KEY LARGO EMS
PEDIATRIC ANAPHYLAXIS

EMT

- Ensures Scene Safety, Body Substance Isolation
- Assess patient using the Broselow® Tape
- Provide Basic Airway Management procedures as needed
- Pt. History to include S.A.M.P.L.E
- Oxygen 10 lpm pediatric O_2 mask, blow by if necessary
- Assess vital signs
- Administer Pedi EPI-Auto injection, (if the patient has their own)

Establish baseline pulse oximetry reading PRIOR to oxygen administration

Paramedic

- Provide Advanced Airway Management procedures
- Apply ECG Monitor & interpret ECG
- Consider need to initiate IV/IO NS KVO
- **Epinephrine (1:1,000) 0.01mg/kg (0.01mL/kg) SQ, max dose 0.5mg**

For Hives, burning, itching, swelling or respiratory distress:

- **Benadryl 0.5-1.0 mg/kg IV/IM**
- **Solu-medrol 1mg/kg IV slow over 2 minutes**
- If Patient is exhibiting respiratory wheezes, Albuterol **1.25mg/3ml administered by nebulizer connected to 6 Lpm 0_2 q 10 min**. If necessary may repeat up to 3 doses.

For severe bronchoconstriction:

- **If patient still in danger, *contact ER physician to request orders* for additional treatment such as Epinephrine (1:10,000) 0.01mg/kg (0.1mL/kg) IV every 3 – 5 min. if needed, max single dose 0.3 mg**

Pediatric patients experiencing acute onset of hives and swelling without respiratory symptoms may become critically ill!

Basic Airway Management (BAM): is defined as follows: Assisted Ventilation's while using basic airway adjuncts (OPA, NPA) King Tube and a Bag Valve Mask.
Advanced Airway Management (AAM): Includes all Basic procedures with the addition of Endotracheal, NasoTracheal, Surgical airways.

KEY LARGO EMS
PEDIATRIC ASTHMA

EMT
- Ensure Scene Safety, Body Substance Isolation
- Assess patient using the Broselow® Tape
- Provide Basic Airway Management procedures as needed
- Establish baseline Pulse Oximetry
- Oxygen 15 lpm NRM, blow-by if necessary
- Pt. History to include S.A.M.P.L.E
- Vital signs
- EMT may assist patient with prescribed inhaler

Paramedic

Provide Advanced Airway Management procedure as needed
- Apply pulse Ox and understand its limitations (see below)
- Apply ECG Monitor & interpret ECG
- IV NS KVO
- If Patient is exhibiting respiratory wheezes, **Albuterol 1.25mg/3ml administered by nebulizer connected to 6 Lpm 02 every 10 min** may repeat up to 3 doses

For severe bronchospasm & bronchoconstriction not responding to continuous nebulizers:
- **Solu-medrol 1mg/kg IV/IM over 1-2 min**
- **Epinephrine 1:1,000 0.01 mg/kg (0.01mL/kg) SQ, max 0.5 mg**
- If patient is still having refractory bronchospasm and respiratory distress, contact ER physician for orders.

Causes:
- Infections: Croup, Epiglotittis, Retropharyngeal abscess, Peritonsillar abscess
- Swelling: Burns, anaphylaxis, laryngospasm
- Choking: foreign bodies can cause partial or complete obstructions

Respiratory Failure Findings:
- Poor color with ashen or central cyanosis
- Obtunded mental status
- Decreased chest wall movement
- Tachypnea (rapid breathing) followed eventually by Bradypnea (slow breathing)
- Pulse Ox may be unreliable; rely on color and improving LOC

Signs of Airway Obstruction:
- Child may prefer to sit up and lean forward in sniffing position
- Drooling may be present if patient unable to swallow
- Retractions and/or nasal flaring, high fever, toxic appearance, gagging or dysphagia
- Acute onset facial swelling and wheezing consistent with allergic reaction
- Infant or toddler who is irritable, not moving neck or poor feeding may have retropharyngeal abscess
- Peritonsillar abscess can present in the older child as muffled voice and trismus

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Pediatric Pulseless Electrical Activity

Determine need for resuscitation
Assess ABCs

→ Obvious death / active DNRO → **Refer to Death Policy**

Inadequate or NO CPR

200 CCC*
≥ 100 / min.

Quicklook, determine Rhtyhm and Confirm PEA

Synchronous Activities:
- Place, Confirm & Secure Advanced Airway **
- Obtain IV / IO access- Administer Epinephrine
- Fluid Bolus NS

Review H's & T's:

Hypovolemia	Tablets (Drug OD)
Hypoxia	Tension Pneumothorax
Hydrogen Ion (Acidosis)	Tamponade Cardiac
Hyper/hypokalemia	Thrombosis Coronary (ACS)
Hypothermia	Thrombosis Pulmonary (PE)
Hypoglycemia	Trauma

Epinephrine IV / IO

Ages 0-8 y/o

0.01 mg/kg
1:10:000 (0.1 ml/kg)
Every 3-5 mins

Epinephrine IV / IO

Ages 8 - 17 y/o

1 mg/kg
1:10:000 (0.1 ml/kg)
Every 3-5 mins

Pause compressions
5 seconds only
Check pulse & ECG

Resume CCC for 2 minutes

Ages 0-8 y/o	**Ages 8-17 y/o**
Fluid Bolus NS 20 cc/kg	Fluid Bolus NS 20 cc/kg
Narcan 0.1 mg/kg IV/IO (max 2mg)	Narcan 2 mg IV/IO
D25 2cc/kg IV/IO	D50 25 gm IV/IO

Neonate (1-30 days old) BS <40 mg/dl
Pediatric (31 days-8 y/o) BS <60 mg/dl

Contact Medical Control

*Continuous Chest Compressions
**Confirmation of an advanced airway, includes using ETCO2 monitoring.

Pediatric Bradycardia

Determine responsiveness, Assess ABCs

Obtain
SAMPLE history
& OPQRST

Synchronous Activities:
- Oxygen based on O^2 Saturation
- Check Vitals Signs
- Obtain IV/IO (NS / KVO)
- ECG Monitor
- Pulse Oximetry / Capnography

Asymptomatic → Monitor VS

Bradycardia
Signs of Cardiopulmonary Compromise

HR< 80 /min (0-1 y/o)
HR <60 / min (1-8 y/o)

NO → Monitor VS

YES

Assist ventilations
BVM to ↑ HR

Begin CCC
If HR < 60 min

Epinephrine 0.01 mg/kg
IV / IO

If increased vagal tone
and/or
primary AV block:
Atropine 0.02 mg /kg
IV / IO

Consider Pacing

If Pulseless Arrest
develops go to
Asystole / PEA

Contact Medical Control

Signs of Poor perfusion/clinical presentation:

Infants:	**Children:**
•Irritability	Hypotension
•Tachypnea	Heart Failure
•Poor feeding	Shock
•Seizures	Decreased LOC
•Children:	Pallor

Rule out any reversible H's & T's:

Hypovolemia	Tablets (Drug OD)
Hypoxia	Tension Pneumothorax
Hydrogen Ion (Acidosis)	Tamponade Cardiac
Hyper/hypokalemia	Thrombosis Coronary
Hypothermia	Thrombosis PE
Hypoglycemia	Trauma

Causes of Bradycardia:
- Sinus Brady with AV block
- Infection
- Trauma
- Vomiting
- Congenital Heart Disease

- Consider External Pacing
- Consider performing 12 lead ECG
- If Pulseless Arrest develops go to Asystole / PEA protocol
- Cardiac output in children, particularly infants younger than 6 months, is heart rate dependent.
- Bradycardia with poor systemic perfusion must be treated regardless of normal blood pressure.

GLUCOSE VALUES - PEDATRIC

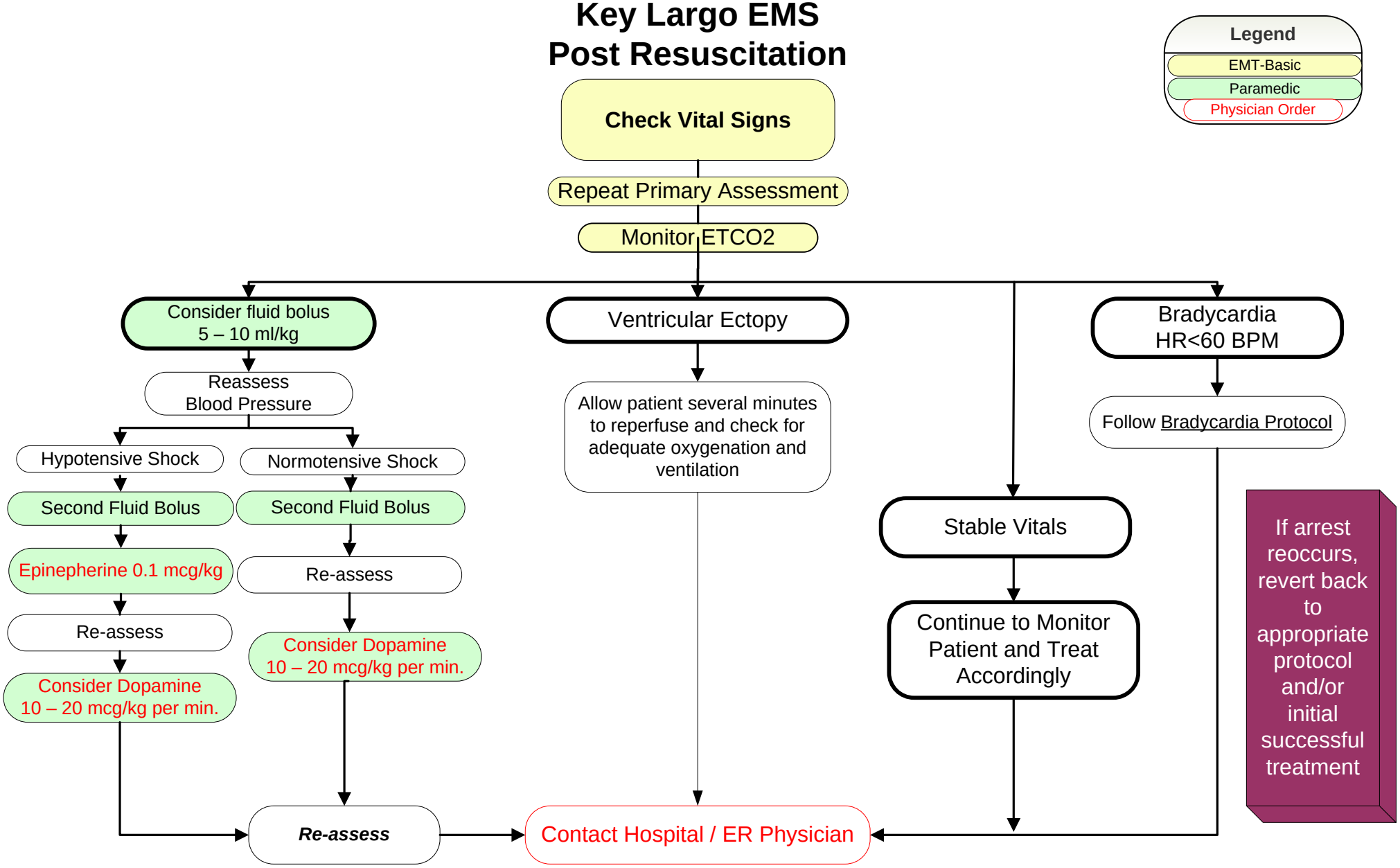
PEDIATRIC/ NEONATE GLUCOSE VALUES

- **Neonate** (1-30 days old) BS < 40 mg/dL
  - Administer 2cc/kg D 25
- **Pediatric** (31 days – 8 y/o) BS < 60 mg/dL
  - Administer 2cc/kg D 25

6-5

GLUCOSE VALUES - PEDATRIC

Key Largo EMS
Post Resuscitation



PEDIATRIC – POST ARREST RESUSCITATION

EMT

- Ensures Scene Safety, Body Substance Isolation
- Provide Basic Airway Management procedures as needed
- Oxygen 10 lpm pediatric O2 mask or blow-by
- Assess vital signs
- Pt. history to include S.A.M.P.L.E

Paramedic

- Provide Advanced Airway Management procedures as needed
- Consider need to initiate IV/IO LR KVO
- Consider potential for toxic ingestion, head injury and serious infection, i.e. Meningitis
  - **Diazepam 0.1 mg/kg slow (1-2 mins) max dose 5 mg IV/IO may repeat x 1 in 5 mins**
  - **Diazepam 0.5 mg/kg rectally if no IV/IO available may repeat x 1 in 5 mins**
  - Glucometer check
- **PEDIATRIC/NEONATE**
  - ♥ BS < **40** mg/dL in a neonate (1-30 days old) **administer 2cc/kg D 25 IV**
  - ♥ BS < **60** mg/dL in a pediatric (31 days – 8 y/o) **administer 2cc/kg D 25 IV**

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Pediatric Tachycardia

Heart Rate > 220 min (0-1 y/o)
Heart Rate > 180 min (1-8 y/o)

Synchronous Activities:
- Oxygen based on O^2 Saturation
- Check Vitals Signs
- Obtain IV/IO (NS / KVO)
- ECG Monitor
- Pulse Oximetry / Capnography
- SAMPLE history
- Assure patient is warm and dry

Rule Out Possible Causes:

Narrow QRS ≤0.12 sec.

- Poor Perfusion
  - Vagal Maneuvers
    - If persistent, **Adenosine 0.1 mg/kg IVP with 20 cc NS Flush, initial max dose 6 mg** ***If no conversion*** May double first dose **Max 12 mg**
      - Converts
        - Yes
          - Monitor patient
        - NO and Patient 's condition deteriorates
          - Sedate if possible **Versed (See Box)** Perform Synchronized Cardioversion 0.5-1 J /kg Repeat 2 J /kg –If necessary
- Good Perfusion
  - Monitor patient

Wide QRS ≥0.12 sec.

- Poor Perfusion
  - Sedate if possible with **Versed (See Box)** Perform Synchronized Cardioversion 0.5-1 J /kg Repeat 2 J /kg –If necessary
    - **Physician Consult On Orders For Amiodarone**
- Good Perfusion
  - Monitor patient

Rule Out Possible Causes First:
- History (fever, dehydration, anemia, septic)
- FBAO
- Ventilatory
- Respiratory
- Heart Rate varies with activity

Versed dosage:

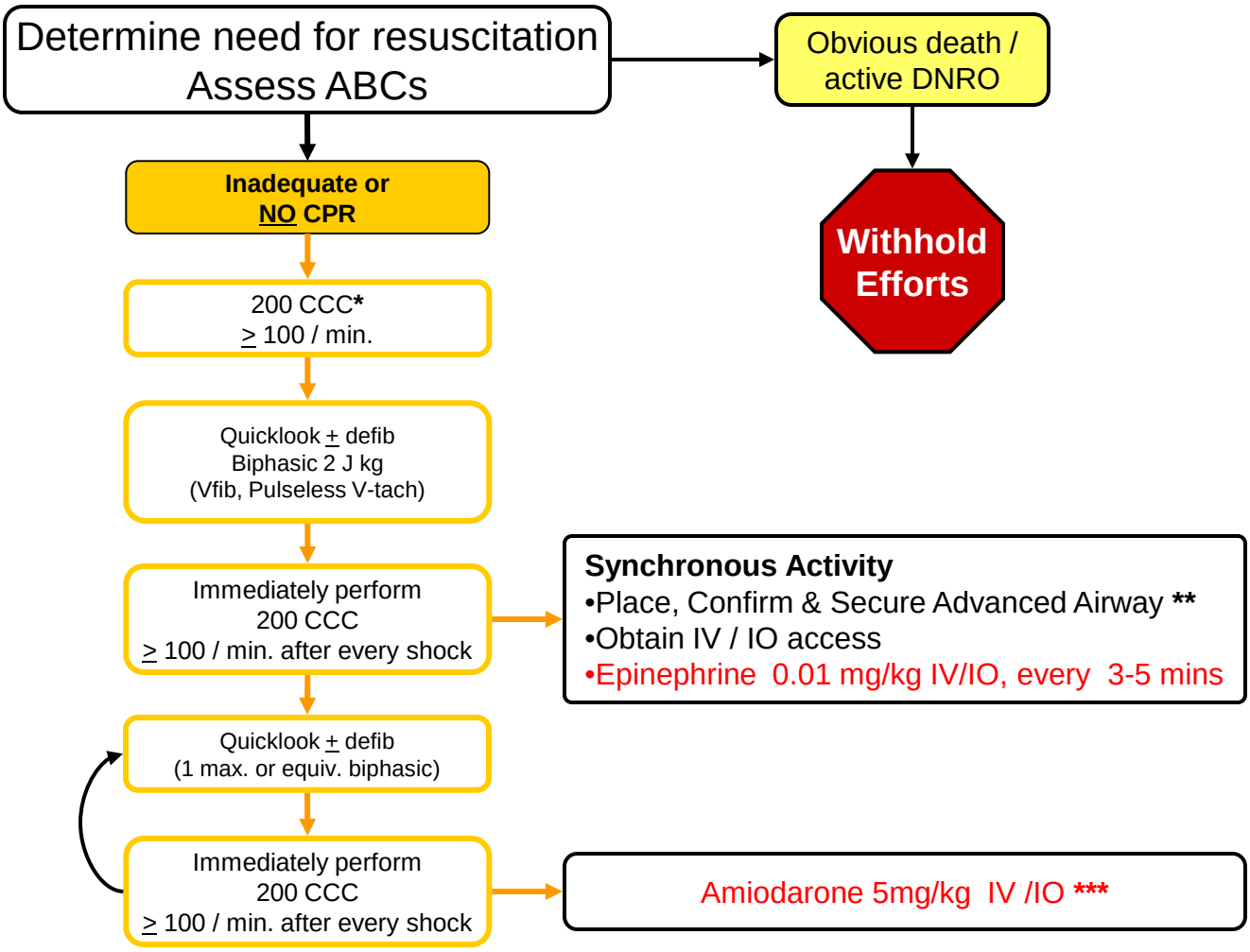
6 Months to 5 Years of Age:
- Initial dose 0.05 to 0.1 mg/kg
- total dose up to 0.6 mg/kg

6 to 12 Years of Age:
- Initial dose 0.025 to 0.05 mg/kg
- total dose up to 0.4 mg/kg

12 to 16 Years of Age:
- Same as adults

Contact Medical Control

Pediatric / Pulseless Arrest



Rule out any reversible H's & T's:

Hypovolemia	Tablets (Drug OD)
Hypoxia	Tension Pneumothorax
Hydrogen Ion (Acidosis)	Tamponade Cardiac
Hyper/hypokalemia	Thrombosis Coronary (ACS)
Hypothermia	Thrombosis PE
Hypoglycemia	Trauma

Consider:

Magnesium Sulfate 25 to 50 mg/kg IV / IO
Fluid Bolus of LR 20ml/kg IV /IO
Sodium Bicarbonate 1 mEq/kg IV/IO
D25 0.5-1g/kg IV/IO
Narcan 0.1mg/kg IV/IO (max dose 2 mg)

Contact Medical Control

***** Continuous Chest Compressions
****** Confirmation of an advanced airway, includes using $ETCO^2$ monitoring.
******* Amiodarone 150 mg IV/IO may be repeated once if V. Fib is persistent
Subsequent shocks at 4 J / kg