

Santa Barbara City Fire Department - Standard Operating Procedures <b>Training Operations</b>	Code: <b>T-XII-3</b>
<b>Cardiac Arrest Management (CAM)</b>	
Chapter: XII EMS	Revised: 6/29/2017 Pages: 5

**I. PURPOSE**

A. Establish a comprehensive CAM policy to ensure that all operational personnel receive the level of training needed to maximize cardiac arrest survival. CAM is also known as Pit Crew CPR or High-Performance CPR (HP CPR)

**II. PIT CREW CPR POLICY:**

A. The intent of the CAM policy is to work in an organized fashion to deliver comprehensive care to a cardiac arrest patient.

B. CAM can be utilized with crews ranging from 2-5 personnel, including both BLS and ALS personnel.

C. The primary goal is to deliver CONTINUOUS high quality chest compressions from the moment of arrest until the return on spontaneous circulation (ROSC).

1. Starts with bystander CPR
2. Dispatch EMD pre-arrival instructions.
3. EMS response with rapid initiation of CAM
4. Hospital Care

B. Cornerstones of treatment from BLS providers:

1. Rapid and accurate Assessment
2. Patient Positioning
3. High Performance CPR with minimal interruption
4. Defibrillation

C. Time on scene will include a minimum of 20 minutes of CPR and ALS.

**III. CAM PROCEDURE:**

A. Role review at beginning of each shift

1. Crew should predetermine who will fill each position
2. Work area should be based on a “TEAM” effort

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- B. Rapid and accurate assessment
- C. Adequate work space needed and should be an initial priority to ensure CAM is done safely and effectively. Do NOT start CPR until patient is placed in a working area
- D. Remove clothing to expose the chest.
- E. Compression rate at 110/minute
  - 1. Never interrupted for more than 3 seconds
  - 2. Use a metronome if available, at 110 beats per minute
  - 3. Compressions continue while AED is attached
  - 4. Ensure full chest recoil/decompression after each compression
    - a) Should be able to slide a credit card under the palm of your hand between the upstroke and downstroke of each compression
  - 5. Ensure proper depth of compressions, at least 2 inches
  - 6. OPA inserted prior to ventilations
  - 7. ALS procedures will be performed during CPR
  - 8. **Rotate compressors every 2 minutes during CPR (this is mandatory)**
- F. Ventilation every 10<sup>th</sup> compression on the upstroke
  - 1. Compressions do not stop for ventilations
  - 2. Ventilations with the BVM should be administered on the 10th chest compression upstroke. The ventilation should be approximately 1/3 of a second. Attempt to deliver about 1/2 of the volume in the BVM
  - 3. A two-handed seal will be used during ventilations unless the initial CAM consists of only two personnel.
- G. AED
  - 1. Rescuer #2 applies pads while Rescuer #1 is performing chest compressions
  - 2. If CPR is being performed prior to arrival, take over chest compressions and apply AED asap. If no CPR is being performed prior to arrival, perform 170 chest compressions and then turn on AED.
  - 3. When AED announces “analyzing,” remove hands from the chest.

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- A. If the patient is in a shockable rhythm, continue chest compressions until “press shock button” is announced (will likely be approximately 30 compressions).
- B. AED operator announces: “I’m clear you’re clear, everyone clear” and presses shock button.
- C. Immediately start CPR after shock
- D. If “no shock advised” is announced by AED, immediately restart chest compressions and ventilations.
- E. **Switch compressors every 2 minutes (again, this is mandatory)**

### H. Keeping time

1. Ventilator progressively counts out each compression (i.e “7,8,9,**10**...7,8,9,**20**,...7,8,9,**30**.....7,8,9, **180**)
2. Ventilator counts out every 10<sup>th</sup> compression
3. Rescuer #3 announces to the paramedic when compressions reach 170. Paramedic will then charge the defibrillator. After 30 more compressions, stop compressions, paramedic will read the heart rhythm and either shock or dump the charge.
4. After patient is defibrillated, immediately continue chest compressions and ventilations.
4. If the charge is dumped, immediately continue chest compressions and ventilations.

