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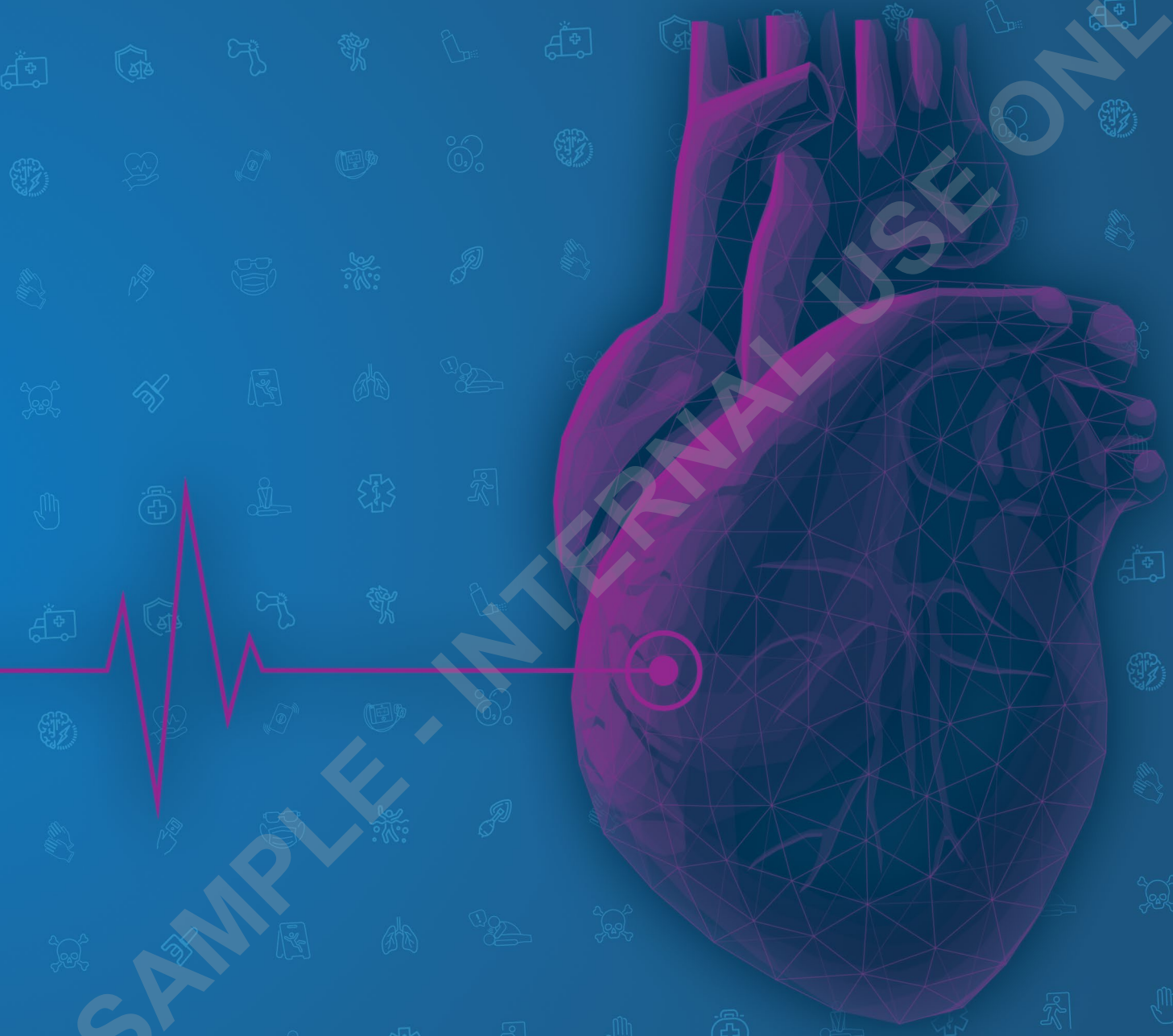


ACLS | ADVANCED CARDIAC LIFE SUPPORT

instructor resource guide
version 9.0, 2023

TABLE OF CONTENTS

INITIAL TRAINING, TRADITIONAL CLASSROOM

Outline & Time Frame

Lesson	Lesson Title	Approx. Length (hr:min.)
Intro	Day One Introduction	0:15
1	Chain of Survival & High-Quality Cardiopulmonary Resuscitation	1:00
2	Teams	0:30
3	Patient Assessment & Resuscitation Therapies	0:30
4	The Patient with Respiratory Compromise	2:00*
5	Bradycardias	0:30
6	Tachycardias	0:30
7	Acute Coronary Syndromes	1:00
8	Acute Ischemic Stroke	1:00
	Breaks	0:30
	Day One Total	7:00
Intro	Day Two Introduction	0:15
9	Case Studies	1:30
10	High-Quality Skills & Teamwork	4:00*
	Performance Evaluation	1:00
	Written Exam	0:45
	Documentation & Certfication	0:15
	Breaks	0:30
	Day Two Total	8:00
	Total Time [29]	15 hours

