



Reference 806: Core Principles: Managing Cardiac Arrest

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- Rule #1 The initial emphasis in managing cardiac arrest patients is in establishing circulation via high quality, uninterrupted chest compressions.
- During the resuscitation attempt no pauses of greater than 5 seconds should ever occur, if possible.
 - 100 compressions/minute with full recoil
 - Switch compressors every 2 minutes when possible
- Rule #2 Defibrillation should be attempted as soon as possible during the resuscitation.
- Patients who develop ventricular defibrillation while being monitored may be immediately defibrillated. "Off the chest" time should only occur during the actual defibrillation of the patient.
- Rule #3 Continuous compressions and defibrillation are more important than ventilation, vascular access, and medications.
- Rule #4 Modest, interpolated ventilation should be administered on every 10th compression upstroke.
- Choice of adjuncts for ventilation should be based on the specific needs of the patient. Endotracheal intubation is still the optimal airway, especially if a ROSC is achieved.
- Rule #5 Vascular access may be established via either IV or IO routes.
- IV routes provide more versatility and ease of use once established.
- Rule #6 Medication administration should proceed per protocol.
- Epinephrine mildly enhances CPR
 - Antiarrhythmics are effective once ROSC is achieved.
- Rule #7 Ventilating patients, placing advanced airways, and establishing vascular access should not interfere with continuous chest compressions or defibrillation.
- Rule #8 End-tidal capnography should be used for evaluating the effectiveness of resuscitation, the return of pulses, and as an endpoint for the resuscitation attempt.



Rule #9 A team leader should clearly be identified at the beginning of the resuscitation attempt. All cardiac arrest management should be handled in a sequential and orderly fashion, with all job tasks clearly defined and delegated to resuscitation team members.

- Overall scene management should be coordinated and supervised using the precepts of the Incident Command System.

Rule #10 Post-arrest management should focus on stabilizing the patient’s life threats and transport. This management should include the following:

- Maintain O2 saturations (SpO2) above 94% using the lowest concentration of O2 possible. Ventilation on room air is optimal if saturations can be maintained.
- Ventilate the patient 10-12 breaths per minute to achieve an end tidal CO2 of 35 – 45 mmHg. No hyperventilation!
- Maintain a minimum systolic BP of 90 mmHg. Use IV fluids and Push-dose Epinephrine to achieve this. If the patient’s BP is 90 systolic or higher, there is no need for any further circulatory support. See Procedure 708 Push-Dose Epinephrine Mixing Instructions
- Manage post-arrest arrhythmias as needed.
- Obtain a 12 lead ECG. Transmit/transport to Dominican Hospital if a STEMI is identified. If the call occurs in South County, make base station contact with Dominican Hospital prior to transport.

Rule #11 Resuscitation should not be attempted, or continued, in circumstances that are patently futile.

“Pit Crew”

Cardiac Arrest Sequence of Care

Step 1	Scene safety and universal precautions
Step 2	Determine unresponsiveness (no more than 5 seconds)
Step 3	Begin chest compressions @ 100 compressions/minute
Step 4	Attach EKG quick patches, turn on EKG monitor, evaluate rhythm and defibrillate as indicated.
Step 5	BVM/ETI/I-GEL at 1 every 6 seconds, ventilating during every 10th compression upstroke.
Step 6	Do not stop compressions for more than 2-4 seconds to deploy an airway adjunct.
Step 7	Establish vascular access. If venous access is not easily established, establish IO access.
Step 8	Administer drug therapy in accordance with the appropriate protocol.
Step 9	Switch compressors every 2 minutes, avoiding interruptions > 2-4 seconds. During this pause, check the ECG to determine if defibrillation is indicated. If so, defibrillate.
Step 10	ROSC? Stop CPR and continue to ventilate 10-12/min (adult) or 20/min (peds). Follow post-arrest instructions above