2025 Interim Training Materials: *ACLS Provider Manual* and *ACLS for Experienced Providers Manual and Resource Text* Changes

Purpose

These instructions will help update the current *Advanced Cardiovascular Life Support* (ACLS) *Provider Manual* and *ACLS for Experienced Providers* (ACLS EP) *Manual and Resource Text* with science from the *2025 American Heart Association Guidelines for Cardiopulmonary Resuscitation* (CPR) *and Emergency Cardiovascular Care*, "2023 American Heart Association Focused Update on Adult Advanced Cardiovascular Life Support: An Update to the American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care," and the *2025 American Heart Association Guidelines for CPR and Emergency Cardiovascular Care* (2025 Guidelines).

ACLS Instructors: Instructors should print these materials and provide copies to students when teaching the new 2025 Guidelines courses while using 2020 Guidelines provider materials until the new materials are available. International English courses must be taught using 2025 Guidelines materials by March 1, 2026. For all other languages, courses must be taught using 2025 Guidelines materials 90 days from when the new materials are available.

ACLS EP Instructors: Instructors should print these materials and provide copies to students when teaching the new 2025 Guidelines courses while using 2017 ACLS EP provider materials until the ACLS EP Course is updated.

ACLS Provider Manual Changes

1. Adult Chain of Survival

2025 Changes

- A single Chain of Survival is intended to be applicable to adult and pediatric in- and out-of-hospital cardiac arrest. In creating this singular chain, it is acknowledged that, before cardiac arrest, prevention and preparedness can both avoid and optimize resuscitation.
  - The systems of care guidelines follow the unified cardiac arrest Chain of Survival, beginning with prevention and preparedness to resuscitate, proceeding with early identification of cardiac arrest, and then progressing to effective resuscitation through to post–cardiac arrest care, recovery, and survivorship. The unified cardiac arrest Chain of Survival includes the following links:
    - Recognition and Emergency Activation
    - High-Quality CPR
    - Defibrillation
    - Advanced Resuscitation
    - Post–Cardiac Arrest Care
    - Recovery and Survivorship

Apply Here

- Part 1: Overview of ACLS
  - Section: Systems of Care

2. Ventilation in Respiratory and Cardiac Arrest

2025 Changes

- When ventilating an adult patient in cardiac arrest, it is reasonable to give enough tidal volume to produce visible chest rise. This can be achieved with about a third-a-bag to one-half-a-bag-squeeze of an adult bag-mask device, depending on the size of the bag. Rescuers should avoid hypoventilation (too few breaths or too little volume) or hyperventilation (too many breaths or too large a volume).

Apply Here

- Part 3: High-Performance Teams
  - **Section:** Respiratory Arrest

3. Atrial Fibrillation or Flutter With Rapid Ventricular Response

2025 Change

- For synchronized cardioversion of atrial fibrillation in adults using any currently US-approved biphasic waveform defibrillator, an initial energy setting of at least 200 J is reasonable and incremented in the event of shock failure, depending on the biphasic defibrillator used.
- The usefulness of double synchronized cardioversion of atrial fibrillation in adults as an initial treatment strategy is uncertain.
- For synchronized cardioversion of atrial flutter in adults, an initial energy setting of 200 J may be reasonable and incremented in the event of shock failure, depending on the biphasic defibrillator used.

Apply Here

- Part 2: Preventing Arrest
  - **Section:** Tachycardia: Stable and Unstable

4. Blood Pressure in Adults After Cardiac Arrest

2025 Change

- Hypotension should be avoided in adults after return of spontaneous circulation (ROSC) by maintaining a minimum mean arterial pressure of at least 65 mm Hg.

Apply Here

- Part 3: High-Performance Teams
  - **Section:** Post–Cardiac Arrest Care

5. Diagnostic Studies for Adults After Cardiac Arrest

2025 Change

- It may be reasonable to perform head-to-pelvis computed tomography for adult patients after ROSC to investigate the etiology of cardiac arrest and complications from resuscitation.
- It may be reasonable to perform echocardiography or point-of-care cardiac ultrasound for adult patients after ROSC to identify clinically significant diagnoses requiring intervention.

Apply Here

- Part 3: High-Performance teams
  - **Section:** Post–Cardiac Arrest Care

6. Temperature Control After Cardiac Arrest

2023 Changes

- Temperature control includes choosing one temperature between 32 °C and 37.5 °C and then holding that temperature for at least 24 hours.
- Temperature control now includes 3 distinct strategies:
  - Hypothermic temperature control
  - Normothermic temperature control
  - Temperature control with fever prevention

2025 Change

- It is reasonable that temperature control be maintained for at least 36 hours in adult patients who remain unresponsive to verbal commands after ROSC.

Apply Here

- Part 3: High-Performance teams
  - Section: Post–Cardiac Arrest Care

7. Left Ventricular Assist Devices

2025 Changes

- In unresponsive adults and children with durable left ventricular assist devices (LVADs) and impaired perfusion, chest compressions should be performed.
- In unresponsive adults and children with durable LVADs and impaired perfusion, it may be reasonable to start chest compressions immediately while simultaneously assessing for device-related reversible causes.

Apply Here

- Part 3: High-Performance Teams
  - Section: Cardiac Arrest: Selected Special Situations

ACLS EP Manual and Resource Text Changes

1. Intravenous Access Preferred Over Intraosseous

2025 Changes

- It is recommended that health care professionals first attempt establishing intravenous access for drug administration in adult patients in cardiac arrest.
- Intraosseous access is reasonable if initial attempts at intravenous access are unsuccessful or not feasible for adult patients in cardiac arrest.

Apply Here

- Chapter 8: Cardiac Arrest, Part 1: VF/Pulseless VT
  - Application of the Adult Cardiac Arrest Algorithm: VF/pVT Pathway

2. Ventilation in Respiratory and Cardiac Arrest

2020 Change

- For respiratory and cardiac arrest, provide 1 breath every 6 seconds (10 breaths per minute). This does not include the 30:2 CPR ratio/protocol.

2025 Change

- When ventilating an adult patient in cardiac arrest, it is reasonable to give enough tidal volume to produce visible chest rise. This can be achieved with about a third-a-bag to one-half-a-bag-squeeze of an adult bag-mask device, depending on the size of the bag. Rescuers should avoid hypoventilation (too few breaths or too little volume) or hyperventilation (too many breaths or too large a volume).

Apply Here

- Chapter 6: Airway Management
  - **Critical Concepts:** Avoid Excessive Ventilation

3. Adult Cardiac Arrest Algorithm

2020 Change

- Early epinephrine was modified to emphasize the role of early epinephrine for nonshockable rhythms after starting CPR.

Apply Here

- Chapter 8: Cardiac Arrest, Part 2: Asystole/PEA
  - **Section:** Drugs for PEA and Asystole

4. Adult Post–Cardiac Arrest Algorithm

2025 Change

- Adult Post–Cardiac Arrest Care Algorithm changed from "SpO_2 92% to 98%" to "SpO_2 target 90% to 98%."

Apply Here

- Chapter 13: Post–Cardiac Arrest Care

5. Adult Bradycardia Algorithm

2020 Changes

- Updates to dosages:
  - Atropine was changed from 0.5 mg to 1 mg.
  - Dopamine was changed from 2 to 20 mcg/kg per minute to 5 to 20 mcg/kg per minute.

Apply Here

- Chapter 9: Bradycardia
  - **Section:** Management of Bradycardias in ACS

6. Adult Tachycardia Algorithm With a Pulse

2020 Change

- Removed recommended doses for cardioversion and replaced it with "Refer to device-specific recommended energy level to maximize first shock success"

2025 Change

- Synchronized cardioversion initial recommended doses:
  - Narrow-complex tachycardia: 100 J
  - Monomorphic ventricular tachycardia: 100 J
  - Atrial fibrillation: 200 J
  - Atrial flutter: 200 J
  - Polymorphic ventricular tachycardia: defibrillation dose (not synchronized)

- Removed *sotalol* from the algorithm
- Changed *supraventricular tachycardia* to *narrow-complex tachycardia*

Apply Here

- Chapter 10: Tachycardia
  - Section: Key Points for Interventions

7. Acute Coronary Syndromes Algorithm

2020 Changes

- The first medical contact–to–balloon inflation (percutaneous coronary intervention) goal is 90 minutes or less.
- Acute coronary syndromes is now broken into 2 primary categories: ST-segment elevation myocardial infarction and non–ST-segment elevation acute coronary syndromes.
- Best practice is to bypass the emergency department and go straight to the cath lab if a cath lab team is available.

2025 Changes

- Removed *left bundle branch block* as a definitive diagnosis for ST-segment elevation myocardial infarction
- Removed *clopidogrel* as primary antiplatelet
- Added *fentanyl* (opioids) for secondary pain control (in addition to *morphine*)
- Added *enoxaparin* and *fondaparinux* (anticoagulants)
- Added *angiotensin-converting enzyme inhibitors*

Apply Here

- Chapter 11: Cardiovascular: ACS (STEMI, NSTE-ACS, Unstable Angina) and Heart Failure and Shock Complicating ACS
  - Figure 83. Acute Coronary Syndromes Algorithm—2015 Update
  - Section: Immediate ED Assessment and Treatment

8. Adult Suspected Stroke Algorithm

2020 Changes

- Best practice is to bypass the emergency department and go straight to the brain imaging suite per protocol.
- "Administer aspirin" was removed.
- Endovascular therapy can be done up to 24 hours after last known normal.
- Alteplase and endovascular therapy are both recommended for a patient, if indicated.
- Acquisition of computed tomography/magnetic resonance imaging of the head: within 20 minutes instead of 25 minutes

2025 Changes

- Added *tenecteplase* along with *alteplase*

Apply Here

- Chapter 12: Stroke
  - Section: Stroke Management

9. Cardiac Arrest During Pregnancy

2025 Change

- Preparation for resuscitative delivery for a pregnant patient in cardiac arrest should begin at the recognition of cardiac arrest, with the goal to complete delivery by 5 minutes.
- It is reasonable to use extracorporeal cardiopulmonary resuscitation in pregnant or peripartum patients in cardiac arrest not responsive to standard resuscitation.

- A massive transfusion protocol with a balanced transfusion strategy should be used for peripartum patients with suspected life-threatening amniotic fluid embolism.

Apply Here

- Chapter 18: Cardiac Arrest Associated With Pregnancy
  - **Section:** Resuscitation of a Pregnant Woman in Cardiac Arrest
  - **Section:** Emergency Hysterotomy (Cesarean Delivery) for the Pregnant Woman in Cardiac Arrest

10. Life-Threatening Asthma Exacerbation

2025 Changes

- It may be reasonable to use extracorporeal life support for adults and children with life-threatening asthma refractory to standard therapies.
- Treatment with volatile anesthetics for adults and children with life-threatening asthma refractory to standard therapies may be considered.

Apply Here

- Chapter 16: Cardiac Arrest Associated With Asthma
  - **Section:** Final Interventions to Consider

11. Life-Threatening Hyperkalemia

2025 Changes

- The effectiveness of intravenous calcium administration for adults and children in cardiac arrest from suspected hyperkalemia is not well established.

Apply Here

- Chapter 15: Life-Threatening Electrolyte and Acid-Base Abnormalities
  - **Section:** Potassium

12. Life-Threatening Hypothermia

2025 Changes

- It is reasonable to use prognostication scores to guide the decision for initiating extracorporeal life support rewarming for adults and children in hypothermic cardiac arrest.
- It may be reasonable to rewarm adults and children with severe environmental hypothermia (core temperature <28 °C [84 °F]) and not in cardiac arrest using extracorporeal life support.

Apply Here

- Chapter 21: Cardiac Arrest in Accidental Hypothermia and Avalanche Victims
  - **Section:** Cardiac Arrest Interventions

13. Left Ventricular Assist Devices

2025 Changes

- In unresponsive adults and children with durable LVADs and impaired perfusion, chest compressions should be performed.
- In unresponsive adults and children with durable LVADs and impaired perfusion, it may be reasonable to start chest compressions immediately while simultaneously assessing for device-related reversible causes.

Apply Here

- Chapter 5: CPR Techniques and Devices
  - **Section:** CPR Devices, Ventricular Assist Devices

14. Temperature Control After Cardiac Arrest

2023 Changes

- Temperature control includes choosing one temperature between 32 °C and 37.5 °C and then holding that temperature for at least 24 hours.
- Temperature control now includes 3 distinct strategies:
  - Hypothermic temperature control
  - Normothermic temperature control
  - Temperature control with fever prevention

2025 Change

- It is reasonable that temperature control be maintained for at least 36 hours in adult patients who remain unresponsive to verbal commands after ROSC.

Apply Here

- ACLS EP Instructor Materials DVD
  - Post–cardiac arrest care cases
  - Cardiovascular cases
- Chapter 13: Post–Cardiac Arrest Care
  - **Section:** Targeted Temperature Management

15. Toxicology: Opioid Overdose

2020 Changes

- Give naloxone for respiratory arrest.
- Consider naloxone for cardiac arrest.

Apply Here

- Chapter 14: Toxicologic Emergencies
  - **Section:** Symptom-Based Therapy for Toxicologic Emergencies, Opiate Poisoning
  - **Section:** Symptom-Based Therapy for Toxicologic Emergencies, Healthcare Provider BLS Modification: Administration of Naloxone Respiratory Arrest