Purpose: To provide guidance to practitioners caring for pediatric patients during a disaster.
Disclaimer: This guideline are not meant to be all inclusive, replace an existing policy and procedure at a hospital or substitute for clinical judgment. These guidelines may be modified at the discretion of the healthcare provider.

Common Pediatric Inpatient Treatment and Monitoring Interventions

INTERVENTION	PEDIATRIC CAVEATS/RATIONALE

Vital Signs:
• Vital signs at least every 4 hours (T, HR, RR)
• BP every 8 hours, if stable
• Pulse oximetry if on O_2
  o Continuous preferred
  o At least every 4 hour checks
• HR may be continuously monitored via pulse oximetry
	Vital Signs:
	• Vital signs vary greatly with age:

Age	Average HR (beats/min)	Average RR (breaths/min)	Average Systolic BP (mm/Hg)
Newborn 0-1 month	100-180	30-60	>60
Infant 1-12 months	100-160	30-60	>70
Toddler 1-3 years	90-150	24-40	>70
Pre-School Age 3-5 years	80-140	22-34	>75
School Age 5-11 years	70-120	18-30	>80
Adolescent 13-18 years	60-100	12-16	>90

• Best predictors of shock:
  o Tachycardia is first sign of shock
  o Altered mental status
  o Low urine output
  o Capillary refill (not well-validated)
• Infants can't increase cardiac stroke volume, thus tachycardia early sign of dehydration

Assessments:

- Obtain head circumference on all children under 2 years of age.
  - Compare to normal for age See: CDC Grow Charts: http://www.cdc.gov/growthcharts
  - If head injury present, obtain measurements daily
- Assess patient's fontanels on all children under the age of 12 months.
- Obtain abdominal circumference on all abdominal trauma patients
  - Compare to normal for age
  - Obtain measurements daily
- Obtain daily weight (kilograms only)
- Bedside glucose check on all infants who are cold and tachypneic or children with altered mental status.
- PEWS (Pediatric Early Warning Score)
  - Complete every 4 hours or more often as indicated on card

Assessments:

- Head circumference is an important measurement to determine swelling in the absence of more sophisticated monitoring options.
- Abdominal circumference is an important measurement to determine pathological changes within the abdomen.
- Fontanels:
  - Assess when infant is not crying
  - Anterior fontanel closes at 12-18 months old
  - Posterior fontanel closes within first 3 months
  - Fontanels should be flat, not depressed or bulging
    - Bulging, firm, tense: sign of increased intracranial pressure
    - Sunken, depressed: sign of dehydration
- Hypoglycemia in children:
  - Infants are at high risk of hypoglycemia when cold or stressed
  - Hypoglycemia:
    - < 60 mg/dL in an infant and child (source: PALS)
    - <50 mg/dL in a neonate (source: STABLE)
  - See Treatment: Medication section for dextrose dosing for hypoglycemia
- PEWS Score: (see next page)
  - Can help nurses assess pediatric patients objectively
  - Using vital signs, child's behavior, cardiovascular and respiratory symptoms

PEDIATRIC EARLY WARNING SCORE CARD					
	3	**2**	**1**	**0**	**SCORE**
Behavior	• Lethargic, confused, or • Reduced pain response	• Irritable or agitated and NOT consolable	• Sleeping or • Irritable and consolable	• Playing • Appropriate for patient	
Cardiovascular	• Grey or • Capillary refill ≥5 or • Tachycardia 30 above normal or • Bradycardia for age	• Capillary refill 4 seconds or • Tachycardia of 20 above normal parameters	• Pale • Capillary refill 3 seconds	• Pink • Capillary refill 1-2 seconds	
Respiratory	• 5 below normal with retractions and/or • ≥ 50% FiO_2	• >20 above normal • Using accessory muscles or • 40%-49% FiO_2 or • ≥ 3 LPM	• >10 above normal • Using accessory muscles or • 45-40% FiO_2 or ≥ 2 LPM • Any initiation of O_2	• Normal for age • No retractions	
Add 2 points for frequent interventions (suction, positioning, O_2 changes or multiple IV attempts)					
TOTAL					