* Indicates a skill practice

29 Stated class times are based on covering required lessons and evaluation time. Lesson times are influenced by student and Instructor preparation, available equipment, Instructor efficiency, and number of students. Instructors may adjust the lesson plan as needed to reach students with varying abilities and experience. Adult education guidelines recommend a break for at least 5 minutes each hour. Class timing can vary. Because of this, no specific breaks have been designated in this class outline. Class size, class location, Instructor-to- student ratios, and other factors will affect the actual schedule. Breaks should be provided, but may be rearranged or combined as required or desired.

HIGH-QUALITY SKILLS & TEAMWORK

PREPARE

Duration
4 Hours

Class Format: Initial Training
Delivery Method: Traditional Classroom

Equipment and Materials:

Per Team:

- HSI ACLS Scenario Sheets
- Adult CPR training manikin
- Metronome/audio prompting device
- Adult CPR mask
- Nasopharyngeal & oropharyngeal airway set
- Adult bag mask, reservoir, and tubing
- Adult AED training device
- Non-rebreathing mask
- Advanced airway and all equipment/supplies for correct insertion, (per student scope of practice)
- ECG simulator
- Electrodes
- Pacing/defibrillator pads
- Drug cards (or empty packaging)

Per Student:

- Nonlatex disposable gloves
- 1-way valve
- ACLS Study Guide, Sixth Edition
- Other appropriate memory aids

Instructional Notes

- You may need explain and/or demonstrate how to operate the monitor/defibrillator and simulators (ECG, pacemaker rhythm, and waveform capnography), and depending how the small groups are set up, you may need to demonstrate how to properly facilitate a scenario in real-time.

PRESENT

Why This Topic Matters

Teamwork and leadership training have been shown to improve performance in actual resuscitation.[30] By actively participating in advanced cardiac life support simulations, seasoned healthcare providers will improve their ability to lead and participate in the emergency assessment and treatment of pre-arrest, arrest, and post-arrest patients.

30 Hunziker S, et al. Teamwork and leadership in cardiopulmonary resuscitation. *J Am Coll Cardiol.* 2011 Jun 14;57(24):2381-8

PRACTICE & ASSESS

Conduct a Hands-On Student Practice

- Allow adequate time for students to practice high-quality skills and teamwork.
- Arrange students into small groups (teams).
  - ✓ Review resuscitation team member roles and responsibilities (Leader, Members, Recorder).
  - ✓ Students may use their ACLS Study Guide, Sixth Edition as reference.
  - ✓ Teaching/Learning Cases may be practiced in any order.
- Assign an HSI ACLS Instructor to each team.
  - ✓ Alternatively, have each student rotate through the role of Facilitator (see Part One, pg. 11).
- Instructor/Facilitator:
  - ✓ Presents the Teaching/Learning Case scenarios using the HSI ACLS Scenario Sheets.
  - ✓ Provides the pertinent findings using the case progression prompts (italicized information following the › symbol).
  - ✓ Generates the appropriate simulated ECG rhythm (when called for).
  - ✓ Provides the pertinent findings only when asked.
- Each team works through all required (non-optional) HSI ACLS Scenario Sheets.
  - ✓ Aim for 5 minutes per student per case.
  - ✓ Students rotate roles so that each person functions as a Team Leader several times.
- Instructor should:
  - ✓ Keep students on topic and moving through the scenarios.
  - ✓ Ensure high-quality skills practice and performance.
  - ✓ Monitor Team Leader effectiveness.
  - ✓ Encourage group-based problem solving.

WRAP UP

Facilitate a Debriefing Before Moving On to the Next Scenario

- ✓ Follow the model, rules, and best practices as described in the HSI ACLS Debriefing Sheet.
- ✓ Aim for about a 5-minute debriefing per case.

