# Pediatric Patient Assessment

**SCOPE:**  
Poudre Valley Hospital EMS and represented Northern Colorado services [See page 1]

**PURPOSE:**  
To define pediatric assessment

**PROCEDURES AND GUIDELINES:**

A. Definition
   1. Pediatric patients are defined as age < 14 years.
   2. Neonate: birth to 1 month
   3. Infant: 1 month to 1 year
   4. Toddlers: 1-5 years
   5. School age: 6-14 years

B. Primary assessment
   1. Scene size-up, mechanism of injury/illness
   2. Spine precautions if indicated.
   4. Airway: Patency, obstruction, foreign body
   5. Breathing: rate, depth, chest rise, lung sounds, equality, work of breathing (retractions, nasal flaring, grunting, tripodding and head bobbing).
   6. Circulation: heart rate, regularity, quality, capillary refill, blood pressure, skin color and temperature.
   7. Disability: GCS; Pupil size and reactivity; eye movements; Motor (posturing, seizures, paralysis, strength), Sensory (numbness, tingling, sensory level), fontanels (flat, depressed, or bulging).
   8. Expose patient completely as needed to facilitate exam but try to prevent hypothermia
   9. Adjuncts: Pulse oximetry, capnography, blood glucose, temperature monitor as indicated.

C. Expanded Exam as Indicated
   1. When appropriate utilize parent/guardian to assist.
   2. HEENT: Blood/fluid from ears, nose, mouth or eyes, pupils, lacerations, eye movements, conjunctiva, swelling, tenderness, bruising, rashes, deformity, wounds, mucous membranes, presence of tears, drooling, fontanel and trauma.
   3. Neck: swelling/mass, JVD, crepitus, tracheal position, subcutaneous air, retractions, bleeding, wounds, tenderness, bruising, deformity, hoarseness and trauma.
   4. Chest: Crepitus, lung sounds, subcutaneous air, paradoxical movement, instability, bleeding, heart sounds, wounds, tenderness, swelling, bruising, retractions, diaphragmatic breathing, surgical scars and trauma.
   5. Abdomen: Rigidity, guarding, distention, bleeding, wounds, tenderness, bruising, rebound, surgical scars and trauma.
7. Extremities: CMS, range of motion, pulse equality, edema, bleeding, wounds, deformity, crepitation, strength, sensory level.
9. Neurological: GCS, cranial nerves, sensory level, reflexes, motor strength, pupils, eye movements. Interacting appropriately
10. Skin: rashes, color, temperature, skin turgor, capillary refill.

D. History
1. Onset, progression, does anything make the symptoms better or worse, previous episodes, loss of consciousness, quality, radiation, severity, toxic exposure, sexual activity, pregnancy, drug and alcohol use.
2. Is history consistent with exam, consider non-accidental trauma
3. Surgeries, medications, dosages, allergies, last oral intake, last bowel movement, urine output, immunizations

E. Reassessment
1. Reassess after interventions and more frequently with unstable patients

<table>
<thead>
<tr>
<th>Age</th>
<th>Weight</th>
<th>HR range</th>
<th>HR ave./min.</th>
<th>Resp. rate range</th>
<th>BP (sys) range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premie or &lt;3 kg</td>
<td>&lt;3 kg</td>
<td>120-160</td>
<td>140</td>
<td>40-60</td>
<td>40-60</td>
</tr>
<tr>
<td>Term newborn 1-7 days</td>
<td>3 kg</td>
<td>90-165</td>
<td>125</td>
<td>40-60</td>
<td>60-80</td>
</tr>
<tr>
<td>1 wk - 3 wks</td>
<td>3 kg</td>
<td>105-180</td>
<td>150</td>
<td>40-60</td>
<td>60-80</td>
</tr>
<tr>
<td>1 month</td>
<td>4 kg</td>
<td>120-180</td>
<td>150</td>
<td>40-60</td>
<td>60-95</td>
</tr>
<tr>
<td>6 mos.</td>
<td>8 kg</td>
<td>110-185</td>
<td>140</td>
<td>25-40</td>
<td>65-105</td>
</tr>
<tr>
<td>12 mos.</td>
<td>10 kg</td>
<td>110-170</td>
<td>135</td>
<td>20-30</td>
<td>70-110</td>
</tr>
<tr>
<td>2 yrs.</td>
<td>12 kg</td>
<td>90-150</td>
<td>120</td>
<td>20-30</td>
<td>70-110</td>
</tr>
<tr>
<td>3 yrs.</td>
<td>14 kg</td>
<td>75-135</td>
<td>110</td>
<td>20-30</td>
<td>80-110</td>
</tr>
<tr>
<td>4 yrs.</td>
<td>16 kg</td>
<td>75-135</td>
<td>110</td>
<td>20-30</td>
<td>80-110</td>
</tr>
<tr>
<td>5 yrs.</td>
<td>18 kg</td>
<td>65-135</td>
<td>100</td>
<td>20-30</td>
<td>80-110</td>
</tr>
<tr>
<td>6 yrs.</td>
<td>20 kg</td>
<td>60-130</td>
<td>90</td>
<td>12-25</td>
<td>90-115</td>
</tr>
<tr>
<td>8 yrs.</td>
<td>26 kg</td>
<td>60-120</td>
<td>90</td>
<td>12-25</td>
<td>90-115</td>
</tr>
<tr>
<td>10 yrs.</td>
<td>32 kg</td>
<td>60-120</td>
<td>90</td>
<td>12-25</td>
<td>95-120</td>
</tr>
<tr>
<td>12 yrs.</td>
<td>42 kg</td>
<td>60-120</td>
<td>85</td>
<td>12-25</td>
<td>95-120</td>
</tr>
<tr>
<td>14 yrs.</td>
<td>50 kg</td>
<td>60-120</td>
<td>85</td>
<td>12-18</td>
<td>100-130</td>
</tr>
</tbody>
</table>

ADDITIONAL CONSIDERATIONS:
A. Patient should remain NPO
B. Use Broselow Tape if available

REFERENCES: