PEDIATRIC ADVANCED LIFE SUPPORT

2020 Algorithms

Florida Heart CPR*

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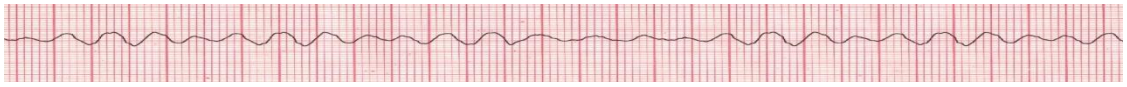

Ventricular Fibrillation and Pulseless Ventricular Tachycardia

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As soon as possible, measure child with BROSELOW tape

Start high quality CPR 100-120/min
Ventilate, attach monitor/defibrillator

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Defibrillate 2j/kg

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Continue CPR (no pulse check)
Obtain IV or IO access

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Epinephrine
IV/IO: 0.01 mg/kg 1:10,000
USE BROSELOW DOSE
Repeat q3-5 minutes
(consider advanced airway with capnography)

If no IV/IO access, may give ET dose: 0.1 mg/kg (0.1mL/kg of 1:1000 concentration

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Defibrillate 4j/kg

↓

Amiodarone
5 mg/kg
*** USE BROSELOW DOSE***
(may be repeated up to 2 times in refractory V-fib/PVT)

↓

Defibrillate 4j/kg

↓

Epinephrine

↓

Defibrillate 4j/kg

↓

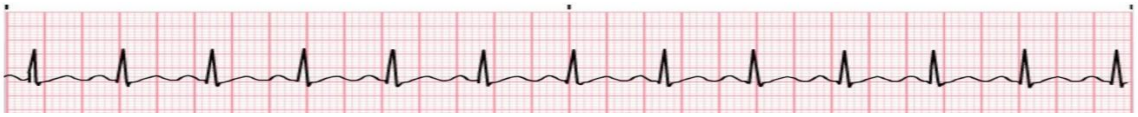
Amiodarone
5 mg/kg

↓

Defibrillate 4j/kg

H's & T's
Treat reversible causes
Hypovolemia
Hypoxia
Hydrogen ion (acidosis)
Hypoglycemia
Hypo/hyperkalemia
Hypothermia
Tension Pneumothorax
Tamponade, cardiac
Toxins
Thrombosis, pulmonary
Thrombosis, coronary

Never stop CPR for more than 10 seconds: If organized rhythm check pulse; if ROSC, start post-cardiac arrest care



Pediatric Asystole/PEA

Check pulse/begin high quality CPR

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Secure Airway
Ventilate with 100% O2

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Obtain vascular access, IV or IO

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Epinephrine
IV/IO: 0.01 mg/kg 1:10,000
USE BROSELOW DOSE
(ET: 0.1 mg/kg 1:1,000)

↓

Repeat **Epinephrine** q3-5 minutes
While providing high quality CPR

↓

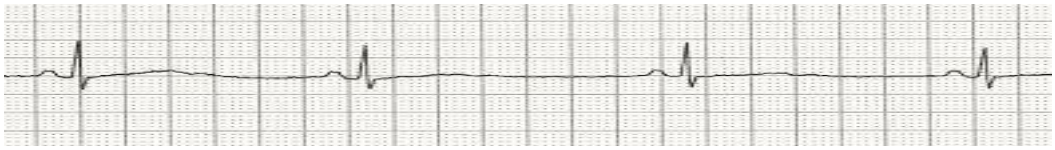
Consider advanced airway w/capnography

Identify & treat reversible causes:

Hypoxemia
Hypovolemia
Hypothermia
Hyper/hypokalemia
Hypoglycemia
Tamponade
Tension pneumothorax
Toxins/ poisons/ drugs
Thrombosis-pulmonary
Thrombosis-coronary

As soon as possible, measure child with BROSELOW tape

Patients who do not respond to several doses of epi with no extenuating circumstances should be considered for termination.



Bradycardia

HR <60

Assess ABCs

Maintain patent airway, assist breathing if necessary

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Cardiorespiratory compromise?

Acutely altered mental status?

Signs of shock?

Hypotension?

