2025 Interim Training Materials: ACLS Lesson Plans and ACLS for Experienced Providers Course Changes

Purpose

These instructions will help you as an Advanced Cardiovascular Life Support (ACLS) Instructor or ACLS for Experienced Providers (EP) Instructor to update the current ACLS and ACLS EP course materials,* respectively, with science from the *2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation* (CPR) *and Emergency Cardiovascular Care* (2020 Guidelines), "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: Use the interim materials to teach all ACLS courses from October 22, 2025, until you begin teaching the new 2025 ACLS Course with the new materials. You must complete the online 2025 ACLS Instructor Update Course by 11:59 p.m. CST February 28, 2026. Instructors should print the "2025 Interim Training Materials: *ACLS Provider Manual* and *ACLS for Experienced Providers Manual and Resource Text* Changes" document and provide copies to students when teaching the new 2025 Guidelines courses while using 2020 Guidelines provider materials until the new materials are available.

ACLS EP Instructors: Use the interim materials to teach all ACLS EP courses from October 22, 2025, until the ACLS EP Course is updated. You must complete the 2025 ACLS Instructor Update online course by 11:59 p.m. CST February 28, 2026. Instructors should print the "2025 Interim Training Materials: *ACLS Provider Manual* and *ACLS for Experienced Providers Manual and Resource Text* Changes" document and provide copies to students when teaching the new 2025 Guidelines courses while using 2017 ACLS EP provider materials.

*The *2020 ACLS Instructor Manual* and 2017 ACLS EP Instructor Materials DVD (including the *ACLS EP Instructor Manual*).

Instructor Preparation

As an ACLS or ACLS EP Instructor, you should be prepared to answer students' questions about the 2025 Guidelines. Therefore, you should review these interim training materials, the 2025 Guidelines, and the *Highlights of the 2025 American Heart Association Guidelines for CPR and Emergency Cardiovascular Care* before teaching your ACLS or ACLS EP courses.

Your Training Center Coordinator can obtain updated exams for your 2025 Guidelines courses.

Instructor Manual Lesson Plan Changes

To teach any 2025 ACLS course, modify the lesson plans from the *2020 ACLS Instructor Manual* with the changes listed in this document.

To facilitate the ACLS EP Course, modify the cases from the 2017 ACLS EP Instructor Materials DVD with the changes listed in this document and use the skills testing checklists found in the *2025 ACLS Instructor Manual*, on Atlas or from your International Training Center you are aligned with. Skills testing in the beginning of the ACLS EP Course should be conducted following instruction from the *2025 ACLS Instructor Manual*.

Only those cases affected by the 2025 Guidelines science changes are listed here. Cases not listed here should be taught as presented in the *2020 ACLS Instructor Manual* and 2017 ACLS EP Instructor Materials DVD.

Throughout any course, emphasize the components of high-quality CPR.

ACLS

1. 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

- Appendix B: Testing Checklists, Learning Station Checklists, and Other Tools
  - Science Summary Table

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

- Part 6: ACLS Lesson Plans
  - **Lesson 3B:** Learning/Testing Station: Airway Management Testing—Testing Details
- Appendix A: Learning Station Scenarios, Megacode Scenarios, and Debriefing Tool
  - All cases that pertain to respiratory failure, respiratory arrest, or cardiac arrest
  - Airway management skills testing (use 2025 ACLS skills testing checklist)
  - Megacode skills testing (use 2025 ACLS skills testing checklists)

3. Atrial Fibrillation or Flutter With Rapid Ventricular Response

2025 Changes

- 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.

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- Part 6: ACLS Lesson Plans
  - **Lesson 6A:** Learning Station: Preventing Arrest: Tachycardia (Stable and Unstable)
- Appendix A: Learning Station Scenarios, Megacode Scenarios, and Debriefing Tool
  - All cases that pertain to wide-complex tachycardia
  - Adult Tachycardia With a Pulse Algorithm
  - Adult Tachycardia With a Pulse Learning Station Checklist
  - Megacode skills testing (use 2025 ACLS skills testing checklists)
- Appendix B: Testing Checklists, Learning Station Checklists, and Other Tools
  - Science Summary Table

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 (MAP) of at least 65 mm Hg.

Apply Here

- Part 6: ACLS Lesson Plans
  - **Lesson 8A:** Learning Station: High-Performance Teams: Cardiac Arrest and Post–Cardiac Arrest Care
  - **Lesson 9A:** Learning Station: High-Performance Teams: Megacode Practice
- Appendix A: Learning Station Scenarios, Megacode Scenarios, and Debriefing Tool
  - All cases that pertain to cardiac arrest
  - Adult Post–Cardiac Arrest Care Algorithm
  - Adult Post–Cardiac Arrest Care Learning Station Checklist
  - Megacode skills testing (use 2025 ACLS skills testing checklists)

5. Diagnostic Studies for Adults After Cardiac Arrest

2025 Changes

- It may be reasonable to perform head-to-pelvis computed tomography (CT) 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 6: ACLS Lesson Plans
  - **Lesson 8A:** Learning Station: High-Performance Teams: Cardiac Arrest and Post–Cardiac Arrest Care
  - **Lesson 9A:** Learning Station: High-Performance Teams: Megacode Practice
- Appendix A: Learning Station Scenarios, Megacode Scenarios, and Debriefing Tool
  - All cases that pertain to cardiac arrest
  - Adult Post–Cardiac Arrest Care Algorithm
  - Adult Post–Cardiac Arrest Care Learning Station Checklist
  - Megacode skills testing (use 2025 ACLS skills testing checklists)

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 6: ACLS Lesson Plans
  - **Lesson 8A:** Learning Station: High-Performance Teams: Cardiac Arrest and Post–Cardiac Arrest Care
  - **Lesson 9A:** Learning Station: High-Performance Teams: Megacode Practice
- Appendix A: Learning Station Scenarios, Megacode Scenarios, and Debriefing Tool
  - All cases that pertain to cardiac arrest
  - Adult Post–Cardiac Arrest Care Algorithm
  - Adult Post–Cardiac Arrest Care Learning Station Checklist
  - Megacode skills testing (use 2025 ACLS skills testing checklists)

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

- Appendix A: Learning Station Scenarios, Megacode Scenarios, and Debriefing Tool
  - All cases that pertain to LVADs
  - Adult Ventricular Assist Device Algorithm
  - Megacode skills testing (use 2025 ACLS skills testing checklists)

8. Adult Post–Cardiac Arrest Algorithm

2025 Changes

- Hypotension should be avoided in adults after ROSC by maintaining a minimum MAP of at least 65 mm Hg.
- It may be reasonable to perform head-to-pelvis CT 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.
- Adult Post–Cardiac Arrest Care Algorithm changed from "SpO_2 92% to 98%" to "SpO_2 target 90% to 98%."

Apply Here

- Part 6: ACLS Lesson Plans
  - **Lesson 8A:** Learning Station: High-Performance Teams: Cardiac Arrest and Post–Cardiac Arrest Care
  - **Lesson 9A:** Learning Station: High-Performance Teams: Megacode Practice
- Appendix A: Learning Station Scenarios, Megacode Scenarios, and Debriefing Tool
  - All cases pertaining to post–cardiac arrest care
  - Megacode skill testing (use 2025 ACLS skills testing checklists)

9. Adult Tachycardia With a Pulse Algorithm

2025 Changes

- Synchronized cardioversion is recommended for acute treatment of adult patients with hemodynamically unstable wide-complex tachycardia.
- Synchronized cardioversion is recommended for acute treatment of adult patients with hemodynamically stable wide-complex tachycardia when vagal maneuvers and pharmacological therapy is ineffective or contraindicated.
- 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.
- 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

- Part 6: ACLS Lesson Plans
  - **Lesson 6A:** Learning Station: Preventing Arrest: Tachycardia (Stable and Unstable)
- Appendix A: Learning Station Scenarios, Megacode Scenarios, and Debriefing Tool
  - All cases pertaining to tachycardia
  - Megacode skills testing (use 2025 ACLS skills testing checklists)

10. Acute Coronary Syndromes

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

- Part 6: ACLS Lesson Plans
  - **Lessons ACLS-Traditional 7A-7C:** Learning Station: Acute Coronary Syndromes
- Appendix A: Learning Station Scenarios, Megacode Scenarios, and Debriefing Tool
  - Cardiovascular cases: all cases pertaining to acute coronary syndromes

11. Adult Suspected Stroke

2025 Change

- Added *tenecteplase* along with *alteplase*

Apply Here

- Part 6: ACLS Lesson Plans
  - **Lessons ACLS-Traditional 8A-8D:** Learning Station: Acute Stroke
- Appendix A: Learning Station Scenarios, Megacode Scenarios, and Debriefing Tool
  - Cardiovascular cases: all cases pertaining to acute stroke

ACLS EP

1. 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

- ACLS EP Instructor Materials DVD
  - All cases that pertain to respiratory failure, respiratory arrest, or cardiac arrest
  - Airway management skills testing (use 2025 ACLS skills testing checklist)
  - High-quality BLS skills testing (use 2025 ACLS skills testing checklist)
  - Megacode skills testing (use 2025 ACLS skills testing checklists)

2. 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

- ACLS EP Instructor Materials DVD
  - All cases pertaining to asystole/pulseless electrical activity cardiac arrest
  - Megacode skills testing (use 2025 ACLS skills testing checklists)

3. Adult Post–Cardiac Arrest Algorithm

2020 Change

- Algorithm changed from "≥94%" in 2016 to "92% to 98%" in 2020.

2025 Changes

- Hypotension should be avoided in adults after ROSC by maintaining a minimum MAP of at least 65 mm Hg.
- It may be reasonable to perform head-to-pelvis CT 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.
- Adult Post–Cardiac Arrest Care Algorithm change from "Spo_2 92% to 98%" to "Spo_2 target 90% to 98%."

Apply Here

- ACLS EP Instructor Materials DVD
  - All cases pertaining to post–cardiac arrest care
  - Megacode skill testing (use 2025 ACLS skills testing checklists)

4. 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

- ACLS EP Instructor Materials DVD
  - All cases pertaining to bradycardia
  - Megacode skills testing (use 2025 ACLS skills testing checklists)

5. 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 Changes

- Synchronized cardioversion is recommended for acute treatment of adult patients with hemodynamically unstable wide-complex tachycardia.
- Synchronized cardioversion is recommended for acute treatment of adult patients with hemodynamically stable wide-complex tachycardia when vagal maneuvers and pharmacological therapy is ineffective or contraindicated.
- 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.
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- 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

- ACLS EP Instructor Materials DVD
  - All cases pertaining to tachycardia
  - Megacode skills testing (use 2025 ACLS skills testing checklists)

6. 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

- ACLS EP Instructor Materials DVD
  - Cardiovascular cases: all cases pertaining to acute coronary syndromes

7. 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 CT/magnetic resonance imaging of the head: within 20 minutes instead of 25 minutes

2025 Changes

- Added *tenecteplase* along with *alteplase*

Apply Here

- ACLS EP Instructor Materials DVD
  - Cardiovascular cases: all cases pertaining to acute stroke

8. Cardiac Arrest During Pregnancy

2025 Changes

- 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

- ACLS EP Instructor Materials DVD
  - Cardiovascular cases: obstetrics in-hospital case

9. Toxicology: Opioid Overdose

2020 Change

- Give naloxone for respiratory arrest.

2025 Change

- For lay and trained rescuers, opioid antagonist administration may be reasonable for adults and children in cardiac arrest with suspected opioid overdose, provided that opioid antagonist (eg, naloxone) administration does not interfere with the delivery of standard resuscitation, including high-quality compression CPR with breaths.

Apply Here

- ACLS EP Instructor Materials DVD
  - Clinical Pharmacology and Toxicology cases: Opioid Toxicology EMS 1, EMS 2, Ed, and In-Hospital

10. 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
  - Cardiovascular Learning Station; Post–Cardiac Arrest Care Learning Station
  - All cases pertaining to post–cardiac arrest care
  - Megacode skills testing (use 2025 ACLS skills testing checklists)

11. 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

- ACLS EP Instructor Materials DVD
  - Respiratory and Metabolic Learning Station
  - All cases pertaining to asthma

12. 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

- ACLS EP Instructor Materials DVD
  - Respiratory and Metabolic Learning Station
  - All cases pertaining to hyperkalemia

13. 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

- ACLS EP Instructor Materials DVD
  - Cardiovascular Learning Station
  - All cases pertaining to hypothermia