** Parental concern should be an automatic call to the Rapid Response Team
Score ≥ 7: Assess every 30 minutes **Score = 6: Assess every 1 hour**
Score = 5: Assess every 1-2 hours **Score 0-4: Assess every 4 hours**

Pain:

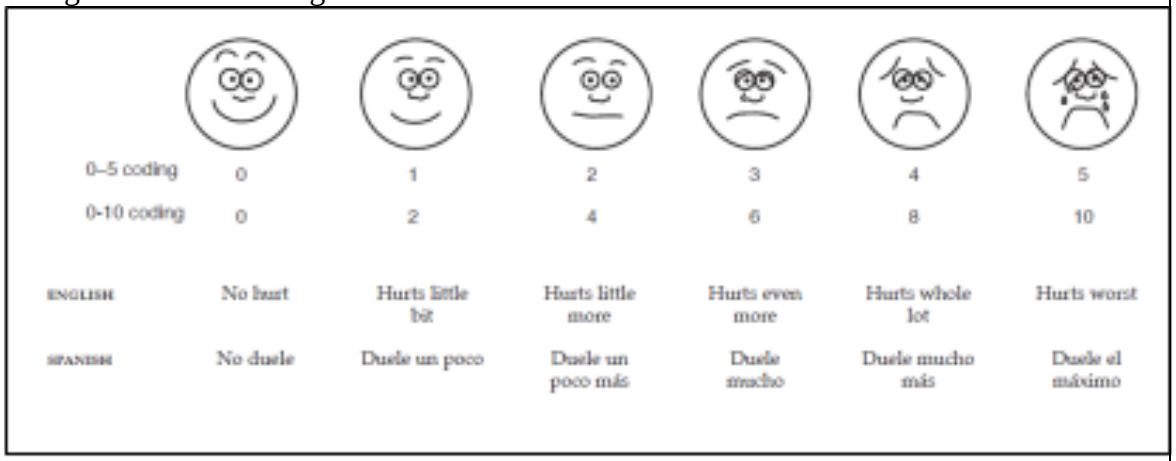
- Need to use age/developmental appropriate pain scales
- Examples:
  - Faces Scale for children > 3 years old
  - FLAAC Scale for children < 3 years old

Comfort measures

- Oral glucose drops effective for neonates
- Distract with favorite media, games

Pain:

Wong-Baker Pain Rating Scale:



FLACC Pain Scale:

Category	0	1	2
Face	No particular expression or smile	Occasional grimace or frown, withdrawn, disinterested	Frequent to constant frown, clenched jaws, quivering chin
Legs	Normal position or relaxed	Uneasy, restless, tense	Kicking or legs drawn up
Activity	Lying quietly, normal position, moves easily	Squirming, shifting back and forth, tense	Arched, rigid, or jerking
Cry	No cry (awake or asleep)	Moans, whimpers, occasional complaint	Crying steadily, screams or sobs, frequent complaints
Consolability	Content, relaxed	Reassured by occasional touching, hugging or being talked to, distractible	Difficult to console or comfort

	• Developmentally delayed children may have exaggerated CNS depression with opiates ○ Start with lowest dose and titrate

Intake/Output:
Diet/Nutrition
• Age appropriate diet as tolerated
• Allow to breastfeed as tolerated unless contraindication present
	Intake/Output:
	Diet/Nutrition
	• Check with parents about diet/formula needs.
	• Contraindications to breastfeeding:
	  ○ Mothers who are/have:
	  • +HIV
	  • Active untreated TB
	  • Radioactive milk
	  • Using street drugs
	  • Herpes simplex lesions on breasts
	  • Taking anti-metabolites or chemotherapeutic agents, and small number of other medications until they clear from the milk
	• Age appropriate diet:
	  ○ Newborn:
	  • Breast or bottle fed, 2-3 ounces/feeding every 2-3 hours
	  ○ Infants:
	  • 2-4 months:
	  • Breast or bottle fed only, 3-4 ounces/feeding every 3-4 hours
	  • 4-6 months:
	  • 4-5 ounces/feeding (breast or bottle) 4 times/day
	  • Begin baby food (i.e. rice cereal)
	  • 6-9 months:
	  • 6-8 ounces/feeding (breast or bottle) 4 times/day
	  • Baby food and mashed table food

