The 2014 upgrade to High-Performance CPR is an initiative to decrease time to patient care in Out-of-Hospital Cardiac Arrest (OHCA), maximize the amount of “hands on” compression time during a cardiac arrest and streamline the approach the OHCA through a simplified, efficient and choreographed team approach. It has been documented that efficient response times, maximizing compression time and minimizing interruptions in CPR lead to demonstrable better outcomes to cardiac arrest.

### BLS/CPR

<table>
<thead>
<tr>
<th><strong>BLS OWNS CPR</strong> (Even if ALS on scene first, BLS measures initiated first until backup arrives).</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 1 provider initiates compressions</td>
</tr>
<tr>
<td>• 1 provider attaches AED/Monitor first, then moves to airway</td>
</tr>
<tr>
<td>- Do not stop compressions to cut clothes or to apply defibrillation pads</td>
</tr>
<tr>
<td>• 1 provider acts as time keeper/team manager.</td>
</tr>
<tr>
<td>- Calls out rotational changes every 2 minutes</td>
</tr>
<tr>
<td>› Analyzes rhythm while providers change position until ALS arrives</td>
</tr>
<tr>
<td>• Reminds ALS providers when last medication dose administered every 3-5 minutes.</td>
</tr>
</tbody>
</table>

### CONTINUOUS COMPRESSIONS

- Compressions continue to be at a rate of 100-110 per minute for 2 minutes.
- Use a metronome if possible (smart phone app or equipped with AED)
- There will be no ventilation pauses.
- “Do NOT interrupt chest compressions” during the 2 minute cycle.
- If possible, change the Compression Person each 2 minute cycle.

### EFFECTIVE COMPRESSIONS

- Aggressively maintain compression depth of 1 ½ - 2 inches (or more on larger individuals).
- Compressions should be smooth with 50% down / 50% up motion.
- Completely release pressure with each compression for maximum blood flow.
- Do not bounce off chest, or lean on the chest during compressions.

### AED/MONITOR

- Turn on the AED/monitor as soon as cardiac arrest has been verified
- Clearly state: “beginning 2 minutes of CPR” for time keeper/team leader
- Team leader records times of initiation of compression and monitor placement
- Do NOT interrupt chest compressions to cut clothes or place patches.

### INTERPOSED VENTILATIONS

- Do NOT interrupt chest compressions; interpose (insert) (1) ventilation for every 10 compressions.
  - Ventilate ‘just enough for chest rise’.
  - You must count compressions to help appropriately time ventilations
  - The Designated Compression Provider should count compressions aloud in sets of ‘10’ to cue the ventilation provider to ventilate the patient
- This will yield a ventilation rate of approximately 10 per minute.
- The Compression Ventilation Ratio of 10:1 applies to pediatric patients as well.

### PULSE CHECKS

- NO PULSE CHECKS AFTER SHOCK
- Pulse checks only if organized rhythm after defibrillation
- Continue to monitor the effectiveness of Chest Compressions during CPR
- Wave-form capnography can greatly reduce need for pulse checks and can accurately identify ROSC

### CARDIAC ARREST AFTER EMS ARRIVAL (EMS WITNESSED ARREST)

- The main priority is to defibrillate as soon as possible.
- Continuous compressions while applying the monitor/AED. This will maximize the likelihood of success.
- Once the monitor/AED is in place push Analyze.
- Continue as in un-witnessed arrest.

### ALS/ACLS

#### INITIATE ALS after BLS initiated

- Continue 2 minute CPR Cycles and 10:1 compression: ventilation ratio.
  - **DO NOT** stop compressions during Intubation attempts, other airway maneuvers or other procedures.
  - Verbalize out loud medication administrations for team leader/timekeeper
  - Peripheral IV preferred over IO (Humeral Head IO preferred over tibial IO)
  - Transport decisions are ultimately the responsibility of the treating/transporting paramedic(s).
  - During manual CPR, if possible, patient should not be moved/transported except if ROSC obtained
  - Transport suggested if: • Unsafe or hostile scene
    - Public setting (department store, convention, sporting event, etc.)
    - Outdoor setting and inclement weather
  - If LUCAS device is applied and operating effectively, patient may be transported or moved.
  - **ALL PEDIATRIC CARDIAC ARRESTS ARE TO BE TREATED AS “LOAD AND GO” AND TRANSPORTED IMMEDIATELY**