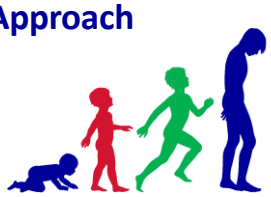
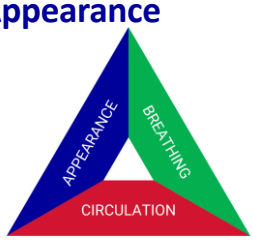
# Principles of Pediatric Assessment and Management:
# Four Keys to Pediatric Assessment and Management

| PEDS KEYS: | PURPOSE: | ESSENTIAL POINTS: |
|---|---|---|
| **Age-Related Approach**<br>  | • Conduct an age-appropriate, individualized assessment | • Recognize and adapt to developmental and physical diversities between infants, toddlers, school-aged children, and adolescents<br>• Recognize common stressors and utilize individualized strategies to assist child with coping |
| **General Appearance**<br>  | • Use the Pediatric Assessment Triangle to determine if the child is sick or not sick | • Before making physical contact, assess Appearance, Breathing, and Circulation<br>• Appearance - Tone, Interactivity, Consolability, Look and Gaze, Speech and Cry<br>• Breathing - Work of Breathing, Nasal Flaring, Retractions, Posturing, and Breath Sounds<br>• Circulation - Skin Color, Signs of Shock |
| **ABCDE's (Primary Survey)**<br>  | • Find and address immediate life-threats | • Airway – Open, clear, maintain<br>• Breathing – Assure adequate oxygenation and ventilation<br>• Circulation – Control bleeding, recognize and treat shock<br>• Disability – Determine if the child is responds and acts appropriately (AVPU)<br>• Exposure – Observe skin for rashes, discoloration, trauma; Maintain appropriate temperature; Preserve patient modesty whenever possible |
| **Environment**<br>  | • Identify needs and the presence of hazards | • Children are more dependent on their environment than adults<br>• EMS providers are usually the only healthcare providers with the ability to assess the home<br>• Routinely assess the behavior of adults, appearance of other children, and presence of hazards |

Adapted with permission from *Principles of Pediatric Patient Assessment* presented January 24, 2022. Kennedy Osborne, RN, BSN, CEN, NRAEMT, Nurse Manager - Pediatric Emergency Center, *Atrium Health Navicent Beverly Knight Olson Children's Hospital and* Kristal Claxton Smith, BS, NRP, Trauma Services Injury Prevention and Outreach Coordinator, *Atrium Health Navicent.*

Special thanks to Haleigh Hawkins, CCLS for lending her expertise and experience to the development of this resource and the *Principles of Pediatric Patient Assessment* presentation .

## Principles of Pediatric Assessment and Management:

# Age-Related Approach

| AGE GROUP: | STRESSORS: | STRATEGIES TO ASSIST WITH COPING: |
|---|---|---|
| **Infants & Toddlers**<br>  | • Separation from caregiver<br>• Sudden movement<br>• Loud noises | • Start assessment with least invasive interventions<br>• Involve caregiver and do not separate the child whenever possible<br>• Offer comfort items |
| **Preschoolers (3-5 years)**<br>  | • Separation from caregiver<br>• Dark<br>• Fear of the unknown | • Explain that treatment is not punishment<br>• Simple, concrete, child friendly language<br>• Explain equipment, what it does, how it feels<br>• Offer choices when possible<br>• Validate their emotions and offer praise<br>• Let them be helpers<br>• Offer comfort items |
| **School-Age Children (6-12 years)**<br>  | • Loss of independence<br>• Loss of bodily control<br>• Pain<br>• Body mutilation<br>• Death | • Give an opportunity to ask questions<br>• Use clear and concise language; they are literal thinkers<br>• Be honest!<br>• Identify and correct misconceptions<br>• Reassure them of their safety and security<br>• Coach in deep breathing, counting, etc.<br>• Respect modesty<br>• Give praise |
| **Adolescents (13-18 years)**<br>  | • Distrust of adults<br>• Loss of independence<br>• Body image<br>• Restriction of physical activity<br>• Fear of rejection<br>• Privacy | • Be honest; trust must be earned<br>• Use clear and concise language; they are abstract thinkers<br>• Respect and maintain privacy<br>• Involve them in care decisions<br>• Don't talk to them like they are a child<br>• Address their concerns<br>• Validate their feelings |

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Principles of Pediatric Assessment and Management:

