❖ Color: pink, pale, flushed, cyanotic or mottled.
- ❖ Obvious injuries: bleeding, bruising, gross deformities, etc.
- ❖ **Determine weight** – ask patient, caregiver(s) or use Broselow tape.

3. Initial Assessment

- Airway access/maintenance with c-spine control
 - Maintain with assistance: positioning
 - Maintain with adjuncts: oral airway, nasal airway
 - Listen for any audible airway noises (*e.g.* stridor, snoring, gurgling, wheezing)
 - Patency: suction secretions as necessary
- Breathing
 - Rate & rhythm of respirations – compare to normal rate for age and situation
 - Chest expansion – symmetrical?
 - Breath sounds – compare both sides and listen for sounds (present, absent, normal, abnormal)
 - Positioning – sniffing position, tripod position
 - Work of breathing – retractions, nasal flaring, accessory muscle use, head bobbing, grunting
- Circulation
 - Heart rate – compare to normal rate for age and situation
 - Central pulses (*e.g.* brachial, carotid, femoral) – strong, weak or absent
 - Distal/Peripheral pulses (*e.g.* radial) – present/absent, thready, weak or strong
 - Color – pink, pale, flushed, cyanotic, mottled
 - Skin temperature – hot, warm, cool, or cold
 - Blood pressure – use appropriately sized cuff and compare to normal for the age of the child
 - Hydration status – observe anterior fontanel in infants, mucous membranes, skin turgor, crying tears, urine output, history to determine
- Disability – Brief Neurological Examination:
 - Assess responsiveness – APGAR or TICLS
 - Assess pupils
 - Assess for transient numbness/tingling
- Expose and Examine:
 - Expose the patient as appropriate based on age and severity of illness.
 - Initiate measures to prevent heat loss and keep the child from becoming hypothermic.

4. Rapid Assessment vs. Focused History & Physical Assessment

- Tailor assessment to the needs and age of the patient.
- Rapidly examine areas specific to the chief complaint.
- *Responsive medical patients*: Perform focused assessment based on chief complaint. A full review of systems may not be necessary. If the chief complaint is vague, examine all systems and proceed to detailed exam.
- *Unresponsive medical patients*: Perform rapid assessment (*i.e.* ABCs & a quick head-to-toe exam). Render emergency care based on signs & symptoms, initial impression and standard operating procedures. Proceed to detailed exam.
- *Trauma patients with **NO** significant mechanism of injury*: Focused assessment is based on specific injury site.
- *Trauma patients **with significant mechanism of injury***: Perform rapid assessment of all body systems and then proceed to detailed exam.

5. Detailed Assessment

- SAMPLE history – acquire/incorporate into physical exam.
- Vital signs (*i.e.* pulse, BP, respirations, skin condition, pulse ox)
- Assessment performed (usually en route) to detect non life-threatening conditions and to provide care for those conditions or injuries

6. Ongoing Assessment

- To effectively maintain awareness of changes in the patient's condition, repeated assessments are essential and should be performed **at least every 5 minutes on the unstable patient** and **at least every 15 minutes on the stable patient**.

<i>Normal Pediatric Vital Sign Ranges</i>			
	Heart Rate	Respiratory Rate	Blood Pressure
Infant	100-160 bpm	30-60 rpm	> 60mmHg systolic
Toddler	90-150 bpm	24-40 rpm	> 70mmHg systolic
Preschooler	80-140 bpm	22-34 rpm	> 75mmHg systolic
School Age	70-120 bpm	18-30 rpm	> 80mmHg systolic
Adolescent	60-100 bpm	12-16 rpm	> 90mmHg systolic

Critical Thinking Elements

- Remember: Pediatric patients have extraordinary ability to compensate and may show normal vital signs even though they are in shock.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Routine Pediatric Care		10

First Responder & BLS Care

First Responder & BLS Care should be focused on assessing the situation and establishing initial care to treat and prevent shock:

1. Open and/or maintain an open airway. Have suction equipment readily available to suction nose and mouth as needed.
2. Protect the child from environmental exposure. Give special consideration to the warmth of the infant (*e.g.* cover the head to prevent heat loss).
3. Reassure the patient and caregiver(s). Speak softly and calmly, maintaining conversation and explanation of exam and treatment. Use age-appropriate communication techniques.
4. Patient positioning will be based on assessment / patient condition, age / development and safety. Both the patient and caregiver should have the appropriate safety restraint devices / seat belts in place for transport.
5. Administer oxygen, preferably 10-15 L/min via non-rebreather mask (either on the child's face or holding the mask close to the face). If the patient does not tolerate a mask, then administer 4-6 L/min by nasal cannula.
6. Monitor the patient's level of consciousness, vital signs, etc. for any acute changes.
7. Attach pulse oximeter and obtain analysis, if indicated.
8. Initiate ALS intercept, if indicated (or ILS intercept **if** ALS is unavailable).
9. Establish on-line Medical Control as indicated and continue to reassess patient en route to the hospital.

ILS & ALS Care should be directed at conducting a thorough patient assessment, providing care to treat for shock and preparing or providing patient transportation. The necessity of establishing IV access is determined by the patient's condition and chief complaint. Consideration should also be given to the proximity of the receiving facility.