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9-12 months:

6-8 ounces/feeding (breast or bottle) 4 times /day
Soft bite-sized pieces of food

Toddlers:

Table food is appropriate
Soft bite-sized pieces: Avoid foods that can cause choking (i.e. hot dogs, grapes, chunks of meat)

Preschool:

Regular table food is appropriate
Soft bite-sized pieces: Avoid foods that can cause choking (i.e. hot dogs, grapes, chunks of meat)

School age and adolescent:

Regular table food is appropriate

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Nasogastric / Orogastric tube placement may be needed to decompress the stomach of air after resuscitation or for feedings

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Insertion technique for NG/OG is similar to adults.

Measure the length needed by placing the tip of the catheter at the nose, hold the tube at the earlobe and measure to the xiphoid process. Place a small piece of tape at that measurement to guide your placement depth. Lubricate the tube well. Abdominal x-ray should be done to confirm placement.

<table>
<tr><th colspan="2">OG/NG Tube Size Selection</th></tr>
<tr><td>Infant</td><td>5 F-10 F</td></tr>
<tr><td>Child</td><td>8 F-14 F</td></tr>
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Urine Output:

Assess urine output

Place indwelling urinary catheter if needed.

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<td>
Urine Output:

Normal urine output is at least 1 mL/kg/hr
For catheter placement, use similar technique as with adult placement.
See next page for urinary catheter size selection

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Weigh diapers if strict I/O is required

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<table>
<tr><td colspan="2">Urinary Catheter Size Selection</td></tr>
<tr><td>Newborn / Infant</td><td>5 F-8 F</td></tr>
<tr><td>Toddler/Preschool</td><td>8 F-10 F</td></tr>
<tr><td>School Age</td><td>8 F-12 F</td></tr>
<tr><td>Adolescent</td><td>12 F-14 F</td></tr>
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To weigh diapers:

Subtract total weight from dry diaper weight
1 gm=1 mL urine

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<h2>IV Fluids:</h2>
<u>IV Site selection</u>:

Infants (< 12 months): hand, wrist, antecubital, saphenous, feet, scalp
>12 months: hand, wrist, antecubital

<u>IO Site Selection</u>

Proximal tibia
Distal tibia
Humerus (if sites palpable)
Distal femur (manual IO only)

<u>IV/IO Monitoring</u>

Assess site at least every 2 hours

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<h2>IV Fluids:</h2>
<u>IV Site Selection</u>:

Avoid feet/saphenous for ambulatory children
If available, use a topical anesthetic (e.g., EMLA,LMX). Follow manufacturer’s instructions.

<table>
<tr><td colspan="2">Suggested IV Catheter Sizes</td></tr>
<tr><td>Newborns/Infants</td><td>24 G-22 G</td></tr>
<tr><td>Toddlers/School Age</td><td>24 G-22 G</td></tr>
<tr><td>Adolescents</td><td>22 G-18 G</td></tr>
</table>
<u>IO Needle Sizes</u>

Follow manufacture’s recommendations for needle size for pediatric patients.
Needles for the IO drills are not long enough to use in the distal femur. Manual IO should be used.

