# Quick Reference for Assessment, Stabilization and Transfer of Pediatric Patients

**Step 1**Initial
Assessment



Step 2
Primary
Interventions



Step 3
Secondary
Survey and
Interventions



Step 4
Assess for
High Risk
Factors



Step 5
Disposition
and
Consultation

#### Appearance Triage

Unresponsive, Limp/Apathetic, Inconsolable, Weak or hoarse cry

ert, Tracking with eyes, Strong muscles, Appropriate interactions (may include



Breathing Triage

Central cyanosis, Absent or labored breathing, Obstructed (stridor, blood/vomit/foreign body)

Excess secretions, Wheezing, Accessory muscle use

Normal respiratory effort and rate

Circulation Triage
Pallid or mottled, Cyanotic
Mild delay in capillary refill or cool digits
Pink, Normal

**Airway**—Position and ventilate as needed with Bag-Valve-Mask. Consider supraglottic airway devices for airway stabilization. Intubate if needed.

Breathing—Provide oxygen, bronchodilators (e.g. albuterol, epinephrine); monitor breathing over time.

**Circulation**—Treat signs of hypoperfusion aggressively with intravenous fluids and/or blood. An elevated heart rate can indicate early hypovolemic shock.

Disability—Assess neurologic status (including sensation and motor) and need for cervical spine protection.

Expose—Remove clothing, jewelry and contact lenses. Protect from heat loss, hypothermia is common.

Analgesia—Titrated opioids and non-opioid analgesia (analgesia/antipyretics); consider ibuprofen 10 mg/kg (>6 months of age without renal compromise), acetaminophen 15 mg/kg, oral oxycodone 0.1 mg/kg, intravenous/oral/nasal morphine 0.1 mg/kg (or equivalent agents).

**Fluids**—Obtain IV or IO access, including second access if critically ill, see table at right for specific types of fluid and rates.

**Family**—Keep family/guardian with patient to degree possible. Identify/notify caregivers as required.

**Genitourinary**—Target urine output to 0.5-1 mL/kg/hr. Insert indwelling catheter as needed. **Gastrointestinal**—Orogastric tube for all intubated patients to decompress stomach.

**Glucose**—Monitor point of care glucose in all significantly ill/injured children. Correct hypoglycemia according to reference table at right.

**History**—Mechanism and time of injury, treatments pre-hospital, underlying diseases, medications/allergies, social history, immunization history.

# CONSIDER CONSULTATION FOR PATIENTS YOUNGER THAN 8 YEARS OR UNDERLYING COMPLEX MEDICAL PROBLEMS

- Hypoxia or respiratory distress
- Multiple injuries or high-energy mechanism
- Signs of hypoperfusion/shock
- Altered mental status



If high risk factors present, transfer to an age appropriate referral center

- Review child's illness/injuries history
- Determine need for referral (consultation if unsure)
- · Arrange appropriate admission or transfer



### REFERENCE INFORMATION

Age (years)		Respiration Rate	Heart Rate
Infant	Birth to 1 year	30 – 60	100 – 160
Toddler	1 to 3 years	24 – 40	90 – 150
Preschooler	3 to 6 years	22 – 34	80 – 140
School Age	6 to 12 years	18 – 30	70 – 120

#### **Equipment Size Estimation Formulas**

ET Cuffed	$(Age \div 4) + 3.5$	Foley/Suction Catheter	2x ET size
ET Uncuffed	(Age ÷ 4) + 4	Naso/Orogastric Tube	3x ET size
ET Depth (cm)	3x ET size	Chest Tube	4x ET size

#### **Weight Estimate Formulas**

Estimate weight ONLY if actual weight/length-based calculation unavailable!

Infant: (Months  $\div$  2) + 4 = kg

 $D_{50}W$ 

Child (≥ 1 yr): (Years x 2) + 10 = kg

## Fluid Management

**Goals of Fluid Resuscitation:** Normal vital signs, Improved signs of perfusion, Urine output 0.5-1 mL/kg/hr

output 0.5-1 mL/kg/m				
Туре	Fluid	Rates and Notes		
Resuscitation Fluids	NS	Initial bolus 20 mL/kg, over 30-60 min, repeat as needed		
	PRBCs	<ul> <li>Hemorrhagic shock</li> <li>10 mL/kg if not responding to initial 20 mL/kg of crystalloid</li> <li>May use O Neg (or O Pos for males) until type-specific or cross matched available</li> </ul>		
Maintenance Fluids <i>Maximum of</i> 2400 mL/day	$D_{10}W$	Newborn (first 48 hrs): 3 mL/kg/hr		
	D <sub>10</sub> ½NS	Neonate (28 days or less): 4 mL/kg/hr		
	D <sub>5</sub> NS	Pediatric patient without renal compromise: • 4 mL/kg/hr first 10 kg • 2 mL/kg/hr next 10 kg • 1 additional mL/kg/hr for each kg over 20 kg		
c	$D_{10}W$	Neonate with BG < 45 give 3 mL/kg IV or IO over 15-30 min		

< 4 years with BG < 60 give 2 mL/kg IV or IO over 15-30 min ≥ 4 years with BG < 60 give 1 mL/kg IV or IO over 15-30 min