1. ILS Care includes all of the components of *BLS Care*.
2. If indicated, establish IV access using a 1000mL solution of .9% Normal Saline with macro drip or blood tubing. No more than one (1) attempt should be made on scene. Infuse at a rate to keep the vein open (TKO) – approximately 8 to 15 drops (gtts) per minute. Dependent upon patient condition, consider initiating IV access en route to the hospital.
3. ILS and ALS airway control see Igel BIAD procedure in the Prehospital Care Manual

Critical Thinking Elements

- When determining the extent of care needed to stabilize the pediatric patient, the EMS provider should take into consideration the patient's presentation, chief complaint, risk of shock and proximity to the receiving facility.
- IV access in pediatric patients is difficult and may complicate the situation. Indications and benefits vs. patient disturbance and complications should be considered.
- If the patient exhibits signs of shock, administer fluid bolus (.9% Normal Saline) at 20mL/kg over 2 minutes.
- If the pediatric patient is in emergent need of fluids and/or medications (*i.e.* cardiac arrest, trauma, decompensated shock or severe burns) and peripheral IV access is unobtainable, proceed with intraosseous infusion (**ALS only**).

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric Pulseless Rhythms Protocol		11

The successful resuscitation of a child in cardiac arrest is dependent on a systematic approach of initiating life-saving high quality CPR, recognition of any airway obstructions, adequate oxygenation & ventilation, early defibrillation and transferring care to advanced life support providers in a timely manner. The majority of pediatric patients found in non-traumatic cardiac arrest are found to have some form of airway obstruction or respiratory failure. Providing good BLS care with regards to relieving foreign body airway obstructions and/or initiating CPR, pediatric patients have a better chance at a positive outcome. Adequate ventilation is the most important step in pediatric resuscitation.

First Responder and BLS Care should be focused on confirming that the patient is in full arrest and in need of CPR. Resuscitative efforts should be initiated by opening the airway and initiating ventilations & chest compressions while attaching a defibrillator. It is important to assure that CPR is being performed correctly following AHA guidelines.

a) If PEDIATRIC PADS are available – apply as pictured on each of the AED electrodes with proper contact and without any overlap of the pads. If overlap of the pads occurs, use anterior (front) / posterior (back) placement with cervical spine precautions if neck/back injury is suspected.

b) If ADULT PADS only – apply anterior /posterior with cervical spine precautions if appropriate.

ILS and ALS Care should focus on maintaining the continuity of care by confirming that the patient is in cardiac arrest and beginning resuscitative efforts or continuing resuscitative efforts initiated by the First Responders and/ or BLS providers and following AHA PALS guidelines.

Asystole, PEA, V-fib, and Pulseless V-tach:

Follow AHA PALS/ BLS Guidelines;

Obtain appropriate peripheral IV or IO access: **Epi 1:10,000-** 0.01 mg/kg-every 3 to5 minutes as needed

Defibrillation Joules **2 J/kg** for 1st defib, **4 J/kg** for subsequent defib attempts

1. If the patient converts to a perfusing rhythm (with a heart rate > 80 bpm), administer **Lidocaine: 1.0mg/kg IV/IO.**
2. If the patient does not return a perfusing rhythm and remains in refractory V-fib or Pulseless V-Tach administer **Lidocaine: 1mg/kg IV/IO.** Repeat bolus: 1mg/kg IV/IO in 3-5 minutes to a total of 3mg/kg. **ALS providers only: Amiodarone: 5mg/kg IV/IO bolus** (300mg max single dose) for persistent V-fib or pulseless V-tach. May repeat 5mg/kg bolus up to 2 times for refractory V-fib and pulseless V-tach to a total of 15mg/kg.
3. Blood Glucose check and if necessary administer **Dextrose: D10 at 5ml/kg IV bolus** if blood sugar is < 60mg/dL. Not to exceed adult dosage of 250ml
4. **Narcan: 0.1mg/kg** (max 2mg) if suspected narcotic overdose.
5. Establish transport and contact **medical control** as soon as possible.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric Bradycardia		12

Pediatric Bradycardia is defined as a heart rate less than the normal range for a specific age demographic. Determine the stability of the patient and treat the signs and symptoms present. Be aware of signs and symptoms of hypoperfusion.

Age Group	Heart Rate	Respirations	Systolic BP
Preterm	120 - 180	50 - 70	40 - 60
Newborn (0 to 1 Month)	100 - 160	35 - 55	50 - 70
Infant (1 to 12 Months)	80 - 140	30 - 40	70 - 100
Toddler (1 to 3 Years)	80 - 130	20 - 30	70 - 110
Preschool (3 to 6 Years)	80 - 110	20 - 30	80 - 110
School Age (6 to 12 Years)	70 - 100	18 - 24	80 - 120
Adolescents (12+ Years)	60 - 90	14 - 22	100 - 120

First Responder and BLS care should be focused upon providing a thorough patient assessment and providing adequate oxygenation. 15LPM via nonrebreather or 6LPM via nasal cannula if unable to tolerate a mask. For children <12 months of age and a resting heart rate below 60bpm and signs of hypoperfusion begin chest compressions.

ILS and ALS care should be focused on continuing First Responder and BLS care along with a thorough assessment of the patient.

1. Establish IV/IO access and administer **20ml/kg bolus of 0.9 Normal Saline** if hypovolemia is suspected
2. Administer **Epi 1:10,000** 0.01mg/kg IV/IO with a maximum single dose of 1mg **(with Medical Control Orders Only)** every 3-5 minutes as needed.
3. Or for patients older than 6 months administer **Atropine** 0.2mg/kg IV/ IO with a maximum dose of 1mg **(With Medical Control Orders Only)**
4. **ALS ONLY:** Transcutaneous Pacing if the patient remains hypoperfused **(Contact Medical Control for rate)**
5. Administer **Midazolam (Versed)** 0.1mg/kg IV/IO or check IN dosing chart page 45 for comfort during pacing. May repeat dose one time if systolic BP >100mm/hg and respiratory rate is >10/ min. Additional doses require Medical Control orders.
6. Transport and contact **Medical Control** asap.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric Tachycardia		13

Tachycardia may be specific to anxiety of a specific situation. A thorough assessment must be performed and recognizing the signs and symptoms of hypoperfusion is a must. There may be a history of SVT with patients that have a congenital heart history. SVT is defined as a QRS complex >0.08sec and a rate >220bpm. For wide complex tachycardia there must be a wide complex QRS and a rate >180bpm.

First Responder and BLS care must establish a thorough assessment and administer **Oxygen 15LPM via nonrebreather or 6LPM via nasal cannula** if the patient will not tolerate a mask.

SVT/ Narrow Complex-- ILS and ALS care should be directed at continuing BLS care and establishing a thorough assessment.

1. Establish Peripheral IV access and administer **20ml/kg 0.9 Normal Saline**.
2. Contact **Medical Control** ASAP.
3. **ALS ONLY- (With Medical Control Orders Only per each administration)** administer **Adenosine (Adenocard) 0.1mg/kg IV (max 6mg)** initial dose rapid push. If there is no response administer a second dose at **0.2mg/kg IV (Max 12mg)** rapid push.
4. **ALS Only-** Administer **Midazolam (Versed) 0.1mg/kg IV max single dose: 2mg** or IN if unable to establish IV with proper dose from page 45 IN dosage chart for comfort during cardioversion. Patient must have a respiratory rate >10rpm. **Synchronized Cardioversion: 1 J/kg** first attempt and **2 J/kg** subsequent attempts as necessary.

Wide Complex— ILS and ALS care should be directed at continuing BLS care and establishing a thorough assessment

1. Establish Peripheral IV access and administer **20ml/kg 0.9 Normal Saline**.
2. Contact **Medical Control** ASAP.
3. **(With Medical Control Orders Only per each administration)** Administer **Lidocaine 1mg/kg** slowly over 2 minutes if the child is alert. If no response administer **Lidocaine 0.5mg/kg** every 5 minutes as needed to a total of 3mg/kg
4. **ALS Only-** Administer **Midazolam (Versed) 0.1mg/kg IV max single dose: 2mg** or IN if unable to establish IV with proper dose from page 45 IN dosage chart for comfort during cardioversion. Patient must have a respiratory rate >10rpm. **Synchronized Cardioversion: 1 J/kg** first attempt and **2 J/kg** subsequent attempts as necessary.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric Respiratory Protocol & Advanced Airway Procedure		14

Respiratory distress is common in the pediatric patient. The small airways of children are compromised more quickly during medical and traumatic problems. Identifying the degree of respiratory distress is crucial for stopping a process that can lead into respiratory failure. At that point, the child has lost ability to compensate for the lack of oxygen. If not treated immediately, respiratory failure will lead to arrest.

EMR, BLS, and ILS Care should be focused on assessing the situation and initiating routine patient care to treat for shock.

1. Render initial care in accordance with the Routine Pediatric Care Protocol.
2. **Oxygen: 15 L/min** via non-rebreather mask or 6 L/min via nasal cannula if the patient does not tolerate a mask. Be prepared to support with BVM if necessary.
3. **Proventil (Albuterol): 2.5mg** in 3mL of normal saline via nebulizer mixed with **Ipratropium (Atrovent): 0.5mg** via nebulizer over 15 minutes. Repeat **Albuterol 2.5mg with Atrovent 0.5mg** every 15 minutes as needed. In-line nebulizer may be utilized if patient is unresponsive or in respiratory arrest. May repeat every 15 minutes as needed (with Medical Control order)
4. If the patient has a tracheostomy tube and it is obstructed with secretions suction with whistle-tip catheter. Repeat suction after removing inner catheter of tracheostomy tube and have caregiver change tracheostomy tube.

If the airway continues to be obstructed or if ventilatory effort is inadequate, ventilate with 100% oxygen by attaching a BVM to the tracheostomy tube or ventilate mask to mouth while covering the stoma.

- The balloon on the trach must be deflated prior to attempting mask to mouth ventilation.

5. Initiate ALS intercept and transport as soon as possible.

ALS Care should be directed at continuing or establishing care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. **Proventil (Albuterol): 2.5mg** in 3mL normal saline mixed with **Ipratropium (Atrovent): 0.5mg** via nebulizer over 15 minutes. Repeat **Albuterol 2.5mg with Atrovent 0.5mg** every 15 minutes as needed. In-line nebulizer may be utilized if patient is unresponsive or in respiratory arrest.
2. **Epinephrine 1:1000: 0.01mg/kg IM** (Max single dose: 0.3mg) if the patient is suffering status asthmaticus and does not improve with nebulizer treatment. May repeat every 20 minutes.
3. **ALS Only-** Patients with persistent respiratory distress consider **Solu-Medrol: 1mg/kg IV** (max 125mg)
4. Transport as soon as possible. Contact the receiving hospital as soon as possible or Medical Control if necessary.

