SECTION: PC-01b

PROTOCOL TITLE:

PEDIATRIC CARDIAC/RESPIRATORY ARREST – ALS Algorithm

REVISED: November 1, 2017

Box #1:

If adequate CPR is being performed upon arrival:

- Confirm cardiopulmonary arrest and resume CPR. a) b) Apply defibrillation pads (pediatric pads as per manufacturer's recommendation) and cardiac monitor without cessation of CPR.
 - C) Apply length based resuscitation tape.
 - d) Move on to, "Box 4."

Box #2:

Sudden, witnessed arrest in the presence of EMS:

- Perform CPR only long enough to apply defibrillation pads (pediatric pads a) as per manufacturer's recommendation) and cardiac monitor.
- b) Apply length based resuscitation tape.
- Move on to, "Box 4." c)

Box #3:

If inadequate CPR or no CPR at all, is being performed upon arrival:

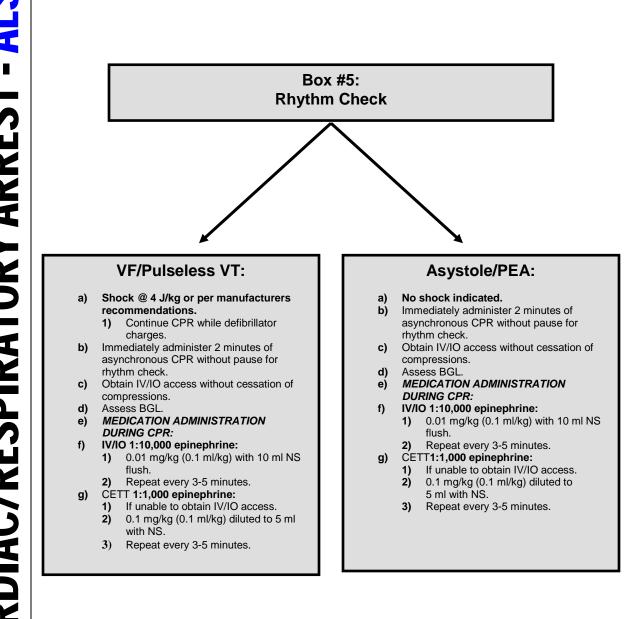
- Confirm cardiopulmonary arrest a)
- b) Initiate CPR
- 5 cycles 15 compressions to 2 ventilations with two rescuers C) (approximately 1-2 minutes)
 - 30:2 for single rescuer CPR (approx. 2 min) 1)
- d) During CPR:
 - Apply defibrillation pads (pediatric pads as per manufacturer's 1) recommendation) and cardiac monitor.
 - 2) Apply length based resuscitation tape.
 - Prepare for endotracheal intubation. 3)
 - Prepare IV/IO equipment. 4)
 - Move on to, "Box 4." 5)

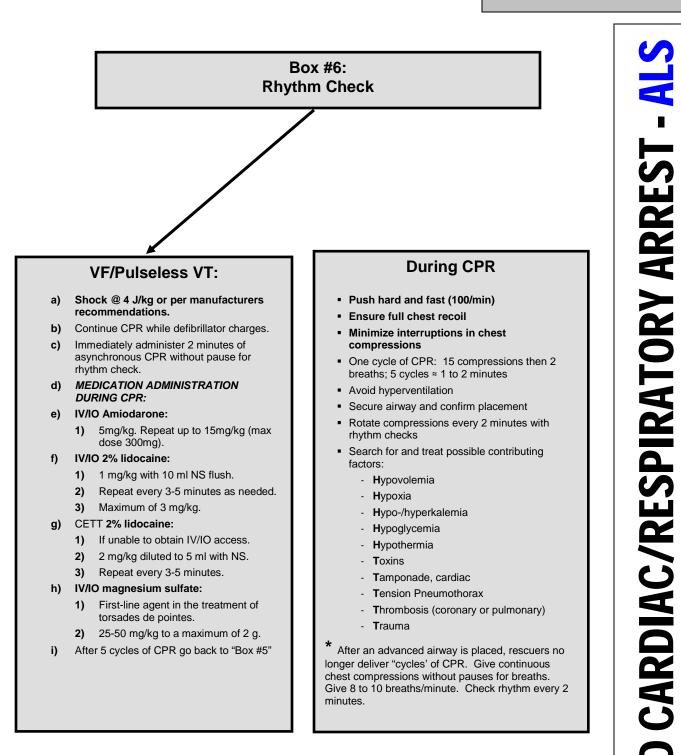
Box #4: **Rhythm Check** VF/Pulseless VT: Asystole/PEA: Shock @ 2 J/kg or per manufacturers No shock indicated. a) a) recommendations. b) Immediately resume CPR. Continue CPR while defibrillator 1) Perform 5 cycles 15:2 (2 c) charges. rescuers) Immediately resume CPR without pause b) for rhythm check. d) Perform 5 cycles 15:2 (2 rescuers) c) e) Check rhythm every 5 cycles d) compressions if possible. e) Intubate without cessation of compressions if possible.

- Check rhythm every 5 cycles
- Intubate without cessation of

Protocol

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PHYSICIAN PEARLS:

Outside of the Comfort One/DNR situations (Appendix 26), once ALS intervention is initiated, medical control should be called prior to ceasing efforts. In addition, BLS interventions, an advanced airway, and at least 10 minutes of rhythm appropriate therapy should have been performed prior to considering termination of efforts.

The American Heart Association (AHA) current guidelines for CPR and Emergency Cardiac Care recommends:

- Good, sustained, and effective CPR. "Push hard and fast".
- Sustained coronary perfusion is believed essential for the heart to respond to defibrillation, any interruption in compressions should be minimized or avoided. Even brief interruptions of compressions (such as seen in the pause for ventilations or defibrillation) result in a rapid decrease of coronary perfusion.
- Change to a 1-shock protocol. Frequent or long interruptions in precordial chest compressions for rhythm analysis or rescue breathing were associated with post resuscitation myocardial dysfunction and reduced survival rates. The AHA notes that: "...if 1 shock fails to eliminate VF, the incremental benefit of another shock is low, and the resumption of CPR is likely to confer a greater value than another shock." Therefore when a shockable rhythm is found, only one shock, instead of three stacked shocks, is recommended.

CETT vs. IO Access: The AHA notes that "...administration of epinephrine by the IV route was associated with a higher rate of ROSC and survival to discharge than administration of the drugs by the endotracheal route". Therefore, while CETT administration of drugs in cardiac arrest is not prohibited, IO is encouraged when peripheral venous access is unsuccessful.