PEDIATRIC PATIENT ASSESSMENT
ROUTINE MEDICAL CARE
PRIMARY AND SECONDARY SURVEY

APPROVED:

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The goal of the pediatric patient assessment is to provide a systematic approach to the assessment of a pediatric patient.

Definitions
The term pediatric is used to define children less than 15 years of age or length-based weight per Broselow Tape of 36 kg or less. Assessment of all pediatric patients (despite weight) should follow this protocol.

- Neonate: newborn up the first 28 days of life
- Infant: 29 days to 12 months
- Toddler: 1-3 years
- Pre-school : 3-5 years
- School-age : 6-10 years
- Adolescent : 11-14 years

Scene Size-Up/Global Assessment

- Recognize hazards, ensure safety of scene, and secure a safe area for treatment
- Apply appropriate universal body substance isolation precautions
- Recognize hazards to patient and yourself and protect from further injury
- Identify number of patients and resources needed
  - Call for EMS, fire and police backup
  - Initiate Multicasualty Incident Policy as needed
- Observe position of patient
- Determine mechanism of injury
- Plan strategy to protect evidence at potential crime scene

Suggested General Approach to the Stable/Conscious Pediatric Patient

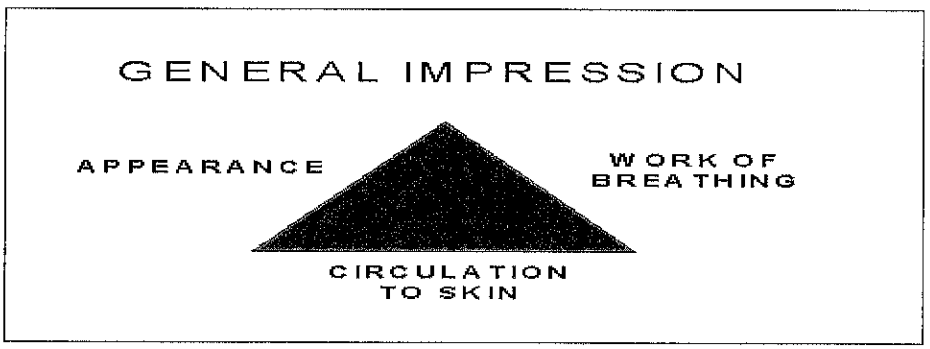
- Smile (when appropriate to the situation)
- Speak slowly and in a quiet even tone; use simple age appropriate terms
- Approach child slowly, calmly and at their level. Observe level of consciousness, activity level and respiratory rate/effort before touching
- Allow the parent/caregiver to remain with the patient whenever possible.

- Consider examining child from foot to head as this is less distressing to infants and young children.
- Have the parents help with the exam in infants and toddlers if appropriate.
  - Have the parents hold the stethoscope
  - Have the parents palpate the abdomen or extremities for you
- Allow child to hold a familiar security object. Use distraction techniques to assist in gaining cooperation. Use toys or pen lights as distracters, make games of the assessment.
- Perform the most distressing components of the assessment last on infants and younger children.
- Adolescents may require interviewing without caregiver present to obtain accurate information about drug/alcohol use, sexual behavior, child abuse, etc.
- Adolescents may want to be examined without parent/caregiver. Honor their request if possible and provide them with privacy.
- Obtain history from both older children and adolescents and their parents/caregivers.
- Compare assessment findings with parents'/caregivers' description of normal behavior.
- Be honest with the child and parent/caregiver. Explain all procedures to older children and adolescents directly.
- Acknowledge positive behaviors, no matter how small.

General Impression/Primary Survey

The Pediatric Assessment Triangle includes the evaluation of the following:

- Appearance
- Work of breathing
- Circulation to skin



Appearance:

- Check for abnormal or absent cry or speech.
- Protect spine from unnecessary movement in patients at risk for spinal injury
- Check for potential airway obstructions:
  - Vomitus / Blood / foreign object (hotdogs, peanuts, etc.)

