# CARDIAC ARREST (ATRAUMATIC)

| ADULT | PEDIATRIC (≤34 kg) |
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| **BLS** | |
| • Universal Protocol #601<br>• High Performance CPR (HPCPR) (10:1) per Procedure #712<br>  ○ Continuous compressions with 1 short breath every 10<br>• AED application (if shock advised, administer 30 compressions prior to shocking)<br>• Pulse Oximetry<br>  ○ $O_2$ administration per Airway Management Protocol #602 | • Same as Adult (except for neonate)<br>• Neonate (< 1 month) follow AHA guidelines<br>• CPR compression to ventilation ratio<br>  ○ Newborn – CPR 3:1<br>  ○ 1 day to 1 month – CPR 15:2<br>  ○ > 1 month – HPCPR 10:1<br>• AED – pediatric patient > 1 year<br>• Use Broselow tape or equivalent if available |
| **ALS Standing Orders** | |
| **Rhythm analysis and shocks**<br>• At 200 compressions begin charging the defibrillator while continuing CPR<br>• Once fully charged, stop CPR for rhythm analysis<br>• **Defibrillate V-fib/Pulseless V-tach** – shock at 120J and immediately resume CPR<br>  ○ Subsequent shock, after 2 mins of CPR: 150J, then 200J<br>  ○ Recurrent V-fib/Pulseless V-tach use last successful shock level<br>• **No shock indicated** – dump the charge and immediately resume CPR<br><br>**V-fib/Pulseless V-tach and Non-shockable Rhythms**<br>• **Epinephrine 1:10,000** 1 mg IV/IO repeat every 3-5 min<br>  ○ Do not give epinephrine during first cycle of CPR<br><br>**V-fib/Pulseless V-tach**<br>• **Lidocaine** 1.5 mg/kg IV/IO repeat once in 3-5 min (max total dose 3 mg/kg) | • **<u>Emphasize resuscitation and HPCPR rather than immediate transport</u>**<br><br>**Rhythm analysis and shocks**<br>• Coordinate compressions and charging same as adult<br>• **Defibrillate V-fib/Pulseless V-tach** – shock at 2 J/kg and immediately resume CPR<br>  ○ Subsequent shock, after 2 mins of CPR: 4 J/kg<br>  ○ Recurrent V-fib/Pulseless V-tach use last successful shock level<br>• **No shock indicated** – dump the charge and immediately resume CPR<br><br>**V-fib/Pulseless V-tach and Non-shockable Rhythms**<br>• **Epinephrine 1:10,000** 0.01 mg/kg (0.1 ml/kg) IV/IO, not to exceed 0.3 mg, repeat every 3-5 min<br>  ○ Do not give epinephrine during first cycle of CPR<br><br>**V-fib/Pulseless V-tach**<br>• **Lidocaine** 1 mg/kg IV/IO repeat every 5 min (max total dose 3 mg/kg) |
| **Base Hospital Orders Only** | |
| **ROSC with Persistent Hypotension**<br>• **Push-Dose Epinephrine 10 mcg/mL** 1 mL IV/IO every 1-3 min<br>  ○ repeat as needed titrated to SBP >90mmHg<br>  ○ <u>See notes for mixing instructions</u><br>***OR*** | Contact closest Base Hospital for additional orders<br>**ROSC with Persistent Hypotension for Age**<br>• **Push-Dose Epinephrine 10 mcg/mL** 1 mL IV/IO (0.1 mL/kg if <10 kg) every 1-3 min<br>  ○ repeat as needed titrated to age appropriate SBP |

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| • **Epinephrine Drip** start at 10 mcg/min IV/IO infusion<br>  ○ Consider for extended transport<br>  ○ See formulary for mixing instructions<br><br>**Contact STEMI Receiving Center (French Hospital)**<br>• Refractory V-Fib or V-Tach not responsive to treatment<br>• Request for a change in destination if patient rearrests en route<br>• Termination orders when unresponsive to resuscitative measures<br>• As needed<br>**Contact appropriate Base Station per Base Station Report Policy #121** - Atraumatic cardiac arrests due to non-cardiac origin (OD, drowning, etc.) | ○ See notes for mixing instructions<br>***OR***<br>• **Epinephrine Drip** start at 1 mcg/kg, up to max of 10 mcg/min IV/IO infusion<br>  ○ Consider for extended transport<br>  ○ See formulary for mixing instructions<br><br>• As needed |

**Notes**

- **Mixing Push-Dose Epinephrine 10 mcg/mL (1:100,000)**: Mix 9 mL of **Normal Saline** with 1 mL of **Epinephrine 1:10,000**, mix well
- **Use manufacturer recommended energy settings if different from listed**
- **Assess for reversible causes**
  - Tension PTX, hypoxia, hypovolemia, hypothermia, hyperkalemia, hypoglycemia, overdose
- **Vascular access** – IV preferred over IO – continue vascular access attempts even if IO access established
- **Oral Intubation (Adults)** – Consider if airway is not patent or with maintained ROSC
- **Adult ROSC** that is **maintained**:
  - Obtain 12-lead ECG and vital signs
  - Transport to the nearest STEMI Receiving Center *regardless of 12-lead ECG reading*
  - Maintain $O_2$ Sat $\geq$ 94%
  - Monitor $ETCO_2$
  - Protect airway with oral intubation if indicated
  - With BP < 100 mmHg, contact SRC (French Hospital) for fluid, or pressors
- **Termination for patients > 34 Kg - Contact SRC (French Hospital) for termination orders**
  - If the patient remains pulseless and apneic following 20 minutes of resuscitative measures
  - Persistent $ETCO_2$ values < 10mmHg, consider termination of resuscitation
  - Documentation shall include the patient's failure to respond to treatment and of a non-viable cardiac rhythm (copy of rhythm strip)
- **Pediatric patients ≤ 34 kg**
  - Stay on scene to establish vascular access, provide for airway management, and administer the first dose of epinephrine followed by 2 min of HPCPR
  - Evaluate and treat for respiratory causes
  - Use Broselow tape if available
  - Contact and transport to the nearest Base Hospital
  - Receiving Hospital shall provide medical direction/termination for pediatric patients