<u>IV/IO Monitoring</u>:

IV/IO can infiltrate quickly because of the child’s activity. Careful assessment will minimize infiltrate damage

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○ Ensure you are able to palpate & visualize the site when taping the line • Do not wrap tape circumferentially around an extremity	• Wrapping tape circumferentially around an extremity may cause tissue damage if the IV infiltrates
IV Fluids: Replacement • Birth - 28 days: ○ Bolus 0.9% NS at 10 mL/kg • > 28 days: ○ Bolus 0.9% NS at 20 mL/kg • Suspected cardiogenic shock: ○ Bolus 0.9%NS at 5-10 mL/kg	IV Fluids: Replacement • 0.9% NS Bolus used for fluid replacement or for intravascular expansion to treat shock • May use Lactate Ringers if acidotic • Administer as rapidly as possible without sacrificing IV/IO • May repeat x 3 if for severe dehydration or non-cardiogenic shock
IV Fluids: Maintenance • D5 0.45% NS is standard • Add 20 mEq KCl/Liter if not hyperkalemic • Monitor weight, urine output and electrolytes and adjust rate/composition of IV fluids accordingly • To calculate maintenance rate: ○ Birth-28 days: 80-100 mL/kg/24 hrs ○ >28 days: First 10 kg = 4 mL/kg/hr Second 10 kg = 2 mL/kg/hr Each additional kg = 1 mL/kg/hr	IV Fluids: Maintenance • Maintenance fluids usually contain D5 ○ Provides 17 calories/100 mL and nearly 20% of the daily caloric needs which will prevent ketone production and helps minimize protein degradation • Will lose weight on this regimen if enteral feedings not given also ○ Need to be started on total parental nutrition after a few days of maintenance fluids if enteral feedings are still not possible. (Nelsons, 2011) • Potassium should only be added after renal function is proven to be adequate and patient has voided • Example 23 kg child: 4 mL/hr x 10 kg + 2 mL/hr x 10 kg + 1 mL/hr x 3 kg = 63 mL/hr

Safety: • Ensure crib rails are up at all times when patient is not directly attended to by a caregiver/parent • No extra supplies should be kept in the crib or in reach • Place infant on their back when sleeping • Children under 3 years of age should be placed in a crib	Safety: • Infants can easily roll out of the crib and be injured. • Supplies may be a choking hazard. • Infants sleeping on the back decreases the risk of SIDS • A hospital is not "child proof." Even if a toddler sleeps in a youth or regular bed at home, consider placing them in a crib for their safety.
Treatments: **Medications** <u>Analgesics/Antipyretics</u> • Acetaminophen o 15 mg/kg PO/PR every 4 hrs PRN (max dose in 24 hours=3 gms) • Ibuprofen (infant/child > 6 months) o 10 mg/kg PO every 6 hr PRN	Treatments: **Medications**: Resource: EMSC Pain Management in the Emergency Setting. Acetaminophen: • Advantages o Minimal adverse effects on GI tract or renal function • Disadvantages o Liver toxicity Ibuprofen • Advantages o Inhibits prostaglandin-induced nociception • Disadvantages o May have limited effect on the immediate treatment of acute pain as these agents do not directly block nociceptors. Inactive against already released inflammatory mediators. Side effects include nausea, vomiting, ulcers, platelet dysfunction, liver toxicity

Analgesics	
• Acetaminophen with hydrocodone o <50 kg: 0.1-0.2 mg/kg/dose of hydrocodone every 4-6 hrs (max 10 mg) o >50 kg: 5-10 mg of hydrocodone every 4-6 hrs	Acetaminophen with hydrocodone • Elixer: Hycet/Lortab: 7.5 mg hydrocodone and 325 mg acetaminophen per 15 ml • Tablet: Lorcet/Norco • Advantages o Oral medication o Moderately rapid onset • Disadvantages o Dizziness, sedation, nausea, vomiting, constipation
• Ketorolac (Toradol) o 0.25-1 mg/kg IM/IV/IO every 6 hr PRN o Can be given PO for children >50 kg	Ketorolac: • Advantages o Effective alternative to opioids for treatment of moderate to severe pain. Can be combined with acetaminophen or low-dose opioids for greater analgesia • Disadvantages o Bleeding diathesis, hyperkalemia and depression of renal function, hepatotoxicity
• Morphine o 0.1-0.2 mg/kg IM/IV/IO, every 2-4 hrs PRN	Morphine: • Advantages o Moderately rapid predictable onset. Significant role for patients who need prolonged pain control (e.g., fracture reduction, multiple trauma, sickle cell disease • Disadvantages o Respiratory depression, hypotension, bradycardia, CNS depression, o Avoid patients with renal failure • Monitor for respiratory depression
• Fentanyl o 1-2 mcg/kg/dose IM/IV/IO, IN* every 30-60 minutes PRN	Fentanyl: • Advantages o Rapid onset if given IV/IO, short duration, potent analgesic, better safety

