Information Needed

1. History: Time of onset, bystander CPR, and first responder AED use; preceding symptoms, recent illness, cardiac, pulmonary, and renal diseases, presence/absence of DNR, evidence of drug ingestion, medications, and toxic exposures/inhalations.
2. Physical findings: no pulse, no respiration, no movement, cyanosis, trauma, cool skin temperature, dusky color.

Treatment

1. Start CPR immediately if no signs of obvious death and no DNR documented.
2. Call for back-up if needed.
3. Attach monitor/defibrillator or AED and determine cardiac rhythm.
4. CPR Guidelines: Chest compressions should be given at a rate of at least 100/minute with a ratio of 30:2 compressions to breaths. CPR should not be interrupted for longer than 10 seconds for any reason except to shock.
5. Once BVM, ET, or King Tube is in use, attach a respiratory impedance device (Res-Q-Pod). Once CPR is discontinued, the device should be removed.

Ventricular Fibrillation/Pulseless Ventricular Tachycardia

1. Defibrillate at 360J monophasic or 200J biphasic.
2. Immediately resume CPR.
3. After 2 minutes, assess. If no pulse, shock again (360J monophasic or 200J biphasic), then continue CPR regardless of rhythm displayed. Assess and shock if needed every 2 minutes, until patient has a palpable pulse or shows signs of responsiveness.
4. Establish IV or IO access and give epinephrine. Repeat every 3 min. for duration of arrest.
5. If possible without interrupting compressions, establish a definitive airway.
6. Give amiodarone. If amiodarone is unavailable, use lidocaine
7. Re-assess after each treatment.
8. Consult medical control for further antiarrythmics.

Asystole/Agonal Rhythm

1. Continue CPR.
2. Establish IV or IO access.
3. If possible without interrupting compressions, establish a definitive airway.
4. Confirm asystole in more than one lead.
5. Give epinephrine every 3 min.
6. Give fluid bolus.
7. Consult medical control for further treatment or termination of resuscitation.

Pulseless Electrical Activity

1. Continue CPR.
2. Establish IV or IO access.
3. If possible without interrupting compressions, establish a definitive airway
4. Give epinephrine every 3 minutes.
5. Consider possible causes and their treatments:
    a. Hypovolemia - fluid bolus.
    b. Hypoxia - ventilate.
    c. Tension pneumothorax - decompress chest.
    d. Cardiac tamponade - fluid bolus to temporarily override tamponade.
    e. Calcium channel blocker overdose - calcium.
    f. Beta blocker overdose – glucagons.
    g. Narcotic overdose - naloxone.
    h. Tricyclic overdose - sodium bicarbonate.
    i. Pulmonary embolus - fluid bolus and CPR
    j. Hypothermia – CPR, ventilation, re-warming (if possible), rapid transport.
6. Do not interrupt CPR to check for a pulse but evaluate for any responsiveness during CPR especially after a treatment is given.
7. Consult medical control for advice and further orders.

After return of spontaneous circulation

1. Post VF/VT give lidocaine or amiodarone bolus if not already given. If lidocaine has been given, start lidocaine infusion. If amiodarone has been used given a second bolus of 150 mg.
2. Treat bradycardia if rate not increasing due to medications already given.
3. If hypotensive and no crackles (rales), give fluid challenge.
4. Consult medical control for further fluids or vasopressors.

Trauma Arrest

1. The chance of resuscitation is very poor if arrested prior to arrival of EMS or from blunt trauma. Arrests from penetrating trauma can sometimes be salvaged with rapid transport and treatment.
2. Start CPR, secure airway, rapidly immobilize, and transport.
3. Decompress chest if needed.
4. Establish IV or IO access, draw blood and give fluid bolus.
5. Consult medical control if resuscitation effort not warranted or to terminate effort.
6. For penetrating trauma arrest always consider tension pneumothorax, cardiac tamponade, and exsanguinating hemorrhage. See PEA for treatment.

Pediatric Arrest

1. Usually due to external cause (suffocation, drowning) or catastrophic congenital anomaly.
2. Cardiac arrest almost always secondary to respiratory arrest.
3. Start CPR.
4. If possible without interrupting compressions, establish a definitive airway. Remember that peds can often be ventilated quite well using only good BVM technique.
5. Establish venous access and draw blood.
6. Treat dysrhythmia per protocol. Use adult sequence with pediatric dosage.

Notes

1. Signs of obvious death: dependent lividity, rigor mortis, decomposition of body or decapitation.

2. IO access should be considered in arrest situations where there is a significant chance of resuscitation. It is often quicker than an IV.
3. Pediatric patients can be defibrillated using adult patches placed on the front and back of chest.
4. In cases where you believe the patient to be viable, transport should be considered as early as possible, as long as adequate care and the safety of responders can be ensured en route.
5. In cases where repeated defibrillation attempts have been unsuccessful, higher energy defibrillation may be tried.