CARDIOPULMONARY ARREST – ADULT / ADOLESCENT NON-TRAUMATIC

Ventricular fibrillation (VF)
OR
Pulseless Wide Complex Tachycardia (VT)

1. Initiate or continue CPR and as soon as defibrillator available:
   ► *Defibrillate once at maximum energy setting or pre-programmed/manufacturer's recommended defibrillator setting*

▼

2. If before loading and initiation of transport, a rhythm with pulse develops (return of spontaneous circulation [ROSC]):
   - Ventilate and oxygenate
   - Assess for and correct suspected:
     1. hypoxia 2. hypovolemia 3.hypoglycemia 4. hypothermia
   - Make Base contact for CVRC destination

▼

3. If remains pulseless:
   → Maintain CPR
   ► *High-flow oxygen by BVM*
   → IV/IO vascular access without interruption of CPR

▼

4. Monitor cardiac rhythm:
   → If continued VF/pulseless Wide Complex Tachycardia
   ► *Defibrillate once at maximum energy setting or pre-programmed/manufacturer's recommended defibrillator setting*
   → If PEA or asystole: refer to PEA/Asystole treatment sequence

▼

5. For continued VF/ pulseless Wide Complex Tachycardia or if reverts back to VF/ pulseless Wide Complex Tachycardia:
   → Maintain CPR, apply Automatic Chest Compression Device, when available
   ► Administer *Epinephrine 1 mg IV/IO (0.1 mg/mL preparation)*, repeat approximately every 3 minutes for continued VF/pulseless Wide Complex Tachycardia
   ► *Advanced airway with minimal interruption of CPR and confirm tube placement.*

▼

6. For continued VF/pulseless Wide Complex Tachycardia:
   → Maintain CPR
   ► *Defibrillate once at maximum energy setting or pre-programmed/manufacturer recommended defibrillator setting.*

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7. For continued VF/ pulseless Wide Complex Tachycardia:
   → Maintain CPR
   ► *Administer Amiodarone 300 mg IV/IO, may repeat 150 mg IV/IO in approximately 3minutes*

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8. After approximately 2 minutes of CPR, if there is continued VF/pulseless Wide Complex Tachycardia:
   ► *Defibrillate once at maximum energy setting or pre-programmed/manufacturer's recommended defibrillator setting*

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9. For continued VF/ pulseless Wide Complex Tachycardia:
   → Maintain CPR and transport to nearest ERC or make Base contact:
   - For further resuscitation orders
   - If appropriate,To request pronouncement of patient in the field

Pulseless Electrical Activity (PEA) OR Asystole

1. Initiate or maintain CPR without interruption unless pulse obtained by any step below
   ► *High-flow oxygen by BVM*

PEA

2. Continually monitor cardiac rhythm:
   → Maintain CPR
   ► *IV/IO vascular access*
   ► *250 mL Normal Saline bolus*

If pulses obtained, continue saline infusion and transport to CVRC per Base contact

If no response to saline bolus, apply Automatic Chest Compression Device when available

ASYSTOLE

2. Continually monitor cardiac rhythm:
   → Maintain CPR
   → apply Automatic Chest Compression Device
   ► *IV/IO vascular access*

3. ► *Administer Epinephrine 1 mg IV/IO (0.1 mg/mL preparation) approximately every 3 minutes*
   → Assess for possible reversible causes:

hypovolemia	acidosis
hypoxia	tension pneumothorax
hypothermia	toxins

If diabetic and hypoglycemia suspected, administer:
► *Dextrose 10%, 250 mL IV/IO once*

4. ► *Advanced airway with minimal interruption of CPR and confirm tube placement*

5. If VF/ pulseless Wide Complex Tachycardia develops:
   ► *Defibrillate once using pre-programmed/manufacturer's recommended defibrillator setting* and follow VF/pulseless Wide Complex Tachycardia algorithm

6. If before loading and initiation of transport, a rhythm with pulse develops (return of spontaneous circulation [ROSC]):
   - Ventilate and oxygenate
   - Assess for and correct hypoxia, hypovolemia, hypoglycemia, or hypothermia
   - Make Base contact for CVRC destination

7. For continued PEA or asystole:
   → Maintain CPR and transport to nearest ERC or make Base contact:
   - For further resuscitation orders
   - If appropriate, to request pronouncement of patient in the field

TREATMENT GUIDELINES:

- Agonal gasps are not adequate breathing and when accompanied with a pulseless state the patient should be considered to be in full cardiopulmonary arrest.

- If the patient has an implanted pacemaker or defibrillator/pacemaker, place electrode pads to either side and not directly on top of the implanted device.

- If the patient has a medication patch in place on the chest area, remove the patch and wipe the area clean before attaching an electrode pad.

- Automatic Chest Compression devices should be applied as soon as available for patients with pulseless rhythms or asystole and for whom CPR is to be continued.

- Appropriate advanced airway includes:
    1. Endotracheal intubation
    2. Supraglottic device (Laryngeal Mask Airway)
    3. King® airway
    4. Combitube®

- If a patient is wearing a LifeVest®
    - Proceed with standard evaluation and treatment measures.
    - Initiate CPR unless the vest device is broadcasting "press the response buttons," "electrical shock possible, do not touch patient," or "bystanders do not interfere."
    - Follow standard treatment as described in algorithms above and remove the LifeVest® and monitor/treat the patient with the standard monitor-defibrillator.
    - To remove the LifeVest®, first pull out or disconnect the battery, then remove the garment from the patient.
    - Take vest, modem, charger, and extra battery to the hospital.

- If Base Hospital orders push-dose epinephrine for refractory hypotension, refer to ALS Procedure # 230 (Push-Dose Epinephrine) for technique in performing procedure.