KEY POINTS AND CHANGES
PEDIATRIC ADVANCED LIFE SUPPORT (PALS)

- Airway skills
  - BVM rates:
    - 12-20/min with perfusing rhythm (3-5 seconds)
    - 8-10/min. with secure airway and non-perfusing rhythm
    - BVM is as effective as ET for short periods
    - LMA's acceptable
    - Emphasis on correct ET placement and confirmation
    - Cuffed tube for in-hospital setting for infants – not newborns
      - Formula: (age in years/4) + 3
      - Cuff pressure to be <20 cm H20

- Arrhythmia Recognition and Management
  - Most common rhythm in Pulseless arrests in children is Asystole or PEA, not VF.
  - Pulseless Arrest – VF/VT
    - Emphasis on BLS following defibrillation – start with chest compressions after shock
    - Interrupt CPR only for defibrillation, rhythm/drug check
    - ONE shock (not 3 stacked shocks)
    - Shock dose: 2 j/kg for first shock, 4 j/kg for subsequent shocks
    - Amiodarone preferred. Lidocaine only if amiodarone not available
    - AED should include both adult and pediatric pads or attenuating device for children <25 kg.. Know your defibrillator!
    - OK to use adult pads on children if no pediatric pads available
    - AED's will be reprogrammed by manufacturers to deliver 1 shock
    - Pulseless Arrest – Asystole/PEA: Hi dose epi NOT recommended
    - Pulseless Arrest – Bradycarida: start compressions if HR<60
    - Pulseless Arrest – Tachycardia:
      - No algorithm for tachycardia with Adequate perfusion
    - All algorithms: Possible contributing causes (H's and T's) same for ACLS and PALS

- IV Access skills
  - Vascular access is preferred method of administration of meds
    - Use ET only if IV/IO cannot be established

- BLS (CPR) skills
  - High quality chest compressions are key
  - Correct hand position
  - Push Hard: 13 – ½ depth of chest
  - Push Fast: 100 x/min
  - Allow for adequate chest wall recoil
  - Avoid interruptions of chest compressions
  - Ratios:
    - 30:2 for all single rescuers for all ages except newborns
    - 15:2 for 2 person Healthcare provider
  - Definition of Child for CPR
    - Lay rescuer – child is 1-8 years of age
    - Healthcare provider – child is 1 yr thru puberty
  - Interventions: for Healthcare providers are every 2 minutes or 10 cycles of 15:2 compressions:ventilations
  - Partial vs. complete airway obstruction now referred to as mild vs. severe obstruction

- Respiratory cases
  - Emphasis on avoidance of hyperventilation
  - De-emphasis on use of advanced airways if transport time is short
  - Confirm placement of ET tube!
  - Secure the ET tube!
  - Use of cuffed ET tube approved in hospital setting

- Shock cases
  - Includes use of capillary refill to assess shock
  - New septic shock algorithm
    - Monitor venous oxygen saturation
    - New drug recommendations for fluid-refractory shock
  - SBP formulas – see ECC handbook, pg 74

- Cardiopulmonary Arrest cases
  - Emphasis on BLS (CPR)
  - Avoid interruptions of compressions
  - Emphasize IV/IO medication delivery, follow with flush
  - Amiodarone recommended
  - Defib doses= 2 j/kg initial shock, 4 j/kg subsequent shocks
  - Advanced airway may be delayed to avoid interruption of CPR

- Newly Born
  - 4 step rapid assessment added to aid triage of babies in need of resuscitation
  - Vigorous newborns do not require routine suctioning, even with presence of meconium
  - Use oxygen when positive pressure ventilation necessary or if central cyanosis
  - Epi dose: 0.01-0.03 mg/kg. No high dose Epi in newly born
  - CPR ration remains 3:1 compressions to ventilations

- No significant changes in Trauma, Coping with Death, Children with special needs, Rapid sequence intubation, Sedation or other optional modules.