If Epiglottitis is suspected: EMR Care, BLS Care, ILS Care, & ALS Care

1. Initiate Routine Pediatric Care Protocol and arrange for transport in an upright position.
2. Do not look in the child's mouth or attempt to visualize the interior of the throat, & do not agitate the child.
3. **Oxygen: 10-15 L/min** via non-rebreather mask or by best means tolerated by the patient (e.g. blow-by or 4-6 L/min via nasal cannula).

ALS ONLY!!!-Needle chest decompression on the affected side with a 14g, 16g, or 18g IV catheter if tension pneumothorax is suspected. **(With Medical Control order ONLY!!!!)**

The following procedure may only be utilized by ALS departments who have “Advanced Airway Provider Training” and a Video Laryngoscope

* If the paramedic is not properly trained or does not feel confident in this procedure, the airway should be maintained by iGel placement or other appropriate basic airway maneuvers.

* If the airway cannot be maintained by other means, including attempts at assisted ventilation, or if prolonged assisted ventilation is anticipated, perform endotracheal intubation.

Advanced Airway Control Procedure

1. Endotracheal intubation may be attempted after assessing, opening and securing the airway in accordance with basic airway control procedures.
2. Select the appropriate equipment (based on patient size utilizing Broselow or HandTevy methods)
3. A **Miller (straight) blade** is recommended for pediatric intubation
4. Have suction, BVM, stethoscope, waveform Capnography, and ETT holder prepared and available.
5. Ensure proper function of equipment
6. Suction as needed
7. Ventilate the patient with a BVM with 100% oxygen (pre-oxygenate) prior to each intubation attempt
8. After visualizing the glottic opening, grasp the ETT with the right hand and advance the tube from the right corner of the mouth. Insert the tube into the glottic opening between the vocal cords, just far enough to pass the tube past the opening.
9. Verify proper position by ventilating the patient through the tube with a BVM, while listening to each side of the chest with the stethoscope to confirm ventilation of both lungs.
10. Apply waveform capnography.
11. If good breath sounds are heard bilaterally, and there is appropriate respiratory waveforms noted on Capnography, secure ETT with commercial ETT holder.
12. Frequently reassess breath sounds and capnography to ensure placement of the ETT
13. Ventilate at rate of 20-30 breaths per minute.

Critical Thinking Elements:

- -Most pediatric airways can be managed with basic procedures including placement of BIAD devices (iGel). When these fail or are not feasible, intubation may be needed.
- -The greatest danger to the patient is wasting time attempting to intubate or secure an airway. Time is precious. If you cannot successfully intubate in 2 attempts, use another method of airway control and do not delay transport.
- -Intubation can create arrhythmias produced by catecholamine release and from vagal stimulation-monitor cardiac rhythm closely. If bradycardia occurs, discontinue the attempt and immediately hyperventilate the patient.
- -Verification of proper ETT placement is of vital importance. Utilize multiple methods of verifying placement including: direct visualization of the ETT passing through the vocal cords, auscultation of bilateral breath sounds and always utilize respiratory waveform patterns on capnography.
- -There are marked differences in pediatric airways from adults. The EMS provider should be familiar with these prior to attempting advanced airway maneuvers on pediatric patients

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric ALOC Protocol		16

First Responder & BLS Care should be directed at establishing care, conducting a thorough patient assessment, stabilizing the patient and preparing for or providing patient transport.

1. Render initial care in accordance with the Routine Pediatric Care Protocol.
2. **Oxygen: 10-15 L/min via non-rebreather mask or 4-6 L/min** via nasal cannula if the patient does not tolerate a mask.
3. Perform blood glucose level test.
4. **Oral Glucose: 15g PO** if the patient's blood sugar is < 60mg/dL, the patient is alert to verbal stimuli, is able to sit in an upright position, has good airway control and has an intact gag reflex.
5. Perform a 2nd blood glucose level test to re-evaluate blood sugar 5 minutes after administration of Glucagon.

ILS & ALS Care should be directed at continuing or establishing care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
2. **Oxygen: 10-15 L/min via non-rebreather mask or 4-6 L/min** via nasal cannula if the patient does not tolerate a mask.
3. Perform **blood glucose level test**.
4. **Oral Glucose: 15g PO** if the patient's blood sugar is < 60mg/dL, the patient is alert to verbal stimuli, is able to sit in an upright position, has good airway control and has an intact gag reflex.
5. **Oral Glucose: 15g PO** if the patient's blood sugar is < 60mg/dL, the patient is alert to verbal stimuli, is able to sit in an upright position, has good airway control and has an intact gag reflex.
6. **Dextrose D10: 5ml/kg** if blood sugar is < 60mg/dL. Not to exceed adult dosage of 250ml.
7. Perform a 2nd **blood glucose level test** to re-evaluate blood sugar 5 minutes after administration of Dextrose or Glucagon. Repeat dose of Dextrose if BG is still < 60mg/dL.
8. **Glucagon: 1mg IM** if the patient's blood sugar is < 60mg/dL and unable to establish an IV.
9. **Narcan: 0.1mg/kg IV/IM/IO (Max single dose: 2mg)** if suspected narcotic overdose.
10. Initiate ALS intercept if needed and transport as soon as possible.
11. **Contact Medical Control** as soon as possible.

Critical Thinking Elements

- ALOC in a child can range from trauma to a systemic infection (sepsis). A good medical history might provide clues as to the reason for the ALOC.
- Accidental overdose/ingestion of medications can be a cause of the ALOC.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric Seizure Protocol		17

Seizures are common in childhood. About 5% of all children will have at least one seizure by the age of three (febrile seizures account for the largest percentage of pediatric seizures). This condition can cause much concern and anxiety in the caregiver and EMS is called. Pediatric seizures are usually short-lived and stop before the arrival of EMS. Since there are many causes of pediatric seizures, treatment and transport to an appropriately equipped emergency department is necessary.

