Rapid Pediatric Assessment

Judy Leverette, MSN, APN, ACHPN, CEN, EMT
Characteristics of Pediatric Population

- Lack of primary care
- Children with special health care needs
- Violence against children
- Non-immunized and under immunized children
Dealing with Children

Childhood-Dynamic state of Change.
Growth and Development

- Predictable, directional, and sequential
- Multifaceted
- Affected by genetic, nutritional, and environmental factors
- Developmental Milestones
- Erickson/Piaget
Epidemiology

- Trauma is the leading cause of death in children > 1 y/o
- MVCs are the leading cause of unintentional injury-related deaths in children of all age groups
- Child maltreatment is the leading cause of injury related death in children 4 y/o and younger
- Severe head trauma is the primary cause of death from child maltreatment
Anatomic and Physiologic Features of Children

- Airway
- Breathing
- Circulation
- Disability
- Exposure
- Additional Differences
Airway

- Large Tongue
- Smaller airway diameter
- Cartilaginous larynx

Airway Obstruction
- Obstruction from secretions/small objects
- Airway obstruction from hyperflexion or hyperextension
Adult's Upper Airway

Child's Upper Airway

- Tongue is larger in proportion to mouth
- Pharynx is smaller
- Epiglottis is larger and floppier
- Larynx is more anterior and superior
- Narrowest at cricoid
- Trachea narrow and less rigid
### Breathing

- Compensatory mechanisms less effective
- Higher metabolic rate
- Tire easily = rapid decompensation
- Less efficient use of oxygen and glucose; increased with fever and anxiety
- Normal resp rate inversely related to age
- Less surface area for gas exchange

- Respiratory rate varies with age
- Fewer smaller alveoli
<table>
<thead>
<tr>
<th>Circulation</th>
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<tbody>
<tr>
<td>- Increased circulating blood volume</td>
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<td>- Rapid heart rate</td>
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<tr>
<td>- Myocardium less compliant with less contractile mass and limited stroke volume</td>
</tr>
<tr>
<td>- Higher cardiac output</td>
</tr>
<tr>
<td>- Small amts of blood loss can lead to circulatory compromise</td>
</tr>
<tr>
<td>- Normal ranges vary with age</td>
</tr>
<tr>
<td>- CO=HRxSV (↑HR)</td>
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<tr>
<td>- ↑oxygen demand but depletes cardiac output reserve</td>
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Disability (Neuro)

- Level of consciousness
- Greatly affected by adequate ventilation and oxygenation
Exposure

- Children have a higher body surface area to weight ratio
- Ill and injured children are at increased risk for hypothermia which can result in:
  - Hypoglycemia
  - Altered LOC
  - Hypoxia
**Additional Differences**

- High metabolic rate with limited glycogen stores
- Medications metabolized differently
- Proportionally larger and heavier head as compared to body size
- Increased risk for hypoglycemia
- Medication administered based on weight
- High risk for head injury from falls
Initial Assessment

- **A**=Airway with cervical spine control
- **B**=Breathing
- **C**=Circulation
- **D**=Disability (Neurologic status)
- **E**=Exposure and Environmental Control
- **F**=Full set of VS and family presence
- **G**=Give comfort Measures
- **H**=Head-to-toe assessment/History
- **I**=Inspect posterior surfaces
Triaging the Pediatric Patient

- Pediatric Assessment Triangle
- Physical Assessment
- History (CIAMPEDS or SAMPLE)
- Triage Decision
Pediatric Assessment Triangle

General Appearance

Work of Breathing

Circulation to the Skin
Physical Assessment

- Head to toe exam
- Focused exam
History

- CIAMPEDS
- SAMPLE
TRIAGE DECISION

 Incoming!
RED Flags

- Choking
- Drooling
- Audible airway sounds
- Positioning
- Grunting
- Cyanosis
- Cool or clammy skin
- Altered LOC
- Petechia
- Signs of Abuse
- Severe Pain
Children with Special Health Care Needs

- Respiratory-cystic fibrosis; asthma
- Cardiovascular-congenital heart disease
- Neurologic-spina bifida; cerebral palsy; seizure disorders
- Immunologic-HIV; Hepatitis
- Mental Retardation-
Medical Technology

- Tracheostomy Tubes
- Ventilators
- Central Venous Access Devices
- Gastrostomy Tubes
- Ventriculoperitoneal Shunts
Trouble Shooting-Central Lines

- **DOPE** Pneumonic
- D-Displacement, disconnection, damage
- O-Obstruction
- P-Pneumothorax, pericardial tamponade, pulmonary embolus
- E-Equipment Failure
Trouble Shooting Ventilators

- D-Displacement or disconnection of the tube or ventilator circuit
- O-Obstruction of airflow
- P-Pneumothorax or other patient related problem
- E-Equipment Failure
Troubleshooting VP shunts

- D-Displacement
- O-Obstruction
- P-Peritonitis, perforation
- E-Elevated temperature
Emergency Information Form

<table>
<thead>
<tr>
<th>Name:</th>
<th>Birth date:</th>
<th>Nickname:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Address:</td>
<td>Home/Work Phone:</td>
<td></td>
</tr>
<tr>
<td>Parent/Guardian:</td>
<td>Emergency Contact Names &amp; Relationship:</td>
<td></td>
</tr>
<tr>
<td>Signature/Consent:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary Language:</td>
<td>Phone Number(s):</td>
<td></td>
</tr>
</tbody>
</table>

**Physician:**

- Primary care physician: Emergency Phone:
- Current Specialty physician: Specialty: Emergency Phone:
- Current Specialty physician: Specialty: Fax:
- Anticipated Primary ED: Pharmacy:
- Anticipated Tertiary Care Center: 

**Diagnoses/Procedures/Physical Exam:**

1. Baseline physical findings:
2. 
3. Baseline vitals:
4. 

* Consent form releases this form to health care providers.
Injury

“I tripped and fell on the playground”
Abdominal Pain

- “I’ve been throwing up”
Injury

“I fell of my bicycle”
Adolescent with Syncope

“I passed out”
Injury Prevention

- MVC
- Pedestrian
- Bicycle
- Fires/burns
- Falls
- Poisons
- Firearms
- Child abuse
- Playgrounds
- Sports
- Drowning
Summary

- Children are not “small adults”
- Pediatric Assessment Triangle
- History
- Physical Exam
- Priorities of Care
- Disposition
Health Promotion and Injury Prevention

- The best treatment for illness or injury is: Prevention
References

- Emergency Nursing Pediatric Course
- http://hsc.unm.edu/emermed/ped/school_rn/course.shtml