*For IN route, divide dose equally between each nostril	o Profile for renal patients, preferred medication for renal patients • Disadvantages o Respiratory depression, apnea may precede alteration of consciousness chest wall rigidity if given too rapidly. o IN route should not be used with facial trauma due to ineffective absorption.
Antibiotics Children > 28 days • Ceftriaxone o 75 mg/kg IV/IO every 24 hrs o Not for infants < 1 m/o • Clindamycin o 10 mg/kg IV/IO every 6 hrs • Vancomycin o 15 mg/kg IV/IO every 6 hrs • Piperacillin/Tazobactam o 75 mg/kg IV/IO every 6 hrs • Cefepime o 50 mg/kg IV/IO every 8 hours (max: 2 g/dose) • Cefuroxime o Infants and children 28 days and older: 50 mg/kg/dose every 8 hours (max dose: 2000 mg/dose)	Antibiotics • Ceftriaxone o Effective for: UTI, pneumonia, bacteremia o For CNS infections, dose is 100 mg/kg every 24 hrs and Vancomycin should be added • Clindamycin o Treats most skin/soft tissue infections • Vancomycin o Reserve for severe infections o Good for pneumonia with suspected MRSA or resistant *Pneumococcus* o Severe skin/soft tissue infections o Gram-positive bacteremia • Piperacillin/Tazobactam o Intra-abdominal infections
Neonates (birth - 28 days) • Ampicillin 100 mg/kg/day IV/IO divided every 6 hours • Cefotaxime IV/IO	Neonates: • Cefotaxime o Broad spectrum

○ Neonates < 7 days old: 50 mg/kg/dose every 12 hours ○ Neonates 8-28 days: 50 mg/kg/dose every 8 hours ○ Maximum dose: 2000 mg/dose • Cefuroxime IV/IO ○ Neonates < 7 days old: 50 mg/kg/dose every 12 hours ○ Neonates 8-28 days: 50 mg/kg/dose every 8 hours ○ Maximum dose: 2000 mg/dose • Acyclovir ○ ≥ 35 weeks post-conceptual age: 60 mg/kg/day divided every 8 hrs. ○ < 35 weeks post conceptual age: 40 mg/kg/day divided every 12 hrs • Gentamycin 2.5 mg/kg IV/IO every 8 hrs <u>Antivirals</u> • Oseltamivir ○ 2 weeks - 1 year (Use for treatment only): 3 mg/kg/dose every 12 hours x 5 days	• Cefuroxime ○ Use with neonates only if cefotaxime is not available <u>Antivirals:</u> • Oseltamivir ○ Recommended by CDC for hospitalized patients with influenza • Acyclovir ○ Usually reserved for CNS infections