- Facial Trauma/ Loose or missing teeth
- Check for body positioning / Muscle tone
- Response to parents / Environmental stimuli.
    - Determine AVPU (A-alert, V-verbal, P-pain, U-unresponsive)

Work of breathing:

- Nasal flaring
- Retractions – Supraclavicular, intercostal, substernal retractions,
- Head bobbing
- Abnormal Airway Sounds – Stridor, grunting, wheezing, snoring, muffled or hoarse speech

Circulation/Skin Color:

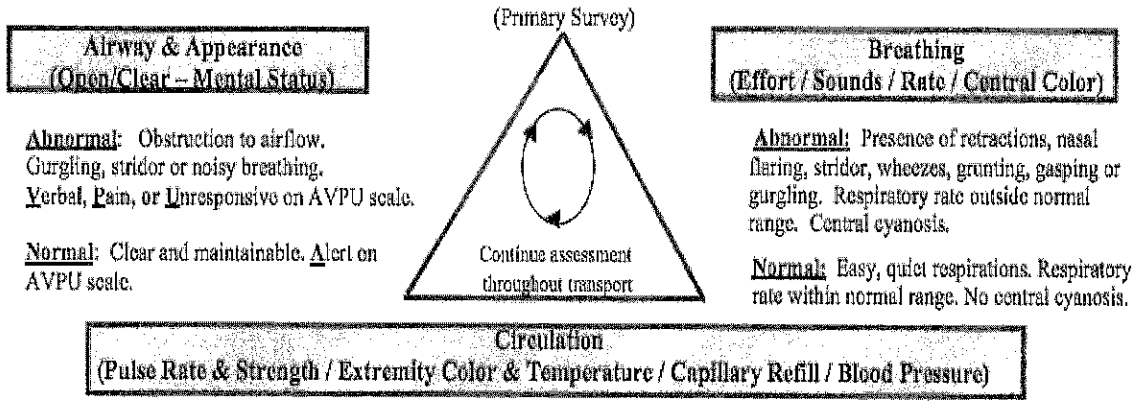
- Mottling – Patchy/lacey skin discoloration
- Cyanosis – Bluish discoloration of skin/mucous membranes
- Bleeding – obvious significant bleeding

For any abnormal findings noted during the general impression initiate treatment per appropriate pediatric protocol

Primary Survey

The purpose of the primary survey is to identify and immediately correct life-threatening problems by assessing:

- Airway
- Breathing
- Circulation



Decision/Action Points

- Initiate treatment and stabilization of any life-threatening airway, breathing, circulation, spinal injuries.
- Utilize the Broselow Tape to measure length and then SMC Pediatric Reference Card for determination of age appropriate vital signs, drug dosages, fluid volumes, defibrillation/cardioversion joules and appropriate equipment sizes
- Begin transport in the potentially unstable or critical patient
- Initiate treatment per appropriate pediatric protocols
- Contact Pediatric Base Hospital Physician for any questions or orders per pediatric specific-protocol

Secondary Survey

The secondary survey is the systematic assessment and complaint-focused, relevant physical examination of the patient. The secondary survey may be done concurrently with the patient's history and should be performed after:

- The primary survey and initial treatment and stabilization of life-threatening airway, breathing and circulation difficulties
- Spinal immobilization as needed
- Beginning transport in the potentially unstable or critical patient
- A Rapid Trauma Assessment in the case of significant trauma
- Investigation of the chief complaint and associated complaints, signs or symptoms
- An initial set of vital signs
  - Pulse
  - Blood pressure
  - Respiration
  - Lung sounds
  - Cardiac rhythm/monitor (if indicated)
  - Pulse oximetry (if indicated)
  - Assess for pain or discomfort with appropriate pediatric tool to determine pain level and document
- Give initial treatment including oxygen, ventilate if indicated, control hemorrhage if needed, institute basic wound/fracture care, and establish IV/IO access if indicated/capable.
- Utilize the Broselow Tape to measure length and then SMC Pediatric Reference Card for determination of age appropriate vital signs, pain scale, drug dosages, fluid volumes, defibrillation/cardioversion joules and appropriate equipment sizes.

History:

- History of present illness (from patient/parents/caregiver)
- Past medical and surgical
- Pregnancy and Delivery

- Vaccinations
- Developmental
- Feeding
- Family and social
- See "Information Needed" section of each protocol for history relevant to specific patient complaints

IN THE STABLE PATIENT, CONSIDER STARTING FROM FEET AND WORKING TOWARDS THE HEAD

Head and Face:
- Inspect and palpate skull (anterior and posterior) for signs of trauma (contusions, abrasions, deformity, crepitus, or lacerations)
- Check eyes for: equality and responsiveness of pupils, movement and size of pupils, foreign bodies, discoloration, contact lenses, prosthetic eyes
- Check nose and ears for foreign bodies, fluid, or blood
- Recheck mouth for potential airway obstructions (swelling, loose or avulsed teeth, vomitus, malocclusion, absent gag reflex) and odors, altered voice or speech patterns, and evidence of dehydration