<i>Classification of Seizures (PEPP 2001)</i>	
Generalized Seizure	Description
Tonic-Clonic (Grand Mal Seizure)	Trunk rigidity and loss of consciousness with sudden, jerking movements of both arms and/or both legs; may be only tonic (rigidity) or clonic (jerking) seizure activity.
Absence (Petit Mal Seizure)	Brief loss of awareness without any abnormal movements; child may appear to be staring.
Partial (Focal) Seizure	Description
Simple Seizure	Focal motor jerking without loss of consciousness; may be sensory, autonomic or psychic without jerking.
Complex Seizure	Focal motor jerking with loss of consciousness; secondary generalization to a tonic-clonic seizure.

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.

1. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
2. **Oxygen: 10-15 L/min via non-rebreather mask or 4-6 L/min** via nasal cannula if the patient cannot tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary and have suction readily available.
3. Perform **blood glucose level test**.
4. Initiate ALS intercept and **transport without delay**.
5. Check and record vital signs and GCS every **5 minutes**.

ILS & ALS Care should be directed at continuing or establishing care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
2. **Oxygen: 10-15 L/min via non-rebreather mask or 4-6 L/min** via nasal cannula if the patient does not tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary and have suction readily available.
3. Perform **blood glucose level test**.
4. **Dextrose D10: 5ml/kg** if blood sugar is < 60mg/dL. Not to exceed adult dosage of 250ml.

5. **Glucagon**: 1mg IM if the patient's blood sugar is < 60mg/dL and unable to establish an IV.
6. Perform a 2nd **blood glucose level test** to re-evaluate blood sugar 5 minutes after administration of Dextrose or Glucagon. Repeat dose of Dextrose if BG is still < 60mg/dL.
7. **Contact Medical Control** as soon as possible.
8. **Midazolam (Versed)**: **0.1mg/kg IV (Max single dose: 2mg)** over 1 minute for seizure activity. May repeat **Midazolam (Versed) 0.1mg/kg IV** every **5 minutes** as needed to a total of 10mg.
9. **Midazolam (Versed)**: **0.2mg/kg IM (Max single dose: 5mg)** *if the patient is seizing and attempts at IV access have been unsuccessful*. May repeat dose one time in **15 minutes** if the patient is still seizing.
10. **Midazolam (Versed)**: Versed Intranasal may also be used if unable to give IV Versed. (See **intranasal dosing sheet Pg. 45**).
11. Initiate ALS intercept if needed and transport as soon as possible.

Critical Thinking Elements

- Benzodiazepines can cause severe respiratory depression. Monitor the child's respiratory status, SPO2 and or Wave Form Capnography if available. Ventilate if needed.
- Seizure activity usually indicates a serious underlying problem. Check the oxygenation and perfusion of the child along with the blood glucose level and temperature. Treat accordingly.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric Anaphylaxis Protocol		19

Allergic reactions or anaphylaxis in children can cause respiratory distress very quickly in pediatric patients due to the small size of the airway. Bee stings and nuts are the primary reason of anaphylaxis in children.

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.

1. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
2. **Oxygen: 10-15 L/min** via non-rebreather mask or 4-6 L/min via nasal cannula if the patient does not tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary.
3. Initiate ALS intercept and transport as soon as possible.
4. **Epinephrine 1:1000: 0.15mg IM** if the patient has respiratory distress (inspiratory & expiratory wheezing, stridor and/or laryngeal edema), hypotension and/or ALOC.
5. **Proventil (Albuterol): 2.5mg** in 3mL normal saline via nebulizer over 15 minutes.
BLS only: Ipratropium (Atrovent): 0.5mg via nebulizer over 15 minutes. May repeat Albuterol 2.5mg with Atrovent 0.5mg every 15 minutes. In-line nebulizer may be utilized if patient is unresponsive or in respiratory arrest.
6. **Benadryl: (BLS Only) 50mg** chewable tablets for severe itching and/or hives.
7. **Contact Medical Control** as soon as possible.

ILS & ALS Care should be directed at continuing or establishing care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
2. **Oxygen: 10-15 L/min** via non-rebreather mask or 4-6 L/min via nasal cannula if the patient does not tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary.
3. **Epinephrine 1:1000: 0.01mg/kg IM (Max single dose: 0.3mg)** if the patient has respiratory distress (inspiratory & expiratory wheezing, stridor and/or laryngeal edema), hypotension and/or ALOC.
4. **Proventil (Albuterol): 2.5mg** in 3mL normal saline via nebulizer over 15 minutes mixed with **Ipratropium (Atrovent): 0.5mg** via nebulizer over 15 minutes. May repeat **Albuterol 2.5mg** with **Atrovent 0.5mg** every 15 minutes. In-line nebulizer may be utilized if patient is unresponsive or in respiratory arrest.
5. **Benadryl: 1mg/kg** IV or IM (**Max single dose: 50mg**) for severe itching and/or hives.
6. **ALS Only-Solu-Medrol: 1mg/kg** IV (max 125mg)
7. **IV Fluid Therapy: 20mL/kg** fluid bolus if patient is hypotensive. May repeat x2 to a maximum of 60mL/kg (**Note:** Exceeding 40mL/kg requires **Medical Control order**).
8. Transport as soon as possible.
9. Contact the receiving hospital as soon as possible.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric OD, Toxic Exposure Protocol		20

This protocol focuses on two problems. First, exposure to a chemical substance that causes adverse medical effects. Secondly, the protocol covers accidental or intentional ingestion of harmful substances into the body. Toddlers explore their environment with all five senses and ingestion of toxic substances is common for this age group. The adolescent age group deals mainly with intentional overdoses due to attempted suicide or recreational pharmaceuticals & alcohol use.

