Pediatric Bradycardia

Pediatric Cardiovascular

Stabilize the patient with special attention to ABC's. Continue monitoring patient after treatment and treat underlying cause.

Most common cause of bradycardia is respiratory insufficiency, failure. Give oxygen early.

General

EMT

AEMT

Paramedic

Routine Transport Orders-Pediatric

Pediatric Airway Protocol

Cardiac Monitor

Poor perfusion
Decreased blood pressure
Respiratory insufficiency

Consider use of:
Generic Pediatric Emergency Tape

No

Monitor and reassess

Yes

Pediatric IV/IO

Heart rate < 60 child? / Heart rate < 60 Infant?
Ensure adequate airway
CPR

Epinephrine 1:10,000 0.1 ml/kg IVP, IO **Maximum 10 ml**
Repeat every 3 - 5 minutes
Epinephrine 1:1,000 ET dose 0.1 ml/kg **Maximum 1 ml**

Atropine 0.02 mg/kg IVP, IO **Minimum dose 0.1 mg / Maximum single dose 0.5 mg**

Reassess

No Pulse

Pediatric Pulseless Arrest
Protocol

Pulse

Consider
Normal Saline Bolus
20 ml/kg

Consider
External Transcutaneous Pacing

for sedation
Midazolam (Versed)
0.1 mg/kg IVP, IO, IN
Maximum 2 mg per dose

Pediatric Tachycardia

Pediatric Cardiovascular

Dysrhythmias in children are uncommon. Causes are usually not cardiac related. Watch for signs of decreased cardiac output.

If history of heart (cardiac) problems and rate is greater than 220 bpm for infants or 180 bpm for children, then Supraventricular Tachycardia should be considered.
Confirm that the child is unstable as indicated by hypotension and poor perfusion.

General

Routine Transport Orders-Pediatric

Continuous **Cardiac Monitor**
Attempt to identify Cause

EMT

Stable

Continue to reassess / Transport

Unstable

Pediatric IV/IO

May attempt
Valsalva's Maneuver
initially and after each drug administration if indicated

Perform continuous cardiac monitoring and print strip

Adenosine (Adenocard) 0.1 mg/kg IVP, IO
Maximum 6 mg
2nd dose if needed 0.2 mg/kg IVP, IO
Maximum 12 mg

Pre-arrest
(No palpable BP, Altered mental status)

Pediatric IV/IO

AEMT

for sedation
Midazolam (Versed)
0.1 mg/kg IVP, IO, IN
Maximum 2 mg per dose

Paramedic

Cardioversion
0.5 - 1 joules/kg

Repeat **Cardioversion**
2 joules/kg

If rhythm changes
Go to **Appropriate Protocol**

Pediatric Pulseless Arrest

Attempt Defibrillation early.
Perform CPR immediately after Defibrillation.

Routine Transport Orders-Pediatric

CPR x 2 minutes
(CPR should be continued for 2 minutes after every defibrillation)

Cardiac Monitor

Consider use of:
Generic Pediatric Emergency Tape

Possible Causes of Asystole / PEA:

- Hypoxemia
- Hypothermia
- Hypoglycemia
- Hypokalemia
- Hyperkalemia
- Acidosis
- Volume Depletion
- Tension Pneumothorax

General

EMT

AEMT

Paramedic

V-Fib / Pulseless V-Tach

Defibrillation
2 joules/kg

CPR x 2 min.

Pediatric IV/IO

Epinephrine 1:10,000 0.1 ml/kg IVP, IO
Repeat every 3 - 5 minutes
Maximum 10 ml

Defibrillation 4 joules/kg

CPR x 2 min.

Amiodarone (Cordarone) 5 mg/kg IVP, IO
Maximum 300 mg
May repeat x 1 **Maximum 150 mg**

Defibrillation 4 joules/kg

CPR x 2 min.

Sodium Bicarbonate 8.4% 1 mEq/kg IVP, IO

Sodium Bicarbonate not indicated in children < 5 kg (11 lbs.)

Continue CPR, Epinephrine, Defibrillation

Asystole / PEA

Pediatric IV/IO

Epinephrine 1:10,000 0.1 ml/kg IVP, IO
Repeat every 3 - 5 minutes
Maximum 10 ml (per dose)

Epinephrine 1:1,000
ET dose 0.1 ml/kg
Maximum 1 ml

Identify Cause:

Hypoglycemia- **Dextrose 10% (D10)** 5 ml/kg IVP, IO
boluses until patient awake &/or follow up blood sugar > 60 mg/dl
Maximum 100 ml

Hypovolemia- NS Fluid Bolus 20 ml/kg

Hypoxia- Oxgenation, ventilation

Hypothermia-

Tension Pneumothorax- **Needle Decompression**