

PR06: High Performance CPR

Applicable To

- FR and higher

Introduction

The 2020 AHA CPR Guidelines emphasized the importance of providing high quality CPR. The quality and timing of CPR is critical to successful resuscitation in patients who have experienced a sudden cardiac arrest. High performance CPR should be used in all cases of cardiac arrest from a presumed cardiac cause (i.e., not in traumatic arrests).

Procedure

- Paramedics and EMRs/FRs should adhere to the five principles of high quality CPR by focusing on providing:
 - Compressions at optimal rates: 100 to 120 compressions per minute.
 - For patients without an advanced airway (supraglottic airway or endotracheal tube), perform compressions and ventilations at a ratio of 30:2.
 - For patients with an advanced airway in place, perform continuous chest compressions, ventilating every 6 seconds.
 - Compressions at an optimal depth of 5 centimetres (2 inches).
 - Complete chest recoil during compressions: after each compression, a negative pressure develops in the chest that pulls blood into the thorax for the next compression. (This is also when coronary arteries are perfused.) Maintaining pressure on the chest wall that results in incomplete chest recoil diminishes or prevents the return of blood into the thorax.
 - When providing ventilations, be aware of appropriate volumes; in adult patients, no more than 500-600 mL should be given during CPR.
 - Minimally interrupted compressions. Pauses during compressions should be limited to 10 seconds or less. Perform pulse checks only while analyzing rhythms, or if signs of spontaneous circulation become evident.
- When charging monitors and defibrillators prior to delivering shocks:
 - For AEDs: pause compressions only as long as required to conduct the analysis. Immediately resume compressions once the AED has completed the analysis, even if a shockable rhythm is detected.
 - With compressions ongoing, verify the presence of a central pulse.
 - Charge the defibrillator (or allow the AED to charge).
 - Once the defibrillator is charged, stop compressions. Confirm the absence of central pulses.
 - Clear the patient and deliver the shock.
 - Immediately resume compressions *without* checking for pulses.
- Clear delegation of roles and effective intra-team communication and leadership are fundamental to success in resuscitation efforts.

References

American Heart Association. 2020 American Heart Association Guidelines for CPR and ECC. 2020. [[Link](#)]