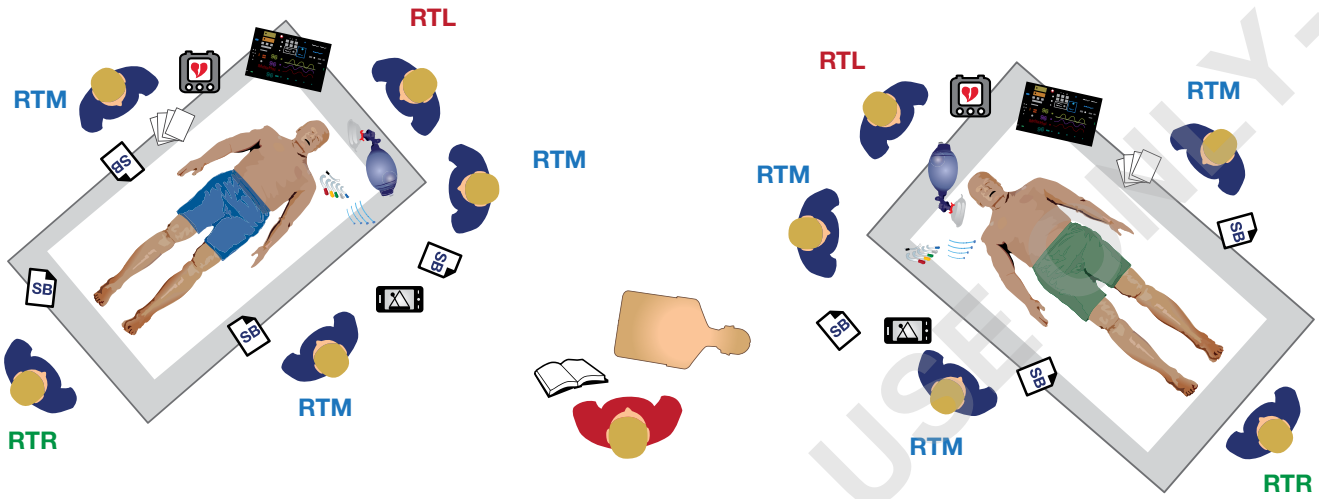
Instructional Notes

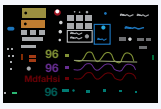
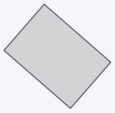
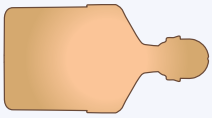
- You may need to offer remediation to student(s) who are experiencing difficulty. Use gentle correction of skills and positive coaching. If possible, assist student(s) privately during breaks, lunch, or at the end of the class. Be polite, considerate, respectful, encouraging, and professional. If possible, have another Instructor privately work with the student. If a student requires more remediation than can be provided during a class, recommend that they attend a separate remediation session or attend another class.

ACLS

SAMPLE CLASSROOM LAYOUT

Maximum Student-to-Instructor Ratio for Scenario Practice & Evaluation: **Unlimited (10:1 Recommended)**



STUDENT MATERIALS			
	HSI ACLS Student *(students rotate team roles and may also rotate into role of coach/facilitator)*		Smartphone with metronome app
	ACLS Student Book *(ACLS Study Guide 6th Ed. Aehlert. Elsevier © 2023)*		Nasopharyngeal & Oropharyngeal Airways
	ECG Rhythm, Monitor, & Defibrillator Simulator		Drug Cards (or empty packaging)
	AED Training Device		Stretcher, bed, or floor mat
	Bag Mask		CPR Manikin
INSTRUCTOR MATERIALS			
	HSI ACLS Instructor		HSI ACLS Instructor Guide
	CPR Manikin		

PULSELESS VT/VF WITH AED/DEFIBRILLATOR (OPTIONAL)

Scenario

You have been called to aid a man with "trouble breathing."

Primary Survey/Reassessment	Check Off
▸ Ensures scene safety. Takes or communicates standard precautions. Assigns team member roles. › ***The scene is safe.*** ▸ Verbalizes general impression of patient (appearance, breathing, circulation). › ***You see a motionless adult, about 70 years of age, slumped on the floor.*** ▸ Directs assessment of responsiveness (AVPU). › ***The patient is unresponsive.*** ▸ Activates emergency protocol and directs a team member to get an AED/cardiac monitor/defibrillator. ▸ Performs simultaneous assessment of breathing and circulation for no more than 10 seconds (or directs a team member to do so). › ***The patient is taking occasional gasping breaths. There is no pulse. The patient's skin is mottled, cool, and dry.*** ▸ Initiates high-quality CPR. Directs team member to immediately begin chest compressions and minimize interruptions. ▸ Directs team member to open the airway, insert an oral airway, and begin bag-mask ventilation with 100% oxygen. ▸ Ensures effective bag-mask ventilations are provided once every 6 seconds (over 1 second, with gentle chest rise). › ***You observe gentle chest rise.*** ▸ When available, attaches AED/defibrillator, placing the pads correctly (or directs a team member to do so). Clears the patient. Analyzes. › ***Shock advised.*** ▸ Continues high-quality CPR until AED/defibrillator fully charged and ready to shock. ▸ Clears everyone from the patient and presses the shock button (or directs a team member to do so). ▸ Directs team to immediately resume high-quality CPR and minimize interruptions.	☐