1. If the scene is considered a *Hazardous Materials* incident, do not treat patients unless they are decontaminated or proper precautions have been implemented to protect EMS personnel.
2. In the event that the patient has not been decontaminated when EMS makes patient contact, removing all of patient's clothing takes away 80-90% of the contaminated materials. Get patient to decontamination area as soon as possible.
3. If there is no patient contact but EMS has determined this to be a *Hazardous Materials* incident, **do not enter the scene under any circumstances**. Refer to PAEMS *Disaster Protocols*.

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.

1. Consider possible scene & patient contamination and follow agency safety procedures.
2. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
3. **Oxygen: 10-15 L/min** via non-rebreather mask or 4-6 L/min via nasal cannula if the patient cannot tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary.

ILS & ALS Care should be directed at continuing or establishing care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. Consider possible scene & patient contamination and follow agency safety procedures.
2. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
3. **Oxygen: 10-15 L/min via non-rebreather mask or 4-6 L/min** via nasal cannula if the patient does not tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary and have suction readily available.
4. **IV Fluid Therapy: 20mL/kg** fluid bolus if the patient is hypotensive. May repeat bolus x 2 to a maximum of 60mL/kg (**Note:** Exceeding 40mL/kg requires **Medical Control order**).
5. If patient is seizing, follow the *Pediatric Seizure Protocol*.
6. **Narcan: 0.1mg/kg IV/IM//IN (Max single dose: 2mg)** if suspected narcotic overdose.
7. Initiate ALS intercept if needed and transport as soon as possible.
8. **Contact Medical Control** as soon as possible.
9. **ALS Only- Sodium Bicarbonate: 1mEq/kg IV (Max single dose: 50meq) (with Medical Control order only)** if known tricyclic antidepressant (TCA) or Aspirin (ASA) overdose.
10. **ALS Only-** If the patient has signs & symptoms of *organophosphate poisoning* or *nerve agent* exposure, **contact Medical Control:**
 - i. Ensure that the patient has been decontaminated prior to transport.
 - ii. **Atropine: 0.02mg/kg IV (Max single dose: 2mg)** or **Atropine: 0.05mg/kg IM (Max single dose: 2mg)** every 5 minutes until symptoms are suppressed.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric Pain Protocol		21

Pain, and the lack of relief from the pain, is one of the most common complaints among patients. Pediatric pain must not be ignored and must be identified and treated if appropriate. The prehospital provider must use clinical observations and a pain scale to rate the pain of the child.

First Responder & BLS Care should focus on the reduction of the patient’s anxiety due to the pain.

1. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
2. Assess level of pain using the *Pain Assessment Scale (0-10)* or the *Wong-Baker Faces Pain Rating Scale*.
3. Place patient in a position of comfort.
4. Reassure the patient.
5. Use distraction therapy to help reduce the patient’s anxiety (e.g. stuffed animals, discussing favorite foods, toys, etc.)
6. Consider ice or splinting.
7. Reassess level of pain using the approved pain scale.

ILS & ALS Care should focus on the reduction of the patient’s anxiety due to the pain.

Fentanyl: 1mcg/kg IV over 2 minutes for pain (**Max single dose: 50mcg**). **Fentanyl 1mcg/kg** may be repeated every 5 minutes. (Total of 100 mcg). **Fentanyl:** Fentanyl Intranasal may also be used if unable to give IV Fentanyl. (See intranasal dosing sheet in the Prehospital Care Manual).

Fentanyl	1mcg/kg IV over 2 minutes for pain (max single dose: 50mcg). Fentanyl 1mcg/kg may be repeated every 5 minutes. (Total of 100 mcg).
	If unable to establish IV access , may administer Intranasal Fentanyl. (See intranasal dosing sheet in the Prehospital Care Manual).

Critical Thinking Elements

- Consider sucrose for infants from birth to 4 months for minor procedural pain, or for additional pain control when used with other pharmacologic agents.
 - Apply directly onto the infant’s anterior tongue and immediately provide the infant with a pacifier for non-nutritive sucking, OR
 - Dip the tip of a pacifier into the sucrose solution and provide to the infant.
 - If pacifier not available, may use tip of a gloved finger to apply.
 - A maximum of 3 doses may be given in one hour.

Note: Do not administer sucrose solution by bottle or through a nipple. Sucrose solution must be absorbed via the mucous membranes and not swallowed.
- Closely monitor the patient’s airway – have BVM and suction readily available.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Routine Pediatric Trauma Care		22

The majority of pediatric contacts the prehospital professional will face involve traumatic injuries. Trauma care in the pediatric patient must be aggressive, due to the child's ability to compensate and mask otherwise obvious signs and symptoms of shock. Early recognition of potential life-threatening injuries due to trauma will help save the pediatric patient.

In addition, pediatric patients may not always have obvious injuries. The anatomical position and size of internal organs are drastically different compared to the adult trauma patient. Children may not bruise or show marks of impact, thus disguising underlying life-threatening problems. When the pediatric patient presents as a possible trauma patient, treat them as such. Stay within the "platinum 10 minutes" of scene time, effectively immobilize the spine, keep the child warm and treat pain and anxiety.