○ > 1 yr (Use for treatment and prophylaxis): 3 mg/kg every 12 hours x 5 days • Acyclovir ○ <12 yrs: 20 mg/kg IV/IO every 8 hrs ○ >12yrs: 10 mg/kg IV/IO every 8 hrs <u>Dextrose:</u> ○ Dextrose 0.5-1 g/kg IV/IO ○ D50W: 1-2 mL/kg IV/IO ○ D25W: 2-4 mL/kg IV/IO ○ D10W: 5-10 mL/kg IV/IO (infants >28 days) ○ D10W: 2 mL/kg IV/IO (birth - 28 days)	<u>Dextrose:</u> ○ Maximum recommended concentration for a bolus administration in children >28 days for hypoglycemia is D25W ○ Maximum recommended concentration for a bolus administration in neonates for hypoglycemia is D10W ○ To convert D50W to D10W • Mix 1 part D50W to 4 parts sterile water or normal saline ○ To convert D50W to D25W • Mix 1 part D50W to 1 part sterile water or normal saline
Other Treatments: Blood Administration: • Replacement with PRBC/ Platelet/Albumin 5%/FFP = 10mL/kg • Assess the child frequently throughout the infusion for a possible transfusion reaction	**Other Treatments:** Blood Administration: • All blood products may be infused through any size IV catheter • Total blood volume varies by weight ○ Approximate volume is 80mL/kg.

Other Considerations: Children with Special Health Care Needs/Children with Functional Access Needs (CSHCN/CFAN): • Tracheostomy Care (established tracheostomy) • G-Tube or J-Tube (established)	Other Considerations: Children with Special Health Care Needs/Children with Functional Access Needs: The parent of a child with special needs will be your best reference for how to manage their care. They will be willing to share their treatment plan and techniques. Some parents will have a resource binder or other reference with them. • Tracheostomy Care: Similar care to adults, wash site gently with warm water as needed. Change tracheostomy ties daily and as needed. • G-Tube/J-Tube: Similar care to adults, wash site gently with warm water as needed. If tube is accidentally dislodged and a replacement tube is not readily available, you may replace with an indwelling urinary catheter. Slide the catheter in gently. There should be minimal resistance. Resource: EMSC CSHCN Reference Guide included in the following two pages

Emergency Medical Services for Children

Children with Special Health Care Needs

- Listen to the caregivers. They know their child best. Inquire about:
  - ***child's baseline abilities***
  - ***devices & medications***
  - ***syndromes/ diseases***
  - ***usual vital signs***
  - ***what is different today***
  - ***symptoms***
- Bring care plans or Emergency Information Forms (EIF) to the hospital with the patient.
- Assess and communicate directly with the child based on developmental age, not chronological age. DO NOT make assumptions about their level of understanding based on their appearance.
- Look for MedicAlert® jewelry or health forms, if usual caregiver is not available.
- Bring necessary specialized equipment and medications into the ED with the child if possible (ventilator, tracheostomy tube or gastrostomy tube, etc)
- Ask caregivers for the best way to move the child, particularly if the child is very prone to fractures, such as in *osteogenesis imperfecta* ('brittle bone disease'). If child suffers a fracture & has a brace or splint on the affected area, leave the brace or splint on & immobilize around it.
- *Down Syndrome* patients may have upper cervical instability and may be more prone to spinal cord injury. Immobilization is important in any mechanism of injury in which there has been significant movement of the neck.
- *Cardiac patients* may have absent pulses in limbs, may be chronically hypoxic or have hypoxic spells. Confirm the baseline assessment with caregiver.

TECHNOLOGY-ASSISTED CHILDREN: Among ***Children with Special Health Care Needs*** is a growing sub-population of children with chronic illnesses who are dependent on medical devices. Several of the most common devices are summarized below with information to assist in the care of children with those devices.