Neck:
- Assess for pain or discomfort. Check for nuchal rigidity in febrile patient.
- Palpate for signs of trauma, jugular venous distention, use of neck muscles for respiration, tracheal deviation, cervical spine tenderness, stoma, and medical information medallions

Chest:
- Inspect and palpate for signs of trauma, implanted devices, chest wall movement, asymmetry, retractions, crepitus and accessory muscle use
  - AICD or pacemaker, medication patches, should be noted
- Have patient take a deep breath if possible and observe and palpate for signs of discomfort, asymmetry, and air leak from any wounds
- Auscultate breath sounds bilateral
  - Consider having parent hold stethoscope for you

Abdomen:
- Inspect and palpate for signs of trauma, scars, diaphragmatic breathing or distention
- Palpate all four quadrants taking special note of tenderness, rebound, guarding, rigidity or masses.
  - Consider having parent palpate for you

Pelvis/Genito-urinary:
- Inspect the pelvis for signs of trauma or asymmetry, incontinence, priapism, blood at urinary meatus, or presence of any other abnormality.

- Gently palpate lateral pelvic rims and symphysis pubis for tenderness, crepitus, or instability
- Check bilateral femoral pulses

Shoulders and Upper Extremities:
- Inspect and palpate for signs of trauma, asymmetry, skin color, capillary refill, edema, medical information bracelets, track marks, cutting, and equality of distal pulses
  - Consider having the parent palpate for you
- Assess sensory and motor functions as indicated

Lower Extremities:
- Inspect and palpate for signs of trauma, asymmetry, skin color, capillary refill, track marks, cutting, edema, and equality of distal pulses
  - Consider having the parent palpate for you
- Assess sensory and motor function as indicated

Back:
- Inspect and palpate for trauma, asymmetry, spinal tenderness, and sacral edema

Precautions and Comments
- Contact Pediatric Base Hospital Physician whenever you have a question or as indicated per pediatric-specific protocol.
- Minimize scene time for critical or potentially unstable trauma or medical patients; conduct secondary survey en route to the hospital.
- Utilize the Broselow Tape to measure length and then SMC Pediatric Reference Card for determination of age appropriate vital signs, pain scale, drug dosages, fluid volumes, defibrillation/cardioversion joules and appropriate equipment sizes.
- Patients who are known to be less than 15 years of age but whose weight exceeds 36 kg may still be considered pediatric patients given their chronological age; however weights will then need to be estimated and adult dosages should be used.
- Children with Special Health Care Needs (CSHCN) are children who have any type of condition that may affect normal growth and development. This may include physical disability, developmental or learning disability, technologic dependency, and chronic illness. CSHCN may be any age. It is important to consider developmental age, rather than chronological age when working with this population.
- When reporting to Pediatric Base Hospital Physician or receiving facility, convey the color and weight determined using the Broselow Tape.
- Inspection and palpation can be done while gathering patient's history
- A systematic approach will enable the rescuer to be rapid and thorough and not miss subtle findings that may become life-threatening

- The Secondary Survey should ONLY be interrupted if the patient experiences airway, breathing, or circulatory deterioration requiring immediate intervention. Complete the examination before treating the other identified problems
- Reassessment of vital signs and other observations may be necessary, particularly in critical or rapidly changing patients. Changes and trends observed in the field are essential data to be documented and communicated to the receiving facility staff
- Initial signs of shock are tachycardia; Hypotension is a late and ominous finding.
- Prehospital medical personnel (paramedics and EMTs) can assist patient with self-administration of own medication if appropriate

Pediatric Age and or Weight Restrictions for Procedures and Protocols

CPR

- Neonatal resuscitation refers to the resuscitation of an infant *immediately after birth*
- "Infant" CPR techniques should be utilized for pediatric patients under 1 year of age
- "Child" CPR techniques should be utilized for pediatric patients ages 1-8 years

Endotracheal Intubation

- Contraindicated in pediatric patients unless unable to ventilate with BVM
    - Exceptions are for tracheal edema: (See Burns, Allergic Reactions) and unrelieved obstructed airway (see Respiratory Distress).

Nasotracheal Intubation

- Contraindicated in ages less than 12 years

Pediatric Intraosseous Infusion

- Use the EZ-IO Pediatric Needle

Needle Cricothyrotomy

- No longer approved in San Mateo County.

Charcoal

- Contraindicated in ages 2 years or less

Naloxone (Narcan)

- Use with caution in neonates of known or suspected narcotic-addicted mothers as it can induce withdrawal reactions

Multi-lumen airway device (King Airway)

- Contraindicated in pediatric patients under 5 feet tall. The entire length of the Broselow Tape is 5 feet