EMR Care, BLS Care, ILS Care, ALS Care

1. Scene Assessment (Scene Size-Up)

- a. Ensure scene safety – identify any hazards (e.g. fire, downed power lines, unstable vehicle, leaking fuel, weapons).
- b. Determine the number of patients.
- c. Identify the **mechanism of injury** (gunshot wound, vehicle rollover, high speed crash, ejection from the vehicle).
- d. Identify special extrication needs, if any.
- e. Call for additional resources if needed.

2. Primary Survey (Initial Assessment)

- a. *The purpose of the primary assessment is for the prehospital provider to rapidly identify and manage life-threatening conditions:*
- b. Obtain a general impression of the patient's condition.
- c. Assess, secure and maintain a patent airway while simultaneously using C-spine precautions.
- d. Assess breathing and respiratory effort:
 - i. Approximate respiratory rate.
 - ii. Assess quality of respiratory effort (depth of ventilation and movement of air).
 - iii. **Oxygen:** 15 L/min via non-rebreather mask. Be prepared to suction the airway and support the patient's respirations with BVM if necessary.

3. Primary Survey (Initial Assessment) (continued)

- a. Assess circulation:
 - i. Evaluate carotid and radial pulses.
 - ii. Evaluate skin color, temperature and condition.
 - iii. Immediately control major external bleeding.
- b. **Critical Decision** (based on mechanism of injury & initial exam):
 - i. Limit scene time to 10 minutes or < if the patient has a significant mechanism of injury or meets "Load & Go" criteria.
- c. Determine disability:
 - i. **T – Tone**
 - ii. **I – Interactiveness**
 - iii. **C – Consolability**
 - iv. **L – Look/Gaze**

v. S – Speech/Cry

- d. Expose the patient:
 - i. Cut the patient’s clothing away quickly to adequately assess for the presence (or absence) of injuries.

4. Secondary Survey (Focused History & Physical Exam)

- a. *The secondary survey is a head-to-toe evaluation of the patient. The object of this survey is to identify injuries or problems that were not identified during the primary survey.*
- b. Examine the head:
 - i. Search for any soft tissue injuries.
 - ii. Palpate the bones of the face & skull to identify deformity, depression, crepitus or other injury.
 - iii. Check pupils for size, reactivity to light, equality, accommodation, roundness and shape.
- c. Examine the neck:
 - i. Examine for contusions, abrasions, lacerations or other injury.
 - ii. Check for JVD, tracheal deviation, deformity.
 - iii. Palpate the c-spine for deformity & tenderness.
- d. Examine the chest:
 - i. Closely examine for deformity, contusions, redness, abrasions, lacerations, penetrating trauma or other injury.
 - ii. Look for flail segments, paradoxical movement & crepitus.
 - iii. Auscultate breath sounds.
 - iv. Watch for supraclavicular and intercostals retractions.
- e. Examine the abdomen:
 - i. Examine for contusions, redness, abrasions, lacerations, penetrating trauma or other injury.
 - ii. Palpate the abdomen and examine for tenderness, rigidity and distention.
- f. Examine the pelvis:
 - i. Examine for contusions, redness, abrasions, lacerations, deformity or other injury.
 - ii. Palpate for instability and crepitus.

5. Secondary Survey (Focused History & Physical Exam) (continued)

- a. Examine the back:
 - i. Log roll with a minimum of 2 rescuers protecting the spine.
 - ii. Look for contusions, abrasions, lacerations, penetrating trauma, deformity or any other injury.
 - iii. Log roll onto long spine board with padding or approved pediatric spinal immobilization device.
- b. Examine the extremities:
 - i. Examine for contusions abrasions, lacerations, penetrating trauma, deformity or any other injury.
 - ii. Manage injuries en route to the hospital.
- c. Neurological exam:
 - i. Calculate Glasgow Coma Scale (GCS)
 - ii. Reassess pupils
 - iii. Assess grip strength & equality and sensation.
 - iv. Calculate Revised Trauma Score (RTS)
- d. Vital signs:
 - i. Blood pressure

- ii. Pulse
- iii. Respirations
- iv. Pulse Oximetry
- e. History:
 - i. Obtain a SAMPLE history if possible.
 - ii. Signs & symptoms
 - iii. Allergies
 - iv. Medications
 - v. Past medical history
 - vi. Last oral intake
 - vii. Events of the incident

6. Secondary Survey (Focused History & Physical Exam) (continued)

7. Interventions (en route)

- a. Cardiac monitor
- b. Blood glucose level
- c. IV access / fluid bolus
- d. Wound care
- e. Splinting

8. Monitoring and Reassessment (Ongoing Assessment)

9. Evaluate effectiveness of interventions

10. Vital signs every 5 minutes

11. Reassess mental status (GCS) every 5 minutes

12. CONTACT MEDICAL CONTROL AS SOON AS POSSIBLE

Critical Thinking Elements

- Prompt transport with EARLY Medical Control contact & receiving hospital notification will expedite the care of the trauma patient.
- IVs should be established en route to the hospital thereby not delaying transport of critical trauma patients (unless scene time is extended due to prolonged extrication).
- Trauma patients should be transported to the closest most appropriate Trauma Center. Medical Control should be contacted immediately if there is ANY question as to which Trauma Center the patient should be transported to.
- Children are prone to hypothermia in traumatic situations – keep the patient warm!!!!

