CPR and AED Guidelines 2005 for Professional Rescuers

The following 10 techniques are the same for all guests in distress regardless of age (*except newborns-those under 1 month*): **Maintain Universal Precautions when providing care.**

- Survey Scene. Check responsiveness – "Tap and shout are you OK".
- Open the Airway – Jaw Thrust with head tilt
- Check for Breathing – Look, Listen, and Feel for breathing for up to 10 seconds.
- If breathing, place in the recovery position.
- If not breathing, give two normal ventilations – each ventilation lasting 1 second. Visualize chest rise and fall with each ventilation.
- If ventilations achieve a visible chest rise and fall then check pulse for up to 10 seconds.
- If no pulse, begin CPR for 2 minutes. Re-assess after 2 minutes of CPR (Chest Compressions and breaths)
- If pulse is definitely present but no breathing, provide rescue breathing. 2 minutes of Rescue Breathing
- If ventilation does not produce a visible chest rise, re-tilt the head and try the ventilation again.
- If the ventilation still does not produce a visible chest rise, assume airway is obstructed – deliver cycles of 30 chest compressions, check the airway, clear any obvious obstructions, give 2 ventilations, and repeat if necessary.

Action	**Adult** **(≥12 years or puberty onset)**	**Child** **(1 year to ≥12 years or puberty onset)**	**Infant** **(< 1 year)**
Calling EMS when alone	Evaluate the likely cause of the event: -Cardiac event -Hypoxic Event Call immediately after determining victim is unresponsive	Evaluate the likely cause of the event: -Cardiac event -Hypoxic Event Call after performing 2 minutes of care	Evaluate the likely cause of the event: -Cardiac event -Hypoxic Event Call after performing 2 minutes of care
CPR			
-Pulse Check	Carotid/Femoral	Carotid/Femoral	Brachial
-Compression Location	2 hands on breastbone (lower half of sternum) at nipple line.	1 or 2 hands on breastbone (lower half of sternum) at nipple line.	Single rescuer: 2 fingers on breastbone just below nipple line. Two Rescuer: two thumbs technique
-Depth	1 ½ - 2 inches	1/3 to ½ depth of the chest	1/3 to ½ depth of the chest
-Single rescuer compression to breath ratio	30:2	30:2	30:2
Two-rescuer compression to breath ratio	30:2	15:2	15:2
AR	-1 breath every 5 seconds -10-12 breaths per minute	-1 breath every 3 seconds -12-20 breaths per minute	-1 breath every 3 seconds -12-20 breaths per minute
FBAO Conscious Guest	Abdominal Thrust(Heimlich) *Obese or pregnant deliver chest compressions	Abdominal Thrust(Heimlich)	Alternate 5 back blows/ 5 chest thrusts
FBAO Unconscious Guest	30 chest compressions	30 chest compressions	30 chest compressions
AED Use	Yes	Yes -Use pediatric pads if available up to 8 yrs old.	No

Instructor Notes and Teaching Points

Definitions/Terms:

- Asphyxial Cardiac Arrest – Mechanism typical in drowning or drug overdose and children in general.
- Pro Rescuer Age Delineation: Infant- less than 1 year; Child- 1 year to 12/14 years (puberty onset- developing of female chest and underarm/facial hair in males) of age. Adult ≥12 years or puberty onset.
- Agonal Breaths- occasional gasps, not effective breathing. Final breaths caused by hypoxia.
- Drowning-Process resulting in primary respiratory impairment from submersion/immersion in a liquid medium; a drowning victim may live or die after the process, but whatever the outcome he/she has been involved in a drowning incident. "Near Drowning" no longer recognized.
- Refer to a "near drowning" event as a **"Submersion Event".**
- First and most important care step for **Submersion victims**: **Open airway** and ***Ventilation.***
- **Open Airway, Quick Check Signs of Life**- performed in less than 10 seconds following a delivered shock and prior to starting Chest compressions when AED is active. This is **NOT** a pulse and/or breathing assessment; it is simply a quick check for obvious signs of life. Examples of obvious signs of include the guest coughing, speaking, opening their eyes, etc.

Teaching Points:

AR

- 1 second breaths- achieve visible chest rise (avoid rapid or forceful breaths). More is not better, quality save lives.
- Agonal breaths NOT effective. Show BVM use with an intelligent GID (conscious simulated GID accepting a breath from a BVM) to demonstrate use of BVM as subsequent chest rise example.
- 2 minute cycles.

FBAO

- Conscious GID: Heimlich or chest thrusts.
- Conscious to unconscious: 30 chest compressions, check the airway, clear any visible obstructions, give 2 breaths, use V-VAC if obstruction (fluid) is present.
- Unconscious GID- Adult/Child/Infant: ventilations or breaths do not make a visible chest rise, re-tilt airway and give two ventilations, still no visible chest rise then perform 30 chest compressions, check the airway, clear any visible obstructions, give 2 breaths (*Use the term Chest Compressions as opposed to CPR*).
- Finger sweep only if obstruction is visible and guest is unconscious.
- No abdominal thrusts on an unconscious guest (only chest compressions).

CPR

- PUSH HARD PUSH FAST.
- Adult 30:2/ 5 cycles or until AED arrives.
- Infant/Child one person compression to breath ratio 30:2; Infant/Child two person compression to breath ratio 15:2.
- **2 minute cycles for both adult and infant/child**
- Infant/Child: 8 cycles (15:2 compressions to breath ratio) or until AED starts analysis.
- Child: can use one or two hands based upon GID/rescuer size- compress ½ to 1/3 chest depth.
- For 30:2 ratio counting: Lose the "and". 1,2,3,….
- Teaching the "trace, space, and place" for proper land marking is encouraged however if nipple line is clearly identifiable there is no requirement to perform this technique for land marking purposes.
- Child- Perform 2 minutes of CPR BEFORE applying AED if cardiac event is not witnessed.

AED

- **INTIAL ANALYSIS-** after analysis (either shock advised and delivered OR No Shock Advised) – open airway and perform "Quick Check" for signs of life- then perform 2 minutes of CPR.
- **ALL SUBSEQUENT ANALYSIS-IF SHOCK IS ADVISED AND DELIVERED**– open airway and perform "Quick Check" for signs of life- then perform CPR for 2 minutes; **IF NO SHOCK ADVISED** then assess airway and breathing for 10 seconds and provide appropriate care.
- **IF a Pediatric capable AED is available use for children age 1-8 yrs old (older than 8 years old use Adult Pads). IF a Pediatric AED is not available use adult pads/AED unit on a child ages 1 year and above.**

Best Practices:

- It will be difficult to provide quality compression in a real situation, additional practice with manikins is highly recommended.
- Every 2 minutes there will be a need to switch rescuer delivering compressions in order to maintain quality compressions.
- Demonstrate agonal breaths and emphasize that this is not effective breathing- If agonal breathing is identified rescuer must GIVE BREATHS and Supplemental Oxygen.
- **VISUAL PROMPTING**. Chest does /does not rise and fall as opposed to "not breathing". Ask rescuer to tell you what they see and/or feel- Have them assess the GID real signs and symptoms. Force lifeguard to "see" and "search" for the real signs and symptoms the guest is exhibiting.