Secondary Survey/Reassessment	Check Off
▸ Directs team to obtain vital signs, apply a pulse oximeter, and to establish vascular access. › ***Breathing and pulse are absent. Attempts to establish venous access are not successful.*** ▸ Directs team member to establish intraosseous (IO) access. › ***IO access is successful.*** ▸ Orders (or AED prompts for) rhythm check. Clears the patient. Analyzes. › ***Shock advised.*** ▸ Continues high-quality CPR until AED/defibrillator fully charged and ready to shock. ▸ Clears everyone from the patient and presses the shock button (or directs a team member to do so). ▸ Directs team to immediately resume high-quality CPR and minimize interruptions. ▸ Orders correct drug and dose (Epinephrine, 1 mg every 3-5 min, IV/IO. Follows with 20 mL flush. Briefly raises extremity.) Does not stop CPR to administer drug. Considers need for an advanced airway, waveform capnography. › ***Ensures 2 minutes of high-quality CPR.***	☐

CONTINUED ON NEXT PAGE ▸

CARDIAC RHYTHM MANAGEMENT

Scenario

Your patient is a 45-year-old man complaining of a "racing heart."

Primary Survey/Reassessment	Check Off
▸ Ensures scene safety. Takes or communicates standard precautions. Assigns team member roles. › ***The scene is safe.*** ▸ Verbalizes general impression of patient (appearance, breathing, circulation). › ***He is aware of your approach and appears to be breathing without difficulty. His skin is pale; you observe sweat on his forehead and upper lip.*** ▸ Directs assessment of airway, breathing, and circulation. › ***Airway open and clear. Breathing unlabored. Pulse weak and rapid, but regular; skin is pale, cool, and clammy.***	☐

Secondary Survey/Reassessment	Check Off
▸ Directs team to obtain vital signs, attach a cardiac monitor/defibrillator. Ensures monitor leads are properly positioned. ▸ Directs team to apply a pulse oximeter and to establish vascular access. › O_2 ***sat (room air) 92%, P 180, RR 16, BP 80/43. Venous access is established.*** ▸ Initiates appropriate O_2 therapy to maintain O_2 saturation between 95% and 98% (or directs a team member to do so). ▸ Obtains a brief history and performs a focused physical examination (or directs a team member to do so). › ***HISTORY: Racing heart x 30 minutes.*** » ***Allergies: None.*** » ***Medications: None.*** » ***Past history: None.*** » ***Last oral intake: Juice.*** » ***Events prior: Symptoms started during an intense morning workout.*** › ***PHYSICAL: Unremarkable.*** › ***ECG shows monomorphic VT.***	☐
Unstable Tachycardia ▸ Correctly identifies rhythm. Recognizes patient is symptomatic/unstable and that immediate synchronized cardioversion is warranted. ▸ Considers sedation. ▸ Selects the "sync" mode, appropriate energy level, and clears everyone from the patient before pressing the shock button (or directs a team member to do so). › ***Shock delivered. Patient loses consciousness. The rhythm changes (ECG shows VF.)***	☐

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TACHYCARDIA WITH ADEQUATE PERFUSION

Scenario

Your patient is a 40-year-old man complaining of a "racing heart."