Pediatric Glasgow Coma Scale

ACTIVITY	SCORE	INFANTS	CHILDREN
Eye Opening	4	Spontaneous	Spontaneous
	3	To speech or sound	To speech
	2	To painful stimuli	To painful stimuli
	1	None	None
Verbal	5	Appropriate words or sounds, social smile, fixes and follows	Oriented
	4	Cries, but consolable	Confused
	3	Persistently irritable	Inappropriate words
	2	Restless, agitated	Incomprehensible sounds
	1	None	None
Motor	6	Spontaneous movement	Obeys commands
	5	Localizes to pain	Localizes to pain
	4	Withdraws to pain	Withdraws to pain
	3	Abnormal flexion (decorticate)	Abnormal flexion (decorticate)
	2	Abnormal extension (decerebrate)	Abnormal extension (decerebrate)
	1	None	None
13-15 Minor head injury 9-15 Moderate head injury ≤ 8 Severe head injury / Coma			

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Suspected Child Maltreatment		26

Illinois state law mandates that EMS providers report any suspicious acts of suspected maltreatment. There is no profile of the “typical” family in which abuse is taking place. Maltreatment of children affects all socio-economic classes. As EMS professionals, we need to be aware of the warning signs, treat the injuries of the child and report accordingly.

EMR Care, BLS Care, ILS Care, ALS Care

1. Consider scene safety issues:
 - a) If the offender is present and interferes with transportation of the patient, or is influencing the patient’s acceptance of medical care, contact law enforcement and Medical Control for consultation on the appropriate action to take.
 - b) If the parent/guardian refuses to allow transportation of the child, contact law enforcement and Medical Control for consultation on the appropriate action to take.
2. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
3. Treat obvious injuries or illnesses.
4. Survey the scene for evidence of factors that could adversely affect the child’s welfare:
 - a) Environmental
 - b) Interaction with parents/guardians
 - c) Discrepancies in the history of events
 - d) Injury patterns inconsistent with history of events or anticipated motor skills based on the child’s growth and development stage.
 - e) Signs of intentional injury or emotional harm.
5. Transport regardless of extent of injuries.
6. Upon arrival at the ED, notify the receiving physician or nurse of the suspected maltreatment.
Remember – healthcare workers (including EMTs/Paramedics) are mandated by Illinois state law to report cases of suspected abuse or neglect to the Department of Children and Family Services (DCFS) by calling 1-800-252-2873.
7. **Thoroughly document** the child’s history & physical exam findings.
8. The following information / telephone numbers regarding services available to victims of abuse shall be offered to all victims of abuse:

Center for Prevention of Abuse Phone (309)691-0551

Crime Victims Compensation Phone (312)814-2581 or (800)228-3368 TTY (312)814-3374

Illinois Child Abuse Hotline Phone (800)252-2873 TTY (800)358-5117

Critical Thinking Elements

- At no time should EMS confront the caregivers about the abuse.
- Do not make accusations on the PCR. Document objective physical findings, not opinion.
- A copy of the *Manual for Mandated Reporters* can be downloaded at www.state.il.us/dcf.
- Willful failure to report suspected incidents of child abuse/neglect is a misdemeanor (1st violation) or a class 4 felony (2nd or subsequent violations).
- Reports must be confirmed in writing to the local investigation unit within 48 hours of the Hotline call.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Suspected SIDS		27

Sudden Infant Death Syndrome (SIDS) and the death of a child are among the most difficult patient care experiences for the prehospital professional. SIDS is the leading cause of infant mortality in the United States and the causes are not known.

The death of a child is a horrible event and creates difficult emotional issues for the caregivers as well as for the prehospital professional. The infant may be in the care of a parent/caregiver or babysitter at the time of death and may not be at home. Absence of one or both parents may complicate field management and interactions at the scene (PEPP 2001).

EMR Care, BLS Care, ILS Care, ALS Care

1. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
2. **If obvious signs of biological death are present** (*pulseless, apneic, cold skin, frothy/blood tinged fluid in the mouth, lividity, dark red mottling on the body, rigor mortis*)
 - a) Confirm absence of breathing and pulse.
 - b) Confirm asystole in two (2) or more leads.
 - c) **Contact Medical Control** and follow procedures for death at scene.
 - d) Provide for the needs of the family:
 - Have at least one prehospital professional stay with the family until a support network is established.
 - Contact support personnel:
 - ❖ Clergy
 - ❖ Other family members
 - ❖ Friends
 - ❖ Professional counselors
3. Consider the possibility of child maltreatment:
 - a) Refer to *Suspected Child Maltreatment Protocol*.
 - b) Obtain past medical history and the history of events.
 - Refrain from asking judgmental or leading questions.
 - Do not place blame or accusations.
4. Consider CISM for prehospital personnel.

Critical Thinking Elements

- The decision of staying on scene or transporting a dead infant to the ED is a difficult one. Consider these factors:
 - a) Could this be a crime scene?
 - b) Am I giving false hope to the family?
- The prehospital caregiver cannot determine the true cause of death in an infant. Therefore, do not rush to judgment. Treat every caregiver as a grieving parent regardless of the situation.
- There are nearly 3000 SIDS cases per year in the United States:
 - a) 90-95% of SIDS cases are less than 6 months old.
 - b) Premature infants are at higher risk for SIDS
 - c) SIDS cases occur more frequently in males & during the winter months.
 - d) 5% of SIDS cases are actually due to child neglect.