NO ←←← →→→ **YES**

Support ABC's, oxygen Observe, consider 12 lead ECG, treat underlying causes Expert consultation	Begin chest compressions if pulse is ,<60bpm despite adequate oxygenation and ventilation

↓

Epinephrine

USE BROSELOW DOSE

(IV/IO: 0.01 mg/kg 1:10,000)

(ET: 0.1 mg/kg 1:1,000)

↓

(Repeat Epi q3-5 minutes)

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If increased vagal tone or primary AV Block:

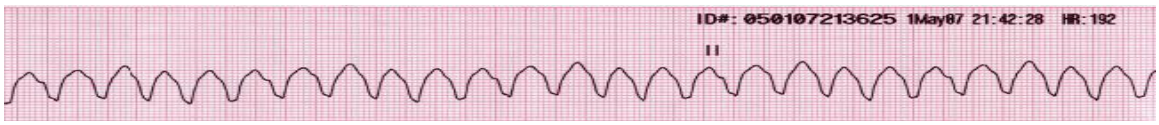
Atropine

(Max single dose: 0.5 mg for child)

Consider transthoracic/transvenous pacing

Treat underlying causes

Toxins	**H**ypoxia
Tamponade	**H**ypoglycemia
Tension Pneumothorax	**H**ypothermia
Thrombosis	**H**erniation of brain stem
Trauma	**H**eart Transplant



Stable Ventricular Tachycardia

(Child has normal V/S)

Assess ABCs

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Secure airway
Administer oxygen
EKG and pulse oximeter
Assess vital signs

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Establish IV/IO
Labs

↓

Consider **vagal maneuvers;** then:
ADENOSINE*
USE BROSELOW DOSE
if wide/regular QRS (monomorphic)

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Expert consultation advised; consider

- Amiodarone
- Procainamide
- Verapamil

Unstable Ventricular Tachycardia

(w/signs of poor perfusion)
Altered mental status, hypotension, signs of shock

Assess ABCs

↓

Secure airway
Administer oxygen

↓

EKG & pulse oximeter
Assess vital signs

↓

Establish IV/IO
Labs

↓

Assemble code/suction equipment

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Immediate synchronized cardioversion
0.5- 1.0 j/kg
If unsuccessful, increase to 2j/k

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(sedate if needed, but don't delay cardioversion)

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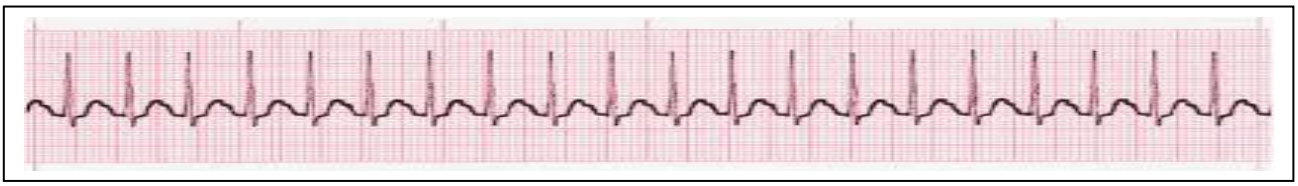
Consult pediatric cardiologist!

Amiodarone IV/IO dose:
5mg/kg over 20-60 min.

Adenosine IV/IO dose:
1st dose: 0.1 mg/kg, max 6mg
2nd dose:0.2 mg/kg max 12 mg



Stable Supraventricular Tachycardia

Assess ABCs
12 Lead EKG
Administer oxygen
Vital signs, IV/IO, Labs
Consider vagal maneuvers

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Adenosine*
0.1mg/kg IV rapidly
followed by rapid flush
(may double dose and repeat)

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Consider **synchronized cardioversion** or alternate medication

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Consult pediatric cardiologist

Unstable Supraventricular Tachycardia

Assess ABCs
12 Lead EKG
Administer oxygen
Vitals, IV/IO, Labs
Consider vagal maneuvers

↓

Immediate synchronized cardioversion
0.5- 1.0j/kg
Sedate if possible (but do not delay cardioversion)

OR

Adenosine*
0.1 mg/kg IV rapidly
followed by rapid flush
may double and repeat

***USE BROSELOW DOSE**

Details

Probable sinus tachycardia:
- Compatible history consistent with known cause
- P Waves present/normal
- Variable R-R; constant PR
- Infants: rate usually < 220/min
- Children: rate usually < 180/min

Search for and treat reversible causes

Probable supraventricular tachycardia
- Compatible history (vague, non-specific)
- History of abrupt rate changes
- P waves absent/abnormal
- HR not variable
- Infants: rate usually >220/min
- Children: rate usually >180/min

Consider vagal maneuvers, consider Adenocard
If IV/IO access not available, or if adenosine not effective, synchronized cardioversion

***CONSULT BROSELOW TAPE FOR DOSES**