

2010 AHA Guidelines for CPR and ECC Summary Table

Topic	2005 Guidelines	2010 Guidelines
Systematic Approach: BLS Survey	<ul style="list-style-type: none"> • A-B-C-D: Airway, Breathing, Circulation, Defibrillation • “Look, listen, and feel” for breathing and give 2 rescue breaths 	<ul style="list-style-type: none"> • 1-2-3-4 1. Check responsiveness. 2. Activate the emergency response system and get an AED. 3. Circulation: Check the carotid pulse. If you cannot detect a pulse within 10 seconds, start CPR, beginning with chest compressions, immediately. 4. Defibrillation: If indicated, deliver a shock with an AED or defibrillator.
Topic	2010 Guidelines	
BLS: High-Quality CPR	<ul style="list-style-type: none"> • A rate of at least 100 chest compressions per minute • A compression depth of at least 2 inches in adults • Allowing complete chest recoil after each compression • Minimizing interruptions in compressions (10 seconds or less) • Switching providers about every 2 minutes to avoid fatigue • Avoiding excessive ventilation 	
ACLS: Cardiac Arrest and Bradycardia Algorithms	<ul style="list-style-type: none"> • The <i>2010 AHA Guidelines for CPR and ECC</i> simplifies the Cardiac Arrest Algorithm and includes a circular algorithm. • The priority is the 2-minute continuous period of high-quality CPR and defibrillation. • All advanced interventions—including IV access, drug delivery, and advanced airways—should not interrupt chest compressions and shocks. Rather, they should be performed or administered strategically after the brief pause for defibrillation. • These actions continue until ROSC, when healthcare providers initiate post-cardiac arrest care protocols. • During cardiac arrest, providers should administer a vasopressor every 3 to 5 minutes. Epinephrine is commonly used, although vasopressin can replace the first or second dose of epinephrine. Regardless of the vasopressor given, one should be administered every 3 to 5 minutes. ACLS providers should administer amiodarone for refractory VF and VT. • The American Heart Association no longer recommends atropine for routine use in managing PEA or asystole. • For treatment of undifferentiated wide-complex tachycardia with regular rhythm, ACLS providers can consider adenosine in the initial treatment. • Atropine remains the first-line treatment for all symptomatic bradycardias, regardless of type. • For symptomatic bradycardia, the American Heart Association now recommends IV infusion of chronotropic agents as an equally effective alternative to external transcutaneous pacing when atropine is ineffective. 	

(continued)

Topic	2010 Guidelines
ACLS: Tachycardia– Synchronized Cardioversion	<ul style="list-style-type: none">• The <i>2010 AHA Guidelines for CPR and ECC</i> simplifies the Tachycardia Algorithm.• For cardioversion of unstable atrial fibrillation, the <i>2010 AHA Guidelines for CPR and ECC</i> recommends that the initial biphasic energy dose be between 120 and 200 J.• For cardioversion of unstable SVT or unstable atrial flutter, the <i>2010 AHA Guidelines for CPR and ECC</i> recommends that the initial biphasic energy dose be between 50 to 100 J.• Cardioversion with monophasic waveforms should begin at 200 J and increase in a stepwise fashion if not successful.• The <i>2010 AHA Guidelines for CPR and ECC</i> also recommends cardioversion for unstable monomorphic VT, with an initial energy dose of 100 J.• If the initial shock fails, providers should increase the dose in a stepwise fashion.
ACLS: Post–Cardiac Arrest Care	<p>A new section focusing on post–cardiac arrest care was introduced in the <i>2010 AHA Guidelines for CPR and ECC</i>. Recommendations aimed at improving survival after ROSC include</p> <ul style="list-style-type: none">• Optimizing cardiopulmonary function and vital organ perfusion, especially to the brain and heart• Transporting out-of-hospital cardiac arrest patients to an appropriate facility with post–cardiac arrest care that includes acute coronary interventions, neurologic care, goal-directed critical care, and hypothermia• Transporting in-hospital cardiac arrest patients to a critical care unit capable of providing comprehensive post–cardiac arrest care• Identifying and treating the causes of the arrest and preventing recurrence• Considering therapeutic hypothermia to optimize survival and neurologic recovery in comatose patients• Identifying and treating acute coronary syndromes• Optimizing mechanical ventilation to minimize lung injury• Gathering data for prognosis• Assisting patients and families with rehabilitation services if needed <p>Critical actions for post–cardiac arrest care:</p> <ul style="list-style-type: none">• Hemodynamic optimization, including a focus on treating hypotension• Acquisition of a 12-lead ECG• Induction of therapeutic hypothermia• Monitoring advanced airway placement and ventilation status with quantitative waveform capnography in intubated patients• Optimizing arterial oxygen saturation
ACLS: Managing the Airway	<ul style="list-style-type: none">• The <i>2010 AHA Guidelines for CPR and ECC</i> recommends using waveform capnography to monitor the amount of carbon dioxide exhaled by the patient and to verify placement of an endotracheal tube.• Cricoid pressure should not be used routinely during cardiac arrest. This technique is difficult to master and may not be effective for preventing aspiration. It may also delay or prevent placement of an advanced airway.• Agonal gasps are not effective breaths and should not be confused with normal breathing.
High-Quality Patient Care: Systems of Care	<ul style="list-style-type: none">• Integrated systems of care should include community members, EMS, physicians, and hospitals.