TRACHEOSTOMY: ***Breathing tube into trachea through opening in neck***

Uses: Respiratory problems – narrow or obstructed airways, bronchopulmonary dysplasia (chronic lung disease seen in premature babies), etc.
Neurological or Neuromuscular conditions – brain damage, muscular dystrophy, etc.
May be ventilator dependent totally, part of the time or may breathe on own

Types: Uncuffed – infant & young child; Cuffed – older child (usually >age 8yr) & adolescent
Fenestrated – hole in stem allows breathing through vocal cords to permit talking, or weaning off tracheostomy
May be single tube or have inner cannula, which can be removed & cleaned

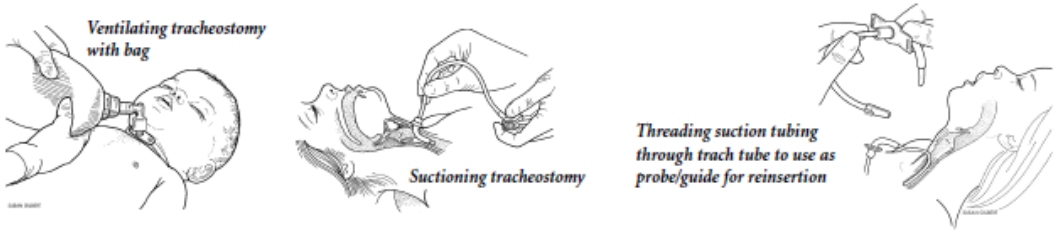
Assessment Issues: Evaluate for DOPE & Infection (tracheal or pulmonary). Reassess pulse/respiratory rates frequently.

- **Displaced** – total or partial removal of tube
- **Obstructed** – mucus plug, blood, foreign body, or moved against soft tissues
- **Pulmonary problems** – pneumothorax, pneumonia, reactive airway, aspiration
- **Equipment** – ventilator malfunction, oxygen depletion, tubing kinked

Treatment:

BLS: **If on ventilator**, disconnect and attempt to oxygenate with bag using tracheostomy adaptor (if present) or infant mask over trach opening or stoma (hole in neck). **Call ALS** if available, especially if respiratory distress present.
If not on ventilator, administer oxygen with bag or infant mask over trach as needed
Suction as needed – no more than 10 sec. Insert no more than 3/4 length of neck
If unable to suction because of thick secretions, request caregiver to instill 2-3 ml saline, then suction
If inner cannula present, request that caregiver remove and clean with saline
If unable to ventilate, cover opening with gauze and ventilate with bag and mask over mouth & nose

ALS: **If above does not work**, may remove tube and either reinsert new tube or use endotracheal tube of same approximate size. **If unable to find opening,** may thread suction catheter through new tracheostomy tube or endotracheal tube and use catheter tip to probe opening, sliding tube over catheter into opening and then removing catheter. Attempt to ventilate and check breath sounds.



NOTE: **This reference card should not replace or supercede regional prehospital medical treatment protocols.** Development and printing of this card has been supported in part by a federal grant from the Assistant Secretary for Preparedness & Response (ASPR), U.S. Department of Health & Human Services. This card was adapted from a document developed by New York State EMSC. Drawings are primarily by Susan Gilbert and are adapted from the Teaching Resource for Instructors in Prehospital Pediatrics (TRIPP).

SEPTEMBER 2007 Illinois EMSC http://www.luhs.org/EMSC

CENTRAL INTRAVENOUS CATHETERS: *Indwelling intravenous access*

Uses: Medication administration, parenteral (IV) hydration/nutrition administration

Types: Totally Implanted (such as Mediport ®); multilumen catheters (such as Hickman® or Broviac® catheters); or peripherally inserted central catheter (PICC) lines

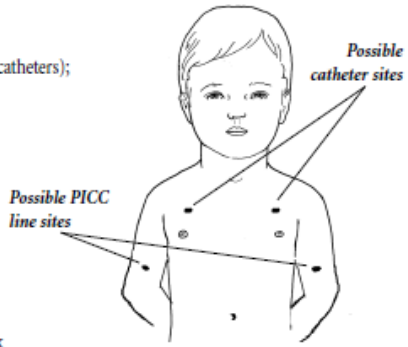
Assessment Issues: Evaluate for DOPE & Infection

- **Displaced**– total or partial dislodgement or movement out of vein into internal tissues
- **Obstructed** – blood clot, protein, crystallized medications / IV nutrition
- **Pericardial Tamponade** - fluid in the pericardial sac due to perforation by catheter
- **Pulmonary problems** – pneumothorax, pulmonary embolism from clot or catheter shear
- **Equipment** – tubing kinked or cracked, infusion pump failure

Treatment:

BLS: Direct pressure if bleeding at site or clamp/tie if tubing leaking. Administer oxygen as needed.

ALS: Aspirate / flush only if permitted by local protocols. Administer IV or IO fluids if signs of shock



CSF SHUNT *(Ventriculoperitoneal or V-P shunt): Drains excess fluid from brain*

Uses: Post meningitis, brain injury/surgery/tumors, hydrocephalus ("water on the brain")

Types: Polyethylene tubing with reservoir from brain ventricles to abdomen or heart

Assessment Issues: Evaluate for infection and signs of increased intracranial pressure:
Apnea, Headache, Nausea, Vomiting, Lethargy, Drowsiness, Downward Deviation of Eyes

Treatment:

BLS & ALS: Administer oxygen as needed. Perform mild hyperventilation if signs of brain herniation such as unresponsiveness with unequal pupils, fixed dilated or unresponsive pupils, or increased BP and decreased heart rate.

Shunt from ventricle of brain to abdominal cavity

GASTROSTOMY: *Feeding tube*

Uses: Total or enhanced feeding & / or medication administration
Abdominal/gastrointestinal problems
Neurological or neuromuscular – brain damage, muscular dystrophy, etc.

Types: Button/catheter type gastrostomy (G) tube – (stomach) or jejeunal (J) tube – (intestine)

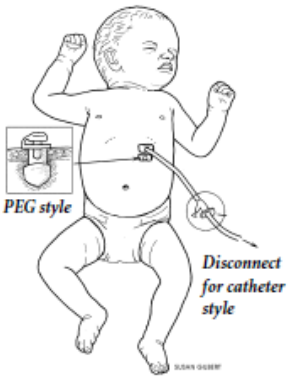
Assessment Issues: Evaluate for DOPE & Infection

- **Displaced** – total or partial removal of tube
- **Obstructed** – blood, crystallized feeding / medications, abdominal tissues
- **Peritonitis or Perforation of stomach/bowel**
- **Equipment** – tubing kinked or cracked, feeding infusion pump failure

Treatment:

BLS: Direct pressure if bleeding at site. Dry sterile dressing over area if tube is dislodged, or tape partially dislodged tube in place. Transport for evaluation of abdominal symptoms or for reinsertion/replacement of tube. (Stoma can close off within hours). If tube blocked, abdominal distension or vomiting – stop feeding. Attach the connector to the tube and leave tube open and draining into a cup. Bring old tube to ED for sizing purposes.

ALS: Administer IV or IO fluids if signs of dehydration or shock. Transport with patient on right side or sitting up to avoid potential aspiration.



COLOSTOMY OR ILEOSTOMY: *Drainage of fecal material*

Uses: Temporary or permanent malfunction or obstruction of intestine or urinary system

Types: Open stoma draining into plastic pouch

Assessment Issues: Evaluate infection, irritation/trauma, peritonitis

Treatment:

BLS: Direct pressure if bleeding at site. Saline moistened sterile dressing covered by dry dressing if stoma exposed

ALS: Administer IV or IO fluids if signs of dehydration or shock

URETEROSTOMY OR NEPHROSTOMY TUBE OR FOLEY CATHETER: *Drainage of urine*

Uses: Temporary or permanent malfunction or obstruction of urinary system

Types: Open stoma draining into plastic pouch or through catheter in urethra

Assessment Issues: Evaluate infection, irritation / trauma, peritonitis, blocked urinary drainage.

Treatment:

BLS: Direct pressure if bleeding at site. Saline moistened sterile dressing covered by dry dressing if stoma exposed

ALS: Administer IV or IO fluids if signs of dehydration or shock.

Drawings by Susan Gilbert