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## IV. PROCEDURE:

### I. Rescuer #1 (patient's right side)

1. Shake and Shout
2. Assesses responsiveness/pulses
3. Initiates chest compressions immediately if needed
4. Will switch roles with Rescuer #2 for compressions and ventilations

### J. Rescuer #2 (patient's left side)

1. Applies AED pads
2. Operates AED after 2 minute cycle of compressions
3. Ventilates patient when not operating AED
4. Will switch roles with Rescuer 1 for compressions and ventilations

### K. Rescuer #3 (patient's head)

1. Assembles and appropriately applies all equipment for airway and ventilations
2. Opens/clears airway
3. Maintains 2-handed BVM mask seal

### L. Rescuer #4 (Paramedic)

1. Switches AED with Manual Monitor
2. Begins ALS

### M. Rescuer #5 (Ambulance EMT or second paramedic)

1. Assists paramedic with set-up of Manual Monitor, IV, and other orders
2. Switches with Rescuer #3 (Captain) when available to do so allowing Captain to control the scene

## IV. VIDEO

1. [Pit Crew CPR Training Video](#)

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## Rescuer 3- Fire

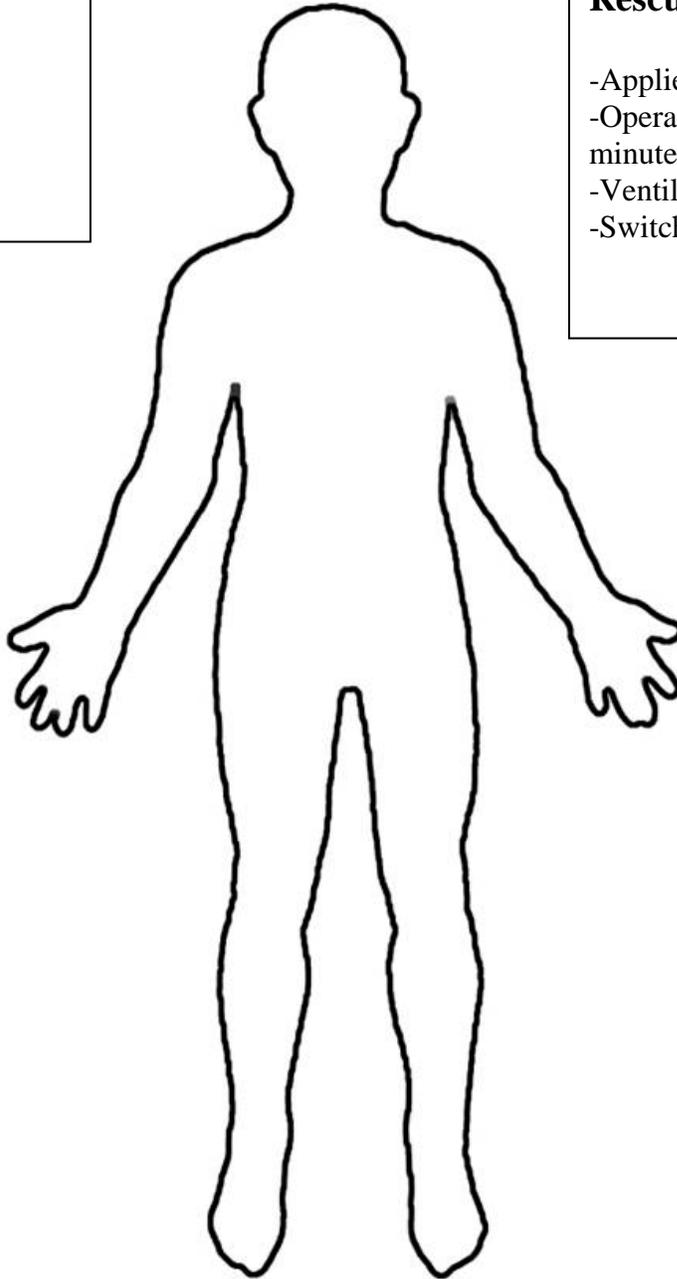
- Opens/Clears Airway
- Ventilates patient
- Maintains 2-Hand Seal when Rescuer 1 or 2 ventilates

## Rescuer 1- Fire

- Shake and Shout
- Assesses
- Initiates Compressions
- Switches with Rescuer 2

## Rescuer 2- Fire

- Applies AED pads
- Operates AED after 2 minutes of Compressions
- Ventilates patient
- Switches with Rescuer 1



## Rescuer 4- Paramedic

- Switches AED with Manual Monitor
- Begins ALS

## Rescuer 5-EMT or Paramedic

- Assists AMR/Medic
- Switches with Rescuer 3 (Captain) when available