# Age-Related Approach

**O** One voice should be heard during procedure

**N** Need parental involvement

**E** Educate patient before the procedure about what is going to happen

**V** Validate child with words

**O** Offer the most comfortable, non-threatening position

**I** Individualize your game plan

**C** Choose appropriate distraction to be used

**E** Eliminate unnecessary people not actively involved with the procedure

## Principles of Pediatric Assessment and Management:

# Pediatric Vital Signs

### PEDIATRIC VITAL SIGNS/WEIGHT BY AGE:

| Age | Weight (kg) | Pulse | Resp | Systolic BP* |
|---|---|---|---|---|
| Newborn | 3 | 100-180 | 30-60 | 60-70 |
| 6 mos | 7 | 100-160 | 30-60 | 70-80 |
| 1 yr | 10 | 100-140 | 24-40 | 72-107 |
| 2 | 12 | 80-130 | 24-40 | 74-110 |
| 3 | 15 | 80-130 | 24-40 | 76-113 |
| 4 | 16 | 80-120 | 22-34 | 78-115 |
| 5 | 18 | 80-120 | 22-34 | 80-116 |
| 6 | 20 | 70-110 | 18-30 | 82-117 |
| 8 | 25 | 70-110 | 18-30 | 86-120 |
| 10 | 35 | 60-100 | 16-24 | 90-123 |
| 12-15+ | 40-55 | 60-100 | 16-24 | 90-135 |

*BP in children is a late and unreliable indicator of shock

### PEDIATRIC MENTAL STATUS ASSESSMENT: RESPONSE TO STIMULI:

| Alert | Verbal | Pain | Unresponsive |
|---|---|---|---|
| A | V | P | U |

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Central Georgia Region 5 Regional Trauma Advisory Committee

# Essential Communication: Prehospital TIME OUT Report

| | |
|---|---|
| **M** | **MECHANISM OF INJURY:**<br>**PROVIDE PATIENT AGE, SEX, AND MECHANISM OF INJURY** |
| **I** | **INJURIES:**<br>**LIST INJURIES OR INSPECTIONS HEAD TO TOE; TIME OF INJURY** |
| **S** | **VITAL SIGNS:**<br>**PROVIDE FIRST SET AND SIGNIFICANT CHANGES; INCLUDE GLUCOSE** |
| **T** | **TREATMENT:**<br>**DESCRIBE TREATMENT PROVIDED AND PATIENT'S RESPONSE TO TREATMENT** |

**Procedure:**

- 30 second EMS "TIME OUT" performed on patient arrival
- Trauma Team members remain silent
- The patient remains on EMS stretcher
- Trauma Team listens to EMS MIST report
- Patient is moved on completion of the EMS report

**"Give EMS 30 seconds, we'll tell you everything you need to know."**
***— David Miramontes, MD, NREMT***

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# National Guidelines for Field Triage of Injured Patients

## RED CRITERIA

***High Risk for Serious Injury***

### Injury Patterns

- Penetrating injuries to head, neck, torso, and proximal extremities
- Skull deformity, suspected skull fracture
- Suspected spinal injury with new motor or sensory loss
- Chest wall instability, deformity, or suspected flail chest
- Suspected pelvic fracture
- Suspected fracture of two or more proximal long bones
- Crushed, degloved, mangled, or pulseless extremity
- Amputation proximal to wrist or ankle
- Active bleeding requiring a tourniquet or wound packing with continuous pressure

### Mental Status & Vital Signs

**All Patients**
- Unable to follow commands (motor GCS < 6)
- RR < 10 or > 29 breaths/min
- Respiratory distress or need for respiratory support
- Room-air pulse oximetry < 90%

**Age 0–9 years**
- SBP < 70mm Hg + (2 x age in years)

**Age 10–64 years**
- SBP < 90 mmHg or
- HR > SBP

**Age ≥ 65 years**
- SBP < 110 mmHg or
- HR > SBP

***Patients meeting any one of the above RED criteria should be transported to the highest-level trauma center available within the geographic constraints of the regional trauma system***

## YELLOW CRITERIA

***Moderate Risk for Serious Injury***

### Mechanism of Injury

- High-Risk Auto Crash
  - Partial or complete ejection
  - Significant intrusion (including roof)
    - >12 inches occupant site OR
    - >18 inches any site OR
    - Need for extrication for entrapped patient
  - Death in passenger compartment
  - Child (age 0–9 years) unrestrained or in unsecured child safety seat
  - Vehicle telemetry data consistent with severe injury
- Rider separated from transport vehicle with significant impact (eg, motorcycle, ATV, horse, etc.)
- Pedestrian/bicycle rider thrown, run over, or with significant impact
- Fall from height > 10 feet (all ages)

### EMS Judgment

**Consider risk factors, including:**

- Low-level falls in young children (age ≤ 5 years) or older adults (age ≥ 65 years) with significant head impact
- Anticoagulant use
- Suspicion of child abuse
- Special, high-resource healthcare needs
- Pregnancy > 20 weeks
- Burns in conjunction with trauma
- Children should be triaged preferentially to pediatric capable centers

**If concerned, take to a trauma center**

***Patients meeting any one of the YELLOW CRITERIA WHO DO NOT MEET RED CRITERIA should be preferentially transported to a trauma center, as available within the geographic constraints of the regional trauma system (need not be the highest-level trauma center)***

Source: The American College of Surgeons Committee on Trauma (ACS COT), 2022
*facs.org/fieldtriageguidelines*

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