Primary Survey/Reassessment	Check Off
▸ Ensures scene safety. Takes or communicates standard precautions. Assigns team member roles. › ***The scene is safe.*** ▸ Verbalizes general impression of patient (appearance, breathing, circulation). › ***The patient is aware of your approach and appears to be breathing without difficulty. His skin is pink.*** ▸ Directs assessment of airway, breathing, and circulation . › ***Alert, oriented; airway open and clear. Breathing easily at 14 breaths/min. P 180, strong and regular; skin is pink, warm, and dry.***	☐

Secondary Survey/Reassessment	Check Off
▸ Directs team to obtain vital signs, attach a cardiac monitor/defibrillator, apply a pulse oximeter, initiate appropriate O_2 therapy, and to establish vascular access. ▸ Ensures monitor leads are properly positioned. › ***O_2 sat (room air) 96%, P 180, RR 14, BP 156/94. Venous access is established. ECG shows a regular, narrow QRS tachycardia.*** ▸ Obtains a brief history and performs a focused physical examination. › ***HISTORY: Palpitations for two hours.*** » ***Allergies: None.*** » ***Medications: None.*** » ***Past history: Nothing pertinent.*** » ***Last oral intake: Scotch.*** » ***Events prior: Smoking cigar.*** › ***PHYSICAL: Unremarkable.***	☐
Stable Narrow QRS Tachycardia ▸ Checks monitor and correctly identifies rhythm ***(regular, narrow QRS tachycardia)***. ▸ Recognizes that the patient is symptomatic but stable. ▸ Attempts vagal maneuvers (or directs a team member to do so). › ***The rhythm is unchanged.*** ▸ Orders correct drug and dose (**Adenosine** 6 mg rapid IVP. Follows with 20 mL flush. Briefly raises extremity). › ***After 90 seconds, the rhythm remains unchanged.*** ▸ Orders correct drug and dose (**Adenosine** 12 mg rapid IVP. Follows with 20 mL flush. Briefly raises extremity). › ***The rhythm changes (Initially sinus bradycardia with ventricular ectopy, then converts to sinus rhythm).*** ▸ Checks monitor and correctly identifies rhythm (sinus rhythm). ▸ Directs team to obtain vital signs. › ***P 80 (sinus rhythm), RR 12, BP 128/76, O_2 sat 97%.*** ▸ Continues ECG monitoring and ensures O_2 saturation is maintained between 95% and 98%. ▸ Considers need for expert consultation.	☐

End Scenario

Take about 5 minutes to debrief. Use the structured and supported approach on the HSI ACLS Debriefing Sheet.

TACHYCARDIA WITH INADEQUATE PERFUSION

Scenario

Your patient is a 75-year-old man complaining of "flip-flopping" in his chest.

Primary Survey/Reassessment	Check Off
▸ Ensures scene safety. Takes or communicates standard precautions. Assigns team member roles. › ***The scene is safe.*** ▸ Verbalizes general impression of patient (appearance, breathing, circulation). › ***You see an older adult sitting up in bed. He is aware of your approach and appears to be breathing without difficulty. His skin is pale.*** ▸ Directs assessment of airway, breathing and circulation . › ***Alert, oriented; airway open and clear. Breathing easily at 14 breaths/min. P 220, weak and regular; skin is pale, cool, and clammy.***	☐

Secondary Survey/Reassessment	Check Off
▸ Directs team to obtain vital signs, attach a cardiac monitor/defibrillator, apply a pulse oximeter, initiate appropriate O_2 therapy, and to establish vascular access. › ***O_2 sat (room air) 92%, P 220, RR 14, BP 80/60. ECG shows a regular, narrow QRS tachycardia. Venous access is established.*** ▸ Initiates appropriate O_2 therapy to maintain O_2 saturation between 95% and 98% (or directs a team member to do so). ▸ Obtains a brief history and performs a focused physical examination. › ***HISTORY:*** » ***Signs/Symptoms: anxiety, dizziness, "flip-flops and flutters in chest," denies chest pain.*** » ***Allergies: None.*** » ***Medications: Cholesterol-lowering drug.*** » ***Past history: None.*** » ***Last oral intake: Water.*** » ***Events prior: Watching the news.*** › ***PHYSICAL: Unremarkable. Unremarkable.***	☐
Unstable Tachycardia ▸ Checks monitor and correctly identifies rhythm. ▸ Recognizes patient is symptomatic/unstable and that immediate synchronized cardioversion is warranted. ▸ Considers sedation. ▸ Selects the "sync" mode, appropriate energy level, and clears everyone from the patient before pressing the shock button (or directs a team member to do so). › ***The rhythm changes (ECG shows sinus tachycardia).*** ▸ Directs team to obtain vital signs. › ***P 110 (sinus tachycardia), RR 12, BP 138/80, O_2 sat 97%.*** ▸ Continues ECG monitoring and ensures O_2 saturation is maintained between 95% and 98%. ▸ Considers need for expert consultation.	☐

End Scenario

Take about 5 minutes to debrief. Use the structured and supported approach on the HSI ACLS